A Complete Bibliography of Publications in *Multiscale Modeling & Simulation*

Nelson H. F. Beebe
University of Utah
Department of Mathematics, 110 LCB
155 S 1400 E RM 233
Salt Lake City, UT 84112-0090
USA

Tel: +1 801 581 5254
FAX: +1 801 581 4148

E-mail: beebe@math.utah.edu, beebe@acm.org,
beebe@computer.org (Internet)
WWW URL: https://www.math.utah.edu/~beebe/

24 August 2024
Version 2.34

Title word cross-reference

(BV, L^2) [TNV04]. 1 [BLO17, FG08, VS11]. $1 + 1$ [MT09, PM14, SPM18]. 13 [Str05, Tor06]. 2 [AE11, CHW23, DD13, FFJD09, IWWM21, JR03, VO13, YLY15, Yin15a]. $2 + 1$ [MK06, BV06]. 3 [Bre23, CLLW15, DWC15, HTS+22, LH14, PKC05, WXZ21]. 30 [CTHC06]. α [GM21, TKM15]. $BV - G$ [Had07]. $BV - L^1$ [Had07]. D [CL17]. ℓ^1 [DN07]. $\frac{\pi}{2}$ [KMOW18, KMOW20]. G [KLX22, SAC06]. Γ [EKCO13, FG08, SS15, SíZ23]. H^1 [OSV03]. KL [LZ07]. L^1 [YGO07]. $\leftrightarrow$ [NOR+06]. M^3 [LMS11]. M_1 [CG18, GABD17]. $\mathbf{R}^d$ [DR20]. $\mathbf{S}^2$ [BGP+11]. p [GN12]. P_N [HL09, SFL11]. R [NOR+06]. S [DMZ17]. t [CF10].

-Based [LZ07]. **-Convergence** [EKCO13, SS15]. **-D** [DWC15, IWWM21, JR03, VS11]. **-Dimensional** [BV06, PKC05]. **-equation** [KLX22]. **-Fraction** [DMZ17]. **-Laplace** [GN12]. **-Lattices** [VO13]. **-Leaping** [CL17]. **-Limit** [FG08, SíZ23]. **-Model** [CF10]. **-Moment** [Tor06]. **-Rotationally** [KMOW18, KMOW20]. **-Stable** [GM21, TKM15]. **-type** [KZ16].

1 [CO16].

2 [CO17].

3 [COW22].

ABC [KLX22]. **Absence** [ZBK+06]. **Absolute** [GPP+17]. **Absorbers** [MS08]. **Absorbing** [BS22]. **Accelerated** [AVE08, AL14, CWD+08]. **Accelerating** [LXY17]. **Acceleration** [VZS20]. **Account** [SSJ+12]. **Accounting** [BFRD13]. **Accuracy** [Aar04, BML18, CCS20, DQS23, EK21, Str05, VO13, VVVR07]. **Accurate** [ACHR06, CW22, CTL16, CR06, CLMZ17, GT18]. **Acoustic** [AS21, ADY20, BIT10, CS14, CS22, GGS20, HMS14, LLZ14, LZ23, LR10a, MCG23, SWY21, VMK05, Kac24]. **Across** [AD16, Fan09, Rob09]. **Active** [BJPR20, HL10a]. **Activities** [LYTP13]. **Activity** [BRR13, GSF09]. **Adaptive** [AE06, AB15a, BCK05, CDG+14, CCJ18, CHW21, CGH18, CEL18, CP19, DP18, DR19, EGM13, FYW11, FCZ24, GABD17, HOS14, HHLZ18, JLT04, KJ16, KN06, LL19, LBM05, LMS11, LCD+22, NPP08, Nor09, PYSF22, Plo09, PC23, WLL22, XGBD16, Xu20, dWMH13]. **Adaptively** [LXY17]. **Adaptivity** [AL08, MR18a]. **Additive** [CRS23, LY16]. **Adhesion** [HPČ+09]. **ADI** [LCZ18]. **Adiabatic** [DDNP17, GMO17, NP16]. **Adjoint** [BRDVE14, CL03b, DR19, HS14]. **Adjoint-Based** [DR19]. **Admissibility** [MHDY17]. **Adsorbing** [AMK03]. **Advancing** [ALT08]. **Advection** [BST16, LLM19, LWZ23, SB20]. **Advection-Diffusion** [BST16]. **Advection-Dominated** [LLM19]. **Advection-Induced** [SB20]. **Advective** [HPV15]. **Advective-Reactive** [HPV15]. **after** [Sti12]. **Agents** [FHV11]. **Aggregates** [ZBFO10]. **Aggregation** [EV23, LSD+20, SSVE10]. **Aging** [BLL14]. **AL** [GGS12, RSM+11]. **Algebraic** [ABG05, KCH03]. **Algorithm** [AF17, AIL05, CDY09, CLLW15, CC06, CCBL11, DIW20, FL18, GT18, HPČ+09, JV21, KC15, LYY15, MS04, MT19a, MT19b, PC23, RSB10, SST23, TY20, VV16, WBG08, YM11, ZS19, ZFW05, ZK08]. **Algorithms** [AP13, AIKK05, BFIL20, BCM05, FYW11, GAK15, HJZ24, YWS11, YYW13]. **Alignment** [Peu16]. **All-Dielectric** [ALLZ24]. **Allen** [WOW19]. **Alloy** [BR12, HJV07]. **Alloys** [MR03, YZX23]. **Along** [Bal24, dHGS24, DDNP17, JC13, KN06]. **Alpha** [NOR+06]. **Ambrosio** [BEZ15]. **Amplifiers** [LM04]. **Amplitude** [AIL05]. **AMS** [WLL22]. **AMS-Net** [WLL22]. **Analog** [BGMS21]. **Analogue** [EE09]. **Analysis** [Abd05, AKN14, AKH12, AKSZ06, ALZ20, AK12, AHS18, ACF12, AL14, AR14, BCCF14, BBK07, BL11b, BEG07, BLPV15, BLO17, Bla19, BFPS09, BFMR03, Bre21, CL03a, CKS08, CLT17, CEP18, CL17, CDM+22, CCG15, CWS10, CDV16, DdGYZ23, DGM07, DQS23, DW22, DKMW14, Eck04a, EKCO13, Fan09, FL18, FKH07, FMQ05, FH20, FMTV05, GT18, GGS20, GP11, GZ06, HTS+18, Hod21, HKLW20, HKDS08, HS10, Hor11, HYR08, KIH15, KCL+20, KK05, LS20, LBB11, LZ06, Li07, LWZ23, Liu10, LJ18, LS18, MMN17, MAG21, MY09, NK11, Nik05, OW23, PS05, PWPK10, PHSN11, PV20, QV03, SS15, SM20a, SWY21, ST21b, TCB24, VVR08, VMM11, WY18, XXZ23, XT04, YY14, YLY15, YCD21, ZCL14, ZMC21, ZJL+23]. **Analytic** [SE07]. **Analytical** [DSH16, Glo06, Glo08]. **Analyzing** [CHS17, DBGS08]. **Angiogenesis** [SWOP05]. **Angle** [XXZ23]. **Angular** [GABD17]. **Anisotropic** [DDN10, DN19, DWZ20b, HMT08, LJ07, MC08, SJF+11, WF08]. **Anisotropy** [Arb11, RCMD09, YCD18]. **Annular** [LLZ23]. **Anomalous** [DWZ20b, GPY13]. **Ansatz** [LQB16, LQB18, QSLB21]. **Antennas** [BMT10]. **Antidiffusive** [CG18]. **Aperture** [FS03]. **Application** [AAPP10, BL11a, BPW+16, Bla19, BN05, BLK16, CS06, CGK21, CHO07, CPT11,

CT18, DFL10, Fil04, FG09, FMKS06, GSS21, GH15, GS13, GL10, HS08, JMW14, KCL+20, LAG09, NOR+06, PR10, RH11, RTE17, RS06, SGOK05, Sto08, TTD19, VMM11, WGM10, ZBK+06]. **Applications** [AD17, AH12, CM14, CM07, CEL15, DGY+11, DWC15, EGT12, GO09, GABD17, Hor11, HWW+13, JCM12, JP12, Rey14, SST23]. **Applied** [CNPT10, FLR11, GS17, SEK+05]. **Approach** [ARRV12, AL11, ALT08, BGP+11, BP05, BK11, BJPR20, BKN+17, Boy08, CLLW15, CTP13, Che08, CCOS06, CGH18, CCM16, Coh10, CM17, DG09, DRLS04, DR20, HWZ21, HL23, HVS10, HMZ19, HC14, HHO+18, KS18, LLL14, LM15b, LRLH22, LE05a, LZZ20, LE05b, LS16b, LZ07, MR18a, MK21, NN13, PEV10, RBSS+21, RS19, SFO09, WTT05, XT04, ZMC21, dWMH13]. **Approaches** [EKL15]. **Approximate** [BML18, FG21, GMO17, MMN16, SSO21]. **Approximated** [OLJ20]. **Approximating** [BSS14]. **Approximation** [AT05, Abr12, Abr13, AdHW12, AL08, BL11a, BL11b, BGW14, BM18, Bos07, Bos10, BS19, BRR22, BCC+10, CDCLLZ11, CS14, CS22, CH22, CGLL24, CHL20, CCP23, DLO10, DSS05, EFM12, Fil12, FR20, FJK09, GMWZ14, GSS21, GAK15, GS15, Gos14, GZ10, HDL08, KMP23, LOS13, LM05, Li18, LFY21, LJ18, LY12, LYZ11, NMJ11, OZ05, SNS10, SVZ11, SS22, SL17, Sou05, YYW13, YDL05]. **Approximations** [AHS18, CDG+14, CE10, DdGYZ23, DLY05, GS12, GP11, HJN+24, KT14, LM14, Lun21, MMN11, OPS16, OZ11, SFL11, SH10, Yin15c, dHUVW13]. **Approximative** [FOSS22]. **Arbitrary** [BS19, CS14, CS22, ER21, LSBQ23, MSAW10, Str05, YCD18]. **Architectures** [BLI07]. **Arclength** [GGSVE14]. **Aris** [RTW+06]. **Arising** [TLCW13]. **Arrangements** [CCOS06]. **Array** [AGJ13, GNR21, LZ18a, LZ18b]. **Arrays** [BFRD13, MS08, ZMC21]. **Arteries** [CLMT05]. **Artificial** [CW24]. **Aspect** [CKLM21]. **Assays** [CHS17]. **Assembling** [ZBFO10]. **Assessment** [BLI07]. **Assessments** [SWF+14]. **Assimilation** [LM15a, ZG04]. **Assist** [CPT21, TZ19]. **Associated** [Cal07, dHUVW13, dHGS24]. **Asymptotic** [AP06, BS17, BMT10, BP23, BCM13, Bla19, BGW14, BK07b, BRR22, Bre21, CGK21, CY13, CWXY21, CKLM21, CMV15, CEP18, CD03, CE16, CLHQ22, CWS10, CD23, DDNP17, DGM07, DDN10, DN19, FNP19, FLMN+18, FA22, FH20, HB05, HS19, JL17, JLP18, JT06, LS20, LL17, Li21, LXY16, MMN11, MMN17, NK11, NMJ11, PWPK10, SM20a, YY14, YCD21, YWS11, ZJL+23, ZJ17]. **Asymptotic-Preserving** [DN19, FNP19, HS19, JL17]. **Asymptotics** [BFIL20, CCPT17, DSS05, EFM12, FA22, FPSS03, FG09, GLG05, GPR17, JC13, LLY19]. **Asymptotics-Based** [FG09]. **Asynchronous** [BLK16, YYW13]. **ATLAS** [CM17]. **Atmospheric** [CL03b, FS05]. **Atomic** [FG09, LE05b, RSM+11]. **Atomistic** [AG05, AL08, BPB+08, CGCL15, GR17, Hod21, LOS13, OSZ14, PBL08, SSJ+12, SSJ+15, Sch06, SíZ23, Sha11, WY18, ZBFO10, ZK08]. **Atomistic-Continuum** [AL08]. **Atomistic-to-Continuum** [BPB+08, LOS13, OSZ14, PBL08, SSJ+12, SSJ+15, WY18, ZBFO10]. **Atomistic/Continuum** [CGCL15, Hod21, Sha11]. **Atoms** [Fan09, FG09]. **Atoms/Continuum** [Fan09]. **Attractors** [LS18]. **Augmented** [FLR11]. **Automated** [EW14, HDFS06, HKDS08]. **Averaged** [Bla19]. **Averaging** [AD17, Bal04, BCW22, BFM+05, BRR22, BCP06, PRS07, PG21, PA06, SWHH04, TOM10, TKM15, WPA18]. **Axisymmetric** [HH23, LH14].

Babich [LSBQ23, LQB16, LQB18, QSLB21]. **Babich-Like** [LQB16]. **Baby** [LKGK03]. **Baby-Bathwater** [LKGK03]. **Backbones** [HHO+18]. **Backscatter** [GLM15]. **Backscattering** [GS14, RK17]. **Backward** [CW05, HH13, MMO23]. **Backward-Forward** [MMO23]. **Bacterial** [RBHK13, SGOK05]. **Baer** [PG21]. **Balance** [GMO17, MMO23]. **Balanced** [CKPS20, Gos21, HVS10]. **Ballistic** [KLX22]. **Band** [AKSZ06, ÁGMR08, BCGP10, CZ23, DLL19, IW10, KMOW18, KMOW20, LDZN22, LJ17]. **Band-Edge** [IW10]. **Band-Gap** [AKSZ06]. **Bandelet** [LM05]. **Baroclinic** [Med05]. **Barotropic** [Med05]. **Barotropic-Baroclinic** [Med05]. **Barriers** [JN06]. **Base** [DKMW14]. **Based** [AKL06, AJS16, AGJ13, Arb11, ACF12, AGNB22, BKL+10, BCM13, COS10, CKS08, CC06, CSB08, CES05, CLY+11, CL04, CMMS13, CCPT17, CVE09, DWZ20a, DP20, DRE16, DLO10, DOS12, DYOD08, DR19, ELW+22, FLYZN19, FL18, FAO22, FMQ05, FG09, GM21, GZ06, HM13b, HW05, HTS+18, HS08, HHLZ19, HCC+23, HHO+18, JZZ11, JO18, KT18, KSNdR21, LM15b, LE05a, LLO12, LZZ20, LZN19, LR10b, LJ18, LZ07, LOT05, MR18a, MDO10, MZ15, MB21, MDHY16, MHDY17, OBG+05, QV03, Rey14, RSM+11, RSB11, Sha11, SCS19, SWF+14, STY14, SM20b, STHS18, ST17, TMC+17, TPM21, TPM22, Tor06, TCB24, WN10, XGBD16, XYZ18, ZPC+20, ZJL+23, ZHY19, FLCG21]. **Bases** [CGCL15, OZ11, Pey08]. **Basis** [Boy08, CMZ20, CLLW20, CHW21, CP19, DP18, GGS12, HZZ15, LL19, PCCL24, WLL22]. **Batch** [JLS22]. **Bath** [DFL10]. **Bathwater** [LKGK03]. **Bayesian** [JO18, KB11, NLS20, Owh15, RSM+11, RND+12b, ZML+24]. **BCF** [LZ06]. **BDDC** [KC15]. **Beam** [JJ15, OPS16, VS11]. **Beams** [FS05, QY10, RK17, TQR07]. **Behavior** [BFRD13, BN05, BG08, CSB08, DWC15, GGN07, Gor15, Li21, MR03, MN11, ST21a, SH10, dWMH13]. **Bellman** [GSS21]. **Beltrami** [LNL17]. **Benchmarks** [ZFW05]. **Bending** [SíZ23]. **Bending-Torsion** [SíZ23]. **Bent** [XYZ18]. **Bent-Core** [XYZ18]. **Best** [CCOS06, NOR+06]. **Beta** [NOR+06]. **Between** [EF24, HKY03, LZ23, MBL20, BCCF14, DIW20, MCM12]. **Beyond** [DJS17, Boy08, Mar12, Mar13]. **BGK** [CDV16, DQS23, VV16]. **Biased** [WN14]. **Bidomain** [GSF06]. **Bilayer** [BCMQ23, MCL23]. **Bilayers** [DLM22, EMLO20]. **Bimaterial** [VMM11]. **Bimolecular** [PL21]. **Binary** [AP13, BEG07, Eck04b, HJV07, RSM+11]. **Binding** [CO16, DKSS22, PL21]. **Binning** [MHW13]. **Bio** [AHLW19]. **Biochemical** [AH12, KRK17]. **Biochemistry** [VFEK11]. **Biocompatible** [CBS04, CSB04]. **Biofilm** [AK07, ZPC+20]. **Biological** [GGM+05, RCMD09]. **Biology** [AHGJ05, EO05, SD06]. **Biomechanical** [PP17]. **Biomolecular** [HS08, HS10, LYZ+15, ZBK+06]. **Biopolymer** [ZBFO10]. **Biotissue** [BP05]. **Bipartite** [HHO+18]. **Birth** [DSS05]. **Birth-Death** [DSS05]. **Bistability** [DHZ22]. **Blended** [LLO12]. **Blending** [BPB+08]. **Blind** [LXQ09]. **Bloch** [DLS14, JC13, SEK+05, VMM11]. **Bloch-Wave** [DLS14]. **Blood** [BP23, CLMT05, DGN+08, FMQ05, MBC+13, QV03, VKK+19]. **Blow** [ADY20, GN12]. **Blow-Up** [ADY20, GN12]. **Blowup** [LH14]. **Blurred** [ACHR06]. **BMO}** [LV05]. **Bodies** [BS19, CS14, CS22]. **Body** [Mar12, Mar13, Sha11, WGM10]. **Boltzmann** [AT05, CC22, CqC23, CELL20, DPV06, Fil12, Fil04, HE21, JS10, JL17, LCZ+22, Neg18, OSAND13, VVVR07, VV12, VV16, YY14, ZHY19]. **Boltzmann/Finite** [VVVR07]. **Born** [LXY21, VO13]. **Bose** [Bao04, Mar12, Mar13]. **Bottom** [BHKT23].

Bottom-Up [BHKT23]. **Bound** [JK12, LZ18b, Mar12, Mar13, OW11]. **Boundaries** [BKL+10, BG14, BL15, KvNP11, QGZX22]. **Boundary** [AST06, AE11, BST16, BLS18, BM06, CDE24, CL03b, CLHQ22, CW24, DWC15, DLTZ18, GS10, GS17, GL10, HE21, MTW16, MT19a, MT19b, MMN11, MCG23, MS08, MS22, PL24, RKM13, SGNR23, TLCW13, VZ08, YCD21, YC23, Yin15b, ZHY19, dHGS24]. **Bounded** [BT14, DG09, Fil12]. **Bounds** [BS17, BFY22, BG08, DIW20, FY21, GAK15, Mit23, NDEG11]. **Breakdown** [DPV03]. **Breaking** [CT18, NMJ11]. **Bregman** [COS10, JV21]. **Bridge** [WiOT+13]. **Bridging** [MB14, ZG05]. **Brinkman** [BELS15]. **Broadening** [GGS20]. **Brownian** [BGS21, CLHQ22, HS12, KK14, KNR14, KS08b, LBW17, TU10]. **Bubbles** [ACCS20, CGLL24, San03]. **Buckley** [WTJT13]. **Buckling** [ARRV12]. **Budget** [LFY21]. **Buffers** [CTL16]. **Bulk** [AV21, Tor06]. **Bulk-Surface** [AV21]. **Bumps** [CK24]. **Bunching** [LXY16]. **Burgers** [Ber07, NM09]. **Buried** [AIL05]. **Burton** [AE11]. **Bus** [GLM13]. **Butterfly** [CDY09, LYM+15, LYY15, LDZN22, LSBQ23]. **Butterfly-Compressed** [LSBQ23].

Cabrera [AE11]. **Caching** [Rey14]. **Cahn** [BEG07, CFM17, DD14, DLM22, LZZ13, PM21, SP24, WOW19]. **Cahn-Type** [WOW19]. **Calcium** [CNG+18, DRE16, GSF06, TW06, TASY+05]. **Calculation** [GGSVE14, LZZ13]. **Calculations** [DGY+11, LXY17, LCD+22]. **Calculus** [GL10]. **Calibration** [DGN+08]. **Cancer** [SMC20, TLCW13]. **Canonical** [dHUVW13]. **Capacity** [CCM16]. **Capillary** [GH11]. **Capsids** [ARRV12]. **Capture** [BLS18, Bre21, BS22, Bre23, LBW17]. **Capturing** [DXZ24, San03]. **Carbon** [BFRD13, MMPS17]. **Carbon-Nanotube** [MMPS17]. **Carbonation** [EFM12]. **Cardiac** [CNG+18, TW06]. **Cardiovascular** [HPČ+09, VZ08]. **Cargo** [HL10a]. **Carlo** [ABS13, AH12, AHS18, BSS14, CC22, CqC23, CLHQ22, DW22, EKL15, PM14, Rey14, RBSS+21, dWMH13]. **Carrier** [SW11]. **Cascade** [GLM15]. **Cascadic** [Xu20]. **Cascading** [RBSS+21]. **Case** [KR15, KT19, KNR14, LZ19, GNR21]. **Categorical** [Hor11]. **Cauchy** [LXY21, VO13]. **Caused** [BBT10]. **Caustics** [dHUVW13]. **Cavities** [BBT10, SW19]. **Cavity** [BMT10, QW05]. **CDF** [WTJT13]. **Cell** [AD17, CPO+20, DWC15, GSF06, Gui24, HPČ+09, MB10, RJM05, VFEK11, CMMS13]. **Cells** [FZW05, HL10a, ZFW05]. **Cellular** [ARS17, Coh10, HL10a, IZ12, MBL20, SP12, WiOT+13]. **CEM** [CP19]. **CEM-GMsFEM** [CP19]. **Center** [Bos07, HKK05]. **Central** [Bal08]. **Centralities** [TPM21, TPM22]. **Centrality** [TMC+17]. **Certain** [DW22, IMP08]. **Chain** [DOS12, NT10, dWMH13]. **Chains** [AH12, AMR03, AR05, BL11b, CLT17, DGHK07, TWZ15, WPA18]. **Change** [MLS12, Pap12]. **Changing** [BV04, BBPR16]. **Channel** [AD03]. **Channels** [ADM+08, GNR21, MZCJ16]. **Chaos** [BAZC10]. **Chaotic** [TW17, WXZ21]. **Characterization** [BMKS23, CD23, SW19]. **Charge** [SHB+14]. **Chemical** [CTL16, CL17, Eng09, GL23, HMP17, Jah11, LB18, LF06, MBS08, MLSH12, MAG21, PB09, RPCG05, AHLW19]. **Chemically** [Li07]. **Chemotaxis** [CY13, JLP18, SGOK05, STY14, ST17]. **Chernoff** [MTV14]. **Chiral** [BGP16]. **Choice** [NYY11]. **Choices** [KS08b]. **CI** [FG09]. **Circadian** [GN06, HKP+18].

Circle [DGN+08]. **Circles** [Kac24]. **Circular** [BL11b, FFJD09]. **Class** [BRR22, HHLZ18, HS19, Kac24, Sha16, LYZ11]. **Classical** [Cal07]. **Classically** [AHS18]. **Classification** [ACT+10, BF12, BLK16]. **Clausius** [Alm14]. **Cleft** [RH11]. **Climb** [JRX17]. **Cloaking** [CGHP18, CDGH21]. **Clonotypes** [MB10]. **Close** [ADY20, HB05, LZ23]. **Close-To-Touching** [ADY20, LZ23]. **Closed** [Hüt03, LHKT21]. **Closing** [LFY21]. **Closure** [Abr12, Abr13, DHZ22, DLY05, FGS24, HCC+23, HDL08, NP16, PG21, YDL05]. **Closures** [CBRFK23, HCC+23]. **Cloud** [LL18, LS16a, SST18]. **Clouds** [MMN16]. **Cluster** [Hüt03, MD19, SW19, SWY21]. **Clustering** [ACT+10, BKV22, HKP+18, dWMH13]. **Coarse** [AKL06, AE11, BHKT23, BLPV15, DK14, EAW04, EGT12, GE10b, GPP+17, HL20, HL24, JO18, KC15, KMP23, LKGK03, MSAW10, ÖS07, SGOK05, SBMA22]. **Coarse-Grain** [GPP+17, SBMA22]. **Coarse-Grained** [DK14, HL24]. **Coarse-Graining** [AE11, BHKT23, BLPV15, HL20]. **Coarse-Scale** [EGT12, KMP23]. **Coarsening** [Coh10, DD14, ELW+22, RSB11, SCS19]. **Coated** [CL13]. **Coating** [HPČ+09]. **Cochlear** [KX05]. **Coefficient** [CLLW21, CW24, KK14, LCZ18]. **Coefficients** [BO16, BFMR03, CCG15, DN07, GR18, HPV15, HM19, HMZ19, HH23, KC15, LNL17, LL17, LZZ20, LWZ23, MV22, OLJ20, SM20a, YC23, ZCH15]. **Coherence** [ARS17]. **Coherent** [BPT06, OYS+11, SW11]. **coli}** [EO05, STY14, ST17]. **Collection** [HMS14]. **Collective** [BBK13, DFMAT18, ST21a]. **Collision** [HM13b, VV16]. **Collision-Based** [HM13b]. **Collisional** [CCP23, LJ18]. **Collisions** [CWD+08]. **Colored** [GPV20]. **Combined** [DW14, HWW+13, LBM05]. **Combustion** [SE06]. **Committor** [LL18, PHSN11]. **Communication** [CCM16]. **Communities** [ZPC+20]. **Community** [BPW+16]. **Compact** [HMT08]. **Comparing** [SH10]. **Comparison** [ZBK+06]. **Compatibility** [KÖ24]. **Competing** [MB10]. **Complex** [ADGP20, CS06, CFM17, DBGA10, HDFS06, LYZ+15, LMC+08, LCZ+22, NDEG11, PA06, PHSN11]. **Complexes** [VBMS04]. **Complexity** [AE08, AHS18, BZZ19, CT18, KDMT24, SSO21]. **Compliant** [CLMT05, MBC+13]. **Component** [CKP20]. **Composite** [BLI07, CLLW15, DH20, HB05, HCY12, Nøe13, WCW15]. **Composites** [BM09, Gor15, MD19, Mit23, QHL13, RCMD09, RKM13, XT04]. **Compound** [FA22]. **Compressed** [EFS14, LXY17, LSBQ23]. **Compressible** [AP06, AAPP10, BFM+05, CM14, CHL20, FLMN+18, FCZ22, FCZ24]. **Compressing** [DRZZ18]. **Compression** [HTS+18, LM05, SSO21, WN10]. **Compressive** [MSO14]. **Computation** [BMKS23, CDY09, EF14, EMLO20, FG21, GP17, HYR08, KLX22, KX05, KZ16, KR15, PHSN11, RS06, Sti12, WCW15, WKWD07, XK05, YF09, Yin15b, ZCL14]. **Computational** [AE08, AHS18, AWA06, BL05, CPO+20, CRK05, CSB04, ELW+22, Hor11, SSO21, VFEK11, ZKK04]. **Computationally** [BLO17]. **Computations** [DKW09, JS12, JS13, SXZ09]. **Computer** [KSH03]. **Computing** [ALT08, Bla19, CHO07, EV23, JV21, KG13, NOR+06, Nøe13, RWF21, VL19, WXZ21, WF14]. **Concentrated** [CCGB05, Gor15]. **Concrete** [EFM12]. **Concurrent** [CHO07, GZ06]. **Condensates** [Bao04]. **Condensation** [Mar12, Mar13]. **Condition** [FG23]. **Conditional** [Cho03, DWC15]. **Conditions** [AE11, BST16, CW24, ER21,

GS10, GS17, VZ08, ZHY19]. **Conducted** [SW19]. **Conducting** [BG08, MR12]. **Conduction** [CL21, SW19]. **Conductive** [AE09, BGW14, BS19]. **Conductivity** [EMLO20, FFJD09, JFD03, LLY19, Nøe13, RKM13, SJF+11]. **Cones** [CZ23]. **Configurations** [MMPS17]. **Confined** [BJPR20]. **Conformation** [FJK09]. **Conformational** [HS10, LYZ+15, MO06]. **Conforming** [NSD+18]. **Conical** [JQZ11]. **Connecting** [PBL08]. **Connection** [PM14]. **Connections** [GP17]. **Connectivity** [CK24]. **Consensus** [KTY09]. **Conservation** [ADGP20, AW13, GPY13]. **Conservations** [KRK17]. **Conservative** [XX14]. **Conserving** [CCEL21]. **Consistency** [CC22, CBRFK23, FG18, RPCG05]. **Consistent** [BS17, CLMT05, CF04, CO17, Sha11, SHB+14, WY18, XEMK09, XH24]. **Consolidation** [DIW20]. **Constants** [Mit23]. **Constitutive** [BP23, CE16, CL21]. **Constrained** [AHLW19, LXQ09, VVR08, VV16]. **Constraining** [LW14]. **Constraint** [CCEL21, DIW20, HNV12, LCJ19, PC23, YC23, ZC23]. **Constraints** [ACHR06, FKKL11, MN11, RSB10, SVZ11]. **Constructed** [LL19]. **Constructing** [LYZ+15]. **Construction** [CLLW20, DRL05, Dur09, KLY21]. **Contact** [SP24, XXZ23]. **Containing** [EKH06, HB05, MMN16, VMM11]. **Context** [EE09]. **Continua** [FKKL11]. **Continuation** [CC10]. **Continuous** [AH12, BGP+11, CSSB04, RK17, WPA18]. **Continuum** [ARRV12, AG05, AL08, BPB+08, BM18, CGCL15, CEPT12, DFMAN20, DSC24, DSS05, DBGA10, Fan09, GZ10, HFOC08, Hod21, HCY12, LOS13, Lun21, MK06, MB14, MY09, NM13, OSZ14, PBL08, QW05, QGZX22, SSJ+12, SSJ+15, Sch06, Sha11, WY18, YZX23, YM11, ZBFO10, HFOC05, LM14]. **Continuum-Microscopic** [YM11]. **Contrast** [AKSZ06, BGW14, BELS15, CW21, CCG15, CE10, CEL18, GE10a, GE10b, Gor15, HM17, KC15, Mit23, OV18, OZ11, YC23]. **Contrasts** [ACCS20]. **Control** [AKN14, BE03, CPT21, DP20, FOSS22, FK19, GLLL23, KD05, LM15b, LWZ23, PSV23, RS19]. **Control-Invariance** [KD05]. **Controlled** [HKK05, TZ19]. **Controls** [FG21]. **Convection** [BCK05, ED03, ZC23]. **Convection-Diffusion** [ED03]. **Convectively** [NM09]. **Convergence** [AD17, BSK07, CqC23, CHW21, CDM+22, CR11, DM10, EKCO13, FMTV05, Giv07, HP23, HKLW20, LZ06, Li19, LJ18, MM24, MMO23, MD19, NM09, Pta13, Pta15, SS15, Sch14, ST21b, VL19, WCW15, ZS19]. **Convergent** [CHW23, CCL21, LS16a]. **Convex** [BCGP10, CVE09, LZ23, SST23]. **Cooperating** [LTK17]. **Cooperative** [WiOT+13]. **Coordinates** [BMKS23, CKL+08, LZ19, SB20]. **Copolymers** [LZZ13]. **Core** [XYZ18]. **Coronary** [GS17]. **Correction** [LL09]. **Corrections** [SFL11]. **Corrector** [BJ11, BO16, BLO17, CEL+20, MR18b]. **Correlated** [CW24]. **Correlating** [Gar05]. **Correlation** [AGJ13, BPW+16, GS09b, KK14, KS08b, Mom13]. **Correlation-Based** [AGJ13]. **Correlations** [Gom23, SWHH04]. **Correspondence** [DIW20]. **Corrigendum** [CS22]. **Corrupted** [TW17]. **Cosine** [LR08]. **Couette** [FZW05, ZFW05]. **Coulomb** [CWD+08]. **Coupled** [AET09, BG20, CLT17, CMMS13, DD13, GS12, GLG05, HHL12, HCY12, JS10, LE05b, MWW15, OW11, SM20a, WCW15]. **Coupling** [AJS16, Abr12, Abr13, ADGP20, AV21, BPB+08, BR12, BG14, CGCL15, CEPT12, ER21, FKKL11, FMQ05, FMKS06, GS09a, Hod21, KSNdR21, LOS13, MBC+13, MO06, MR18b, OSZ14, PBL08, QV03, SSJ+12,

Sha11, TTD19, VFEK11, WY18, dHGS24]. **Couplings** [PA06]. **Covariates** [KIH15]. **Crack** [NMJ11, VMM11]. **Cracked** [BP14]. **Cracks** [VMM11]. **Created** [KdL15]. **Creating** [LJ17]. **Criminal** [BRR13]. **Critical** [GNR21, Sti12]. **Cross** [DKMO03, Gar05, Peu16, WiOT$^+$13]. **Cross-Bridge** [WiOT$^+$13]. **Cross-Correlating** [Gar05]. **Cross-Linked** [Peu16]. **Cross-Tie** [DKMO03]. **Crossings** [JQZ11]. **Crowd** [BBK13, CPT11]. **Cryer** [vDM21]. **Crystal** [BN05, CEK08, CHO07, EW14, Kat22, Kat23, MK06, NM13, SPM18, YLY15, vN09]. **Crystalline** [AG05, CO16, CO17, COW22, LXY21, MT09, SL17, WLS08]. **Crystallinity** [CK23]. **Crystals** [BGZ10, DD13, MZ15, Sto08]. **Cucker** [BCCD16, Li21]. **Cure** [Fan19]. **Current** [LM04, SWFM13, SWF$^+$14]. **Currents** [BM06, Gos14]. **Curvature** [CMM11, RV15, RV18]. **Curved** [ADM$^+$08, Bal24, RV15, RV18]. **Curvelet** [CDDY06]. **CVD** [PEPL16]. **Cycle** [GN06, WBE$^+$18, McC05]. **Cycling** [CNG$^+$18]. **Cylinder** [BLK16, MRTV14]. **Cylinders** [SXZ09]. **Cylindrical** [RH11]. **Cytoplasm** [GSF06].

D [AE11, BLO17, Bre23, CLLW15, CHW23, DWC15, DD13, FFJD09, FG08, HTS$^+$22, IWWM21, JR03, LH14, VS11, WXZ21, YLY15, Yin15a]. **Darcy** [ADGP20, ER21, MK21, PVB24]. **Dark** [HI12]. **Data** [BF12, BLK16, Cal07, CSSB04, CH22, CVE09, CVE11, DN07, ELW$^+$22, GLLL23, GR17, GMP10, Hor11, LM15a, LZZ20, LFY21, LSH15, MB21, Plo09, RDS$^+$05, SW20, TW17, XY09, ZCH15, ZG04]. **Data-Based** [CVE09]. **Data-Driven** [GLLL23, LZZ20, MB21, ZCH15]. **Data-Fidelity** [DN07]. **Death** [DSS05]. **Deblurring** [KOJ05]. **Decay** [AAP23, HSW23, OOWZ23]. **Deciding** [LKGK03]. **Decision** [KBP$^+$11]. **Decomposed** [PCCL24]. **Decomposition** [GE10a, GE10b, HP22, HP23, Hod21, HLZ17b, HHLZ18, HHLZ19, KZ16, KY16, LLM24, LV05, MT19a, MT19b, MB14, OSV03, PBL08, PEV10, SEK$^+$05, Sjö05, TY20, WSK13a, WSK13b, XX14, YGO07, WSK13a]. **Decompositions** [TNV04]. **Deconvolution** [BSK07, FAAC09, MDO10]. **Decoupling** [DIW20]. **Deep** [GKS22, ZML$^+$24]. **Deep-Water** [GKS22]. **Default** [FSS09]. **Defect** [AL11, CD23, LM15b]. **Defect-Type** [AL11, LM15b]. **Defects** [CO16, CO17, CDG$^+$21, COW22, EW14, JC13, LXY21, SL17]. **Deficiency** [LB18]. **Definite** [HHLZ18]. **Definiteness** [LLO12]. **Deformable** [IMP08]. **Deformation** [BFRD13, CK24, CHO07, DLO10, LNL17]. **Degeneracies** [KMOW18, KMOW20]. **Degenerate** [DD14, DLM22, HH23, PM21]. **Degradation** [MRTV14, PB09]. **Degrees** [SWHH04]. **Delay** [CL17, KK05, YWS11]. **Delivery** [CBS04, CSB04]. **Dendritic** [Eck04a]. **Denoising** [BKL$^+$10, BCM05, CCN07, CC06, DN07, EE09, FAAC09, JZZ11, KOJ05]. **Dense** [SSO21]. **Densities** [CF15, WKWD07, WN14]. **Density** [CK23, CF15, DWZ20a, DdGYZ23, DRLS04, EA08, FK19, GPK12, HFOC05, HFOC08, LOS13, LZN19, MLO17, MZ15, RSB10, SWY21, XH24]. **Dependence** [SE07]. **Dependent** [BS16, CLLW15, EGT12, FL18, Gar21, GR16, HM13b, LWZ23, MV22, PCCL24]. **Deposition** [AE11, LE05a, MS04]. **Derivation** [AG05, DGM07, Fil04, MT16, PG21, Sch06, STY14, Str05]. **Derivative** [CMCS10a, CMCS10b]. **Describing** [DH22, MN11]. **Description** [CSSB04, PA06]. **Design** [ABG05, CDCLLZ11, CBS04, CSB04].

Detailed [TW06]. **Detection** [BPW+16, EW14, KBP+11, MLS12, WBE+18]. **Determine** [PM21]. **Deterministic** [BdCPT09, Fil12, GM21, JK12, JP12, MLSH12]. **Development** [CMMS13]. **Developments** [LR08, SP12]. **Deviation** [GL23]. **Deviations** [SM20b]. **Dewetting** [EKM18]. **Diabatic** [FL18]. **Diad** [TW06]. **Diagrams** [CCM16, VHPT17]. **Diameter** [HB05]. **Diblock** [LZZ13]. **Dielectric** [ALLZ24, BGZ10]. **Diffeomorphic** [HWZ21]. **Diffeomorphisms** [BRV12]. **Difference** [BS17, JZZ11, LZ06, OZ05, SST23, VVVR07]. **Different** [GGM+05]. **Differential** [ABG05, BKV22, BFIL20, BRR22, CR11, FOSS22, Giv07, GM21, HJZ24, JL22, KK05, LLM24, LL19, VZS20]. **Differential-Algebraic** [ABG05]. **Diffraction** [KdL15, LZ18a]. **Diffractons** [KdL15]. **Diffuse** [BF12, KÖ24, LCZ+22]. **Diffuse-Domain** [LCZ+22]. **Diffusion** [AT05, APV12, AS05, AE11, ADM+08, BK07a, BST16, BRR13, BCK05, BM17, BP14, BEHL16, BFMR03, BRR22, Cal07, CG18, CKL+08, CVE11, CCL21, DD14, DWZ20b, Dun15, ED03, GP17, GAK15, Giv07, GK08, GLG05, GT17, HHL12, HH13, IHM09, JO18, KORS22, KDMT24, KM11, KSNdR21, KPK13, LWZ23, MM24, MP19, NX03, PS12, PSVE09, PV20, RTW+06, RH11, SB20, SH10, VVVR07, VK10, WF08, XT04, XK05, ZJL+23, ZC23]. **Diffusions** [BRDVE14, DSW12, GS18, GPV20, KPK13, Spi15, SM20b]. **Diffusive** [CY13, GNR21, Gos21, JL17, NLS20, SFL11]. **Diffusivities** [MBL20]. **Diffusivity** [CL03b, DR20, GNR21, RSM+11, WXZ21]. **Digital** [JSZ18]. **Dilute** [Alm14, BS07]. **Dimension** [ABCF23, CJLM20, FG23, FHV11, GE10b, HKDS08, Hor11, LZZ20, WY18, XGBD16]. **Dimensional** [BV06, BLL14, BP23, BF12, BGZ19, BG14, Bos10, Bre21, CDCLLZ11, CLT17, CCG15, CCPT17, CKL+08, CM17, DP18, EA08, EMLO20, FDJ11, FCZ24, Gos14, Gos21, GKS22, HWZ21, HS05, HYR08, HLZ17a, HL17, HHO+18, KX05, KC15, KT18, KB11, LOS13, LM14, LF06, LQB16, MBC+13, MCL23, MY09, NOR+06, NM10, OYS+11, OZ11, PKC05, PWPK10, Plo09, QLY+16, RJM05, Tor06, VV16, XH14, YCF+08, dHGS24, ZJ17]. **Dimensionally** [LBB11]. **Dimensionally-Heterogeneous** [LBB11]. **Dimensions** [HHL12, JRX17, KORS22, MK06, MT09, PM14, SPM18, Sha11, SGNR23]. **Diode** [AF17]. **Dirac** [BFY22, CW22, CZ23]. **Dire** [HS12]. **Direct** [AIKK05, CqC23, DP09, HMS14, SGNR23]. **Directional** [Dur09, Yin15a, Yin15b]. **Directions** [LL23]. **Dirichlet** [BGW14]. **Discontinuity** [CCN07]. **Discontinuous** [CES05, CCEL21, CEL18, EGM13, HH21, LCZ18, PC23, STHS18, WLS08]. **Discrete** [Abd05, AE11, AdHW12, BK07a, BGP+11, BCGP10, BGS21, BG08, CDDY06, Dur09, Fil04, GS18, GT17, HH13, HP23, HHO+18, JSZ20, Lun21, NM13, dHUVW13]. **Discrete-State** [Lun21]. **Discrete-Time** [BGS21, GS18]. **Discretization** [BIL+08, BE03, CCL21, DR19, Eck07, HH21, LL18, LY17, VS11, ZG05]. **Discretizations** [DGY+11, GKP+14]. **Disentanglement** [DL18]. **Disk** [TK15]. **Disks** [HB05, MR12]. **Dislocation** [HFOC05, HFOC08, JRX17, QGZX22]. **Dislocations** [FG08, OOWZ23]. **Disocclusion** [BCV03]. **Disordered** [HTS+18, HTS+22, Mom13]. **Disparate** [Neg18]. **Disperse** [CMV15, CFL+17]. **Dispersion** [CL13, KvNP11]. **Dispersions** [SWF+14, YCF+08]. **Dispersive** [DLS14, Fre22, HI12, Sjö05]. **Displacement** [GPY13, GH11]. **Dissipative** [JL22]. **Dissolution** [BvWP20, GS17, vN09]. **Distance** [WN10]. **Distortion** [EW14].

Distributed [CKS08, tTP05]. **Distribution** [FYW11, Hüt03, JFD03, JO18, MR12, SJF+11]. **Distributions** [BLS18, CLHQ22, SWF+14]. **Disturbed** [BMP05]. **div** [LV05]. **Divergence** [DP09, HP15]. **Divergence-Free** [DP09, HP15]. **Divergences** [PC15]. **Diversity** [PRS07]. **DNA** [FMKS06, GPP+17, MO06, RTE17, VBMS04]. **Do** [PM21]. **Domain** [Bal24, CGLL24, DWC15, Fil12, GE10a, GE10b, GS23, Hod21, Kac24, KX05, LCZ+22, MT19a, MT19b, MB14, MX16, MS23, MS22, OSP10, PBL08, PEV10, SWY21, Wol22, XX14]. **Domains** [AST06, BT14, BJPR20, BL15, DKW09, LLL14, LLM19, MMN11, PWPK10, FLCG21]. **Dominant** [BBPR16, CWS16]. **Dominated** [HPV15, LLM19]. **Donoho** [NYY11]. **Doppler** [GLG05]. **Double** [AF17, CZ23, CL13]. **Doubly** [LYTP13]. **Drawing** [KCH03]. **Drift** [AFM06, KPK13, PSVE09]. **Drifts** [JZ23]. **Driven** [BGS21, FOSS22, GLLL23, GM21, KNR14, LZZ20, MB21, QW05, ZCH15]. **Driver** [CPT21, TZ19]. **Driver-Assist** [CPT21, TZ19]. **Driving** [Hüt03]. **Drug** [CBS04, CSB04, GS17, MP05, VZ08]. **Drying** [CTP13]. **Dual** [CTP13]. **Dual-Scale** [CTP13]. **Duality** [MR18a]. **Duality-Based** [MR18a]. **Dumbbell** [DLY05, LZ06]. **During** [HFOC05, LE05a, HFOC08]. **Dynamic** [ARS17, CK24, GPK12, LXQ09, WSK13a, WSK13b, XXZ23, YM11]. **Dynamical** [BDZ17, FGS24, HNV12, Hor11, HL24, KZ16, KB11, Liu10, Mic11, NOR+06, NN13, PYSF22, PHSN11, STWZ20, TKM15, WKWD07]. **Dynamics** [Abr12, Abr13, AP13, AL20, AL14, Bao04, BFY22, BBK13, BJPR20, BM17, CL03a, CJLM15, CGCY15, CSPD06, CCH+19, CPT11, CT18, CTHC06, DRL05, DFMAT18, DK14, DWZ20b, DRE16, FKKL11, Fan09, FJS18, FY21, FG18, FJK09, FRK+20, FMKS06, GAK15, GLLL23, GLM13, GL24, GZ06, GABD17, HKK05, HH13, HS08, HCY12, HL20, JL05a, JS12, JS13, Kat23, KS18, LZ19, LZZ13, LS16b, MI03, MKBK19, MLS12, MMB12, NM13, OSAND13, PSV23, PR10, PA06, QW05, RSM+11, Rob09, RTE17, RS19, Sch14, SPGL09, ST21a, ST18, TW06, TOM10, TPC09, WGM10, WLS08, WPA18, WOW19, WiOT+13, YDL05, ZKK04]. **Dynamics-Continuum** [HCY12]. **Dysthe** [GKS22].

E. [ST17]. **Easy** [Plo09]. **Eddy** [CMV15, CF10, TS06]. **Edge** [ABCF23, BEZ15, CHW21, DN07, FLCG21, HSW23, IW10]. **Edge-Penalization** [BEZ15]. **Edge-Preserving** [DN07]. **Edges** [KDMT24, Nik05]. **Effect** [BCC+10, BM09, BBPR16, GS23, LR08, RWF21, WF14, vDM21]. **Effective** [ABJ06, BF16, BG08, Cal07, CLMT05, DLS14, EF24, ER21, FFJD09, GP17, GGN07, Gom23, IW10, JFD03, KvNP11, LZ19, LYZ11, MCM12, MD19, NDEG11, Nøe13, SJF+11, WXZ21, vN09]. **Effects** [AGS14, BLO17, BM17, BdCPT09, BdCPT10, CPO+20, CD06, CCM16, DLM06, DW11, GLG05, HWY06, LXY16, MO06, MCG23, WTT05]. **Efficiency** [CCS20, CCM16, EP10, GFKR22, VZS20]. **Efficient** [BK11, BLO17, BEH13, CD06, FJS18, FR20, FRK+20, HL17, JRX17, KLY21, LMT12, LDZN22, MHW13, PHSN11]. **Ehrenfest** [FJS18]. **Eigendeformation** [SFO09]. **Eigenfracture** [SFO09]. **Eigenfrequency** [ADY20]. **Eigenpairs** [CVE11]. **Eigensolver** [HHLZ19]. **Eigenvalue** [DGY+11, DSS12, MMN17, Xu20]. **Eigenvalues** [HS14]. **Eigenvector** [TMC+17, TPM21, TPM22]. **Eigenvector-Based** [TMC+17, TPM21, TPM22]. **Eikonal** [MT19a, MT19b]. **Einstein**

[Bao04, Mar12, Mar13]. **Elastic** [AVE08, ÁGMR08, BGMO08, CM14, CEP18, CGLL24, CRS23, GS13, LLW23, OOWZ23, QSLB21, QHL13, RCMD09, RS06, VM24]. **Elasticity** [CDGH21, LXY16]. **Elastoplastic** [HJN+24]. **Electric** [DFL22, Gor15, LL23]. **Electrical** [ABG05, GSF09, LM04]. **Electrode** [CPO+20, HLL24]. **Electrode-Induced** [CPO+20]. **Electromagnetic** [AB15b, ALZ20, ALLZ24, BBT10, BAZC10, BS19, GTY21, GS09a, LL23, LLZ23]. **Electromigration** [QM10]. **Electron** [AAHM14, NP16, Neg18]. **Electronic** [CG18, CGH18, DGY+11, LCD+22, MLO17, MCL23]. **Electrons** [DDNP17]. **Electrostatic** [ZBK+06]. **Element** [Aar04, AEJ08, AE08, AG11, AGS14, AB15a, AB05, APWY07, BL11a, BEH13, CEGL16, CCSY08, CDG+14, CCJ18, CLLW20, CEL14, CEL15, CELL20, CBL18, DW14, DM10, Eck07, FAO22, FMTV05, FLCG21, FCZ22, GSS21, HJN+24, HP13, HOS14, HZZ14, HZZ15, Hoa09, ILW11, JCM12, JP12, JMW14, LLM19, LCJ19, MX16, MS24, MNLD15, NSD+18, Ohl05, San03, SXZ09, SWOP05, VM24, Xu20, YC23, ZC23]. **Elements** [AKL06, Arb11, CCSY08, HS05, PS12, SB20, XH14]. **Elephant** [BGZ19]. **Elliptic** [ABS13, AAP23, BO16, BM06, CDCLLZ11, CW21, CCSY08, CHW21, CH22, CCG15, CW24, DDN10, DN19, DW14, DM10, EP03, EGM13, GMP10, Glo06, GGS12, HM19, HMT08, HZZ14, HZZ15, HS05, HLZ17a, HMZ19, JZ23, KC15, KY16, LMT12, LS16a, Li18, Li19, LZZ20, LCZ21, Mål11, NPP08, Ohl05, OZ05, PEV10, PS12, San03, SVZ11, ST21b, YCD18, ZCH15]. **Embedded** [CEL+20, IWWM21, KSH03]. **Embedding** [Gui24, LZN19]. **EMD** [KZ16]. **Emergence** [OW11]. **Emergent** [ST21a]. **Empirical** [Kat23, KZ16]. **Encoding** [CSSB04]. **Energies** [BK11, BGP16, Glo06, HMP17, ST18, WN14]. **Energy** [Bal04, CKPS20, CK23, CO17, CCEL21, FG21, HW05, HP23, HHLZ18, LRZ10, LCJ19, LXY16, PC23, QGZX22, RSB10, Sha11, TPC09, VL19, YC23, ZBFO10, ZC23]. **Energy-Based** [Sha11]. **Energy-Conserving** [CCEL21]. **Enforcing** [HCC+23]. **Enhanced** [HDL08, KJ16, LYZ+15]. **Enhancement** [BBT10, FS03, LZ18a, LZ18b, LLZ23]. **Enriched** [CGCL15, FAO22, KC15, LRLH22, LLB18]. **Enrichment** [CP19, CHO07]. **Ensemble** [AGZ20, AZ20, ZG04]. **Entangled** [DLL19]. **Entanglement** [DL18]. **Entrained** [SEZ+18]. **Entropy** [GPP+17, NM09, YZX23]. **Environment** [CEK08, FH20, LB16]. **Environments** [BV04, Spi15, SHB+14, ST17]. **Epitaxial** [BV06, CL03a, LXY16, MC08, SCE11]. **Equation** [AT05, AG11, AGS14, BT14, BFY22, Ber07, Bos10, BML18, CW22, CTL16, CMZ20, CLLW21, CDM+22, CFM17, CELL20, CGHP18, CCP23, DD14, DLM22, DD13, EY11, FY21, Fil12, FRK+20, GL23, Gom23, GN12, Gos21, GR16, GKS22, HH21, HJMS08, HCC+23, Jah11, JQZ11, JL17, LLM24, LR22, LKGK03, LSZ21, LWZ23, LR10a, LY16, LF06, LZ07, LLB18, MBS08, MB10, MP19, MZZ20, MLSH12, NM09, OV18, PRS07, PK07, PCCL24, QY10, Sti04, Sti12, VVR08, VV16, VY21, VMK05, WTJT13, WOW19, XZ21, XK05, Yin15d, ZC23, ZK08, KLX22]. **Equation-Free** [PK07, VVR08, XK05, ZK08]. **Equations** [AE11, AHLW19, BDW10, BST16, BCK05, BV24, BS10, BKV22, BFMR03, BFIL20, BRR22, BEH13, CLMT05, CLLW15, CC22, CqC23, CKPS20, CF10, CC10, CHW23, CE16, CHL20, CR11, CLMZ17, DH22, DN19, DP18, DP08, DP20, DPZ24, DLS14, DKMW14, ELW+22, FOSS22, FNP19,

FLMN+18, FHV11, GMWZ14, GSF06, GSF09, GM21, GGSVE14, GT17, HL09, HM13b, HH13, HKY03, HMT08, HMS19, HYR08, HH23, HS19, HJZ24, IW10, JR03, JZ14, JO18, JL22, JZ23, KT19, KK05, KT18, KvNP11, LPSV18, LMC+08, LS16a, LL17, LCJ19, LW21, LJ18, LCZ21, LSBQ23, LQB16, LQB18, LR08, LYZ11, LH14, MM24, MV22, MT19b, Med05, NP16, NM10, OTV09, OZ05, ÖS07, PKC05, PM21, QLY+16, QSLB21, SM20a, SB20, SW11, SEK+05, Sjö05, Sti07, Str05, SGNR23, Tor06, VZS20, XH14, vN09]. **Equations** [MT19a]. **Equiaxed** [Eck04a]. **Equilibrium** [BV06, GLG05, Kat22, Kat23, KÖ24]. **Equivalence** [XY09]. **Equivalent** [ACCS20, SW19, SWY21]. **Erratum** [CMCS10a, HFOC08, JS13, KMOW20, Mar13, MT19a, RV18, TPM22, WSK13a]. **Error** [Abd05, AAP23, AK12, AR17, AL08, BS17, BFY22, BET10, BML18, CDE24, CL17, DSS12, Eck07, FLMN+18, FY21, GAK15, JK12, MS24, Ohl05, PHSN11, WY18, WXZ21, ZG05]. **Errors** [BE03, LR22]. **Escape** [AGK+11, BL15, CWS10, PWPK10, RH11]. **Essential** [NT10]. **Estimate** [MS24]. **Estimates** [AR17, BO16, DFL22, DLO10, Eck07, FLMN+18, LRZ10, LZ19, MR18b, Ohl05, WXZ21]. **Estimating** [DSS12]. **Estimation** [AL08, BET10, CM14, Cal07, CS06, CL03b, CVE11, GPP+17, HS08, KLX22, KPK13, LBM05, MP19, MDHY17, MS23, OSP10, PSV23, PSVE09, SSW21, SW19, SHB+14, WN14, ZG05]. **Estimators** [WY18]. **Euler** [CHL20, CR11, HH23, LH14, NM10, Sti07]. **Eulerian** [CMV15, JR03, JQZ11, LY12, QLY+16]. **Evaluation** [KK14]. **Evaporation** [NM13]. **Event** [Spi15]. **Evolution** [AF17, BL23, DLM22, DJS17, EKM18, FNP19, LLB18]. **Evolutionary** [DRL05]. **Evolving** [PB09]. **Exact** [ABRE16, BG08, DSS05, FG09, PR10, TW17]. **Example** [CSB04, ZK08]. **Excesses** [KIH15]. **Excitable** [Sha04, tTP05]. **Excited** [BAZC10]. **Exemplar** [ACF12]. **Exemplar-Based** [ACF12]. **Exemplified** [CEK08]. **Exhibiting** [HDFS06, SWHH04]. **Existence** [BS07, BM17, CHL20, Peu16]. **Exit** [CCM16, DSH16, FOSS22]. **Exopolymeric** [SEZ+18]. **Exp** [NYY11]. **Expanded** [JCM12]. **Expansion** [AP06, BAZC10, CE16, DPV03, FG21, JT06, KS18, WLL22]. **Expansions** [BMT10, FA22, JT06, CKLM21]. **Expectations** [Cho03]. **Experiments** [BvWP20, GS23, HKY03, MNLD15, vN09]. **Explicit** [CCEL21, CNPT10, JL05b, Li07, Nøe13, SG09]. **Exploring** [HLZ17a]. **Exponential** [AAP23, CHW21, FY21, HS19, MM24, SWFM13]. **Exponentially** [CHW23, CR06]. **Extended** [CFL+17, HMS14, PVB24]. **Extending** [LQB18, SS23]. **Extension** [SST18]. **Extensions** [CCN07]. **External** [MO06]. **Extinction** [DSS05]. **Extracellular** [SMC20]. **Extracting** [STWZ20]. **Extraction** [THS14, VV12]. **Extrapolation** [SSW21]. **Extravascular** [LSD+20]. **Extrinsic** [LB18].

Faceted [NM13]. **Factor** [Dur09]. **Factorization** [LYM+15, MHDY17]. **Factorizations** [MDHY16, MDHY17]. **Failure** [DSS05, RBSS+21]. **Fano** [ALLZ24]. **Far** [BV06, LL23, OOWZ23]. **Far-Field** [OOWZ23]. **Fast** [AF17, ALT08, BM04, BGS21, CDDY06, CDY09, CCBL11, EW14, EGO15, HHLZ18, HHLZ19, HNW08, IZ12, LSBQ23, MDHY17, Pap12, PS05, QY10, QLY+16, Rey14, RSB10, SWHH04, SM20b, SGNR23, TY20, WG19, YF09, Yin15b, ZKK04]. **Fatigue** [KCL+20]. **Fault** [MMB12]. **FDTD** [CLLW15]. **FE** [CLLW15]. **FE-FDTD** [CLLW15]. **Feature** [ACT+10]. **Feed**

[KX05]. **Feed-Forward** [KX05]. **Feedback** [FOSS22]. **FEM** [AS05, Abd05, KORS22, MM24]. **FENE** [DLY05, HDL08, YDL05]. **Ferromagnetic** [CGCY15]. **Few** [STWZ20]. **FFRT** [EGO15]. **FFTs** [Yin15b]. **Fiber** [BKN+17, CSB08, HTS+18]. **Fibers** [Peu16]. **Fibre** [RKM13]. **Fibrous** [MD19, Mit23, YM11]. **Fidelity** [DN07, ELW+22]. **Field** [Bla19, BKN+17, Bos07, BLI07, BvWP20, CF04, CGCY15, CCOS06, CW24, DDNP17, DN19, Eck04a, Eck04b, Eck07, FG08, FJK09, GPV20, Gor15, KT19, LMWW18, LMC+08, LL23, LZ18a, LZ18b, LLZ23, LCZ+22, Mar12, Mar13, MK21, MWW15, OOWZ23, PS03, RND+12b, STY14, WOW19, XH24]. **Fields** [BBT10, BCV03, BFPS09, BZZ19, CK24, DFL22, GS13, LR10a, LR10b, PC15, RS06, TU10, XEMK09]. **Filled** [LMWW18, MWW15]. **Film** [DKMW14]. **Films** [CL03a, HJV07]. **Filter** [AGZ20, ZG04]. **Filtered** [NM09]. **Filtering** [BdCPT09, BdCPT10, FYW11, HM13a, LMQ17, PS14, TS06]. **Filters** [BML18, GR17, Pap12, JSZ18]. **Filtration** [BGMP03]. **Finding** [ASST12, CWS16, LLZ16]. **Fine** [LFY21, ZML+24]. **Fine-Scale** [ZML+24]. **Fine-Tuning** [LFY21]. **Finely** [BKL+10, BPT06]. **Finescale** [DR20]. **Finite** [Aar04, AKL06, AEJ08, AE08, AG11, AGS14, AB15a, AB05, APWY07, Arb11, BL11a, BS17, BST16, BF16, BEH13, CEGL16, CTL16, CKPS20, CCSY08, CDG+14, CCJ18, CLLW20, CEL14, CEL15, CELL20, CBL18, CCP23, DGY+11, DW14, DM10, Eck07, EGO15, FAO22, FMTV05, FLCG21, FCZ22, GSS21, HH21, HP13, HOS14, HMT08, HZZ14, HZZ15, HS05, Hoa09, ILW11, JLT04, JCM12, JP12, JMW14, LLM19, LZ06, LCJ19, LJ07, LL09, LH14, LXY21, MX16, MS24, Mom13, MNLD15, NSD+18, Ohl05, OZ05, OZ11, PEPL16, PS12, San03, SL17, SXZ09, SB20, SWOP05, TPC09, VVVR07, VM24, WLT06, XH14, XX14, Xu20, YC23, ZC23]. **Finite-Dimensional** [OZ11]. **Finite-Time** [LH14]. **Finite-Volume** [CKPS20, HH21, JLT04, LJ07, LL09, PEPL16]. **Fire** [DXZ24]. **First** [AKH12, CLHQ22, CWS10, CDV16, DWC15, IWWM21, LBW17, LTK17, PWPK10, Sto08, TK15]. **Fitting** [Cal07]. **FitzHugh** [GR18]. **Fixed** [Alm14, AIL05, HKLW20, TPC09]. **Fixed-Stress** [HKLW20]. **Flamelet** [BET10]. **Flames** [BK07b]. **Flat** [RH11]. **Flea** [BGZ19]. **Flexibility** [Aar04]. **Flexural** [MT16]. **Flocking** [AP13, BCCD16, Li21]. **Floes** [DSC24]. **Floquet** [BM22, HSW23, SEK+05, VMM11]. **Flow** [AE06, AKL06, AB15a, AP06, ADGP20, AE11, AKN14, AAPP10, AD03, BP23, BFPS09, BGMP03, BLK16, BBPR16, BFOS07, CLMT05, CL03b, CFL+17, CY03, CD06, CL09, CEPT12, CE10, CEL18, DWZ20a, DGN+08, DHL14, EAW04, FMQ05, Fil04, FDJ11, FR20, FCZ22, FCZ24, GKP+14, GLM13, GK10, HP15, HJV07, IZ12, JR03, JLT04, KG13, LSD+20, LH11, LZ07, LJ07, MBC+13, MB14, MK21, Nor09, PM14, QW05, QV03, RV15, RV18, SPM18, Str05, TOM10, VKK+19, VHPT17, WLL22, WLT06, ZBPR21]. **Flows** [ADGP20, ACT+10, AS21, ADM+08, BELS15, CMV15, CHL20, CPT11, EGT12, ER21, FAO22, GE10a, GE10b, HWY06, IMP08, ILW11, JCM12, JMW14, KLX22, KT18, KvNP11, LMS11, LCZ+22, MNLD15, NX03, SXZ09, WXZ21, YY14]. **Fluctuating** [MCG23, UBDB+12, WBG08]. **Fluctuations** [BBK07, GM16, MTW16]. **Fluid** [AE06, AMR03, AR05, AK07, BV24, CCH+19, CKP20, CDV16, DLM06, DFL10, EF24, GJL+03, HPČ+09, JS10, LMWW18, MCM12, MWW15, NP16, SEZ+18, YY14]. **Fluid-Cell** [HPČ+09]. **Fluid-Filled** [MWW15]. **Fluid-Particle-Spring** [JS10].

Fluids [BLL14, BFM+05, DBGA10, YDL05]. **Flux** [DKSS22, ZPC+20]. **Flux-Based** [ZPC+20]. **Flux-Limited** [DKSS22]. **Fluxes** [Bre21]. **FMM** [SGNR23]. **FMM-LU** [SGNR23]. **Fokker** [CWXY21, ZJ17, DPZ24, DSS05, HS14, LL18, LF06, PKC05, VHPT17]. **Folding** [CSPD06]. **Foldy** [BS19, CS14, CS22, Kac24]. **Foldy-Lax** [CS22]. **Follicular** [CMMS13, ECS07, Mic11]. **Force** [CO17, CCOS06, DLO10, DOS12, Hüt03, LLO12, LW14, RND+12b]. **Force-Based** [DLO10, DOS12, LLO12]. **Force-Field** [RND+12b]. **Force-Mixing** [CO17]. **Forced** [OYS+11, TKM15]. **Forces** [BL23]. **Forcing** [GN05, LRZ10]. **Forcings** [SS23]. **Forecast** [AFM06]. **Forecasting** [BGMS21]. **Forest** [ACH+21]. **Form** [JZ23, ST21b]. **Formalism** [HL20]. **Format** [FOSS22]. **Formation** [EO05, HH23, KTY09, LE05a, MTW16, PM21, ZJL+23]. **Formations** [CD06, CL09, FDJ11]. **forms** [CR06]. **Formula** [Alm14, CGK21, Nøe13, RTW+06]. **Formulas** [HB05, SE07]. **Formulation** [BCGP10, BS17, BCM13, DLL19, LY12, LL09]. **Formulations** [NSD+18, PEPL16, YWS11]. **Forward** [CW05, CLMZ17, HH13, KX05, MMO23, RND+12a]. **Forward-Backward** [CW05, HH13]. **Foundations** [Man06]. **Fourier** [AdHW12, CDY09, LYY15, RS06, YF09, dHUVW13]. **Fourth** [CCBL11]. **Fourth-Order** [CCBL11]. **FPU** [GMWZ14]. **Fractal** [AST06, AD16, HKP20, PKC05, VK10]. **Fraction** [Alm14, DMZ17]. **Fractional** [BGS21, BGP18, DLTZ18, Gom23, JO18, KNR14, LWZ23, TU10, XZ21]. **Fracture** [HHO+18, KJ16, LM14, SFO09]. **Fractures** [LMWW18, MWW15, RKM13]. **Fragmentation** [CCS20, JS10]. **Frame** [COS10, DJS17, DN07, GABD17]. **Framelet** [JSZ20]. **Framework** [ACF12, ABRE16, BP23, CHS17, DBGS08, Glo06, Glo08, HWY06, KCL+20, LB16, MB14, NLS20, NPP08, OW23, SHB+14, STHS18]. **Frank** [AE11]. **Free** [AAHM14, CKPS20, DP09, FG21, Gos21, HP15, HFOC05, HFOC08, KvNP11, MTW16, PK07, San03, VVR08, WN14, XK05, ZK08]. **Freedom** [SWHH04]. **Frenkel** [AL08]. **Frequencies** [LQB16, QSLB21]. **Frequency** [AIL05, CHW23, Dur09, GTY21, GS23, JJ15, LDZN22, LR10a, LR10b, LSH15, LSBQ23, OSP10, QLY+16, THS14, Yin15a, Yin15b]. **Friction** [KK14]. **Front** [KLX22, NX03, SXZ09]. **Fronts** [Gom23, SE06]. **Frozen** [GPW+12, LY12]. **Full** [BS19, CE16, CLHQ22]. **Fully** [Abd05, GKP+14]. **Function** [CLLW20, CH22, FM03, LL09, NMJ11, VMM11]. **Functional** [CF15, DWZ20a, DdGYZ23, FK19, GPK12, HFOC05, HFOC08, LOS13, LZN19, SVZ11, XH24, BEZ15]. **Functionalized** [DLM22]. **Functionals** [KOJ05]. **Functions** [BKL+10, CHW21, DLL19, FAO22, KK14, LL18, SST23]. **Fundamental** [CCM16, VHPT17]. **Fusion** [KBP+11]. **Fuzzy** [SSVE10].

Gabor [JSZ18]. **Galerkin** [CES05, CC10, CCEL21, CEL18, DPZ24, EGM13, HH21, JL17, LJ18, MB21, PYSF22, PC23, STHS18, WLS08]. **Galerkin-Based** [MB21]. **Galvanic** [BM06]. **GANs** [CBRFK23]. **Gap** [AKSZ06, BK07a, DD13, LLZ23, SRK05]. **Gap-Tooth** [SRK05]. **Gaps** [ÁGMR08, LFY21, LJ17]. **Gas** [AAPP10, AVE08, BGH11, CKP20, GABD17, KT18, LE05b, Str05]. **Gaseous** [BGMO08]. **Gates** [AGK+11]. **Gauge** [AL20]. **Gaussian** [BML18, CFL+17, JJ15, LY12, MDHY17, QY10, TQR07]. **Gene** [IHM09]. **General** [CKPS20, GS15, HHLZ18, KT19, LY12, SHB+14, ST18, XY09]. **Generalization**

[LFY21, OW23]. **Generalized** [AK03, BL11a, CEGL16, CCJ18, CLLW20, CCEL21, CEL14, CEL15, CEL18, CELL20, ED03, Fan09, FCZ22, LCJ19, MM24, PC23, RTW+06, VM24, YY14, YC23, ZC23]. **Generated** [ACCS20]. **Generating** [KCL+20]. **Generation** [ARR18, BN05, HKDS08, MS23, Sou05]. **Generator** [GS13, SSW21]. **Generators** [CVE09]. **Generic** [CPT21]. **Genome** [LH06]. **Geometric** [CM17, DLM22, DAG09, MN11]. **Geometrical** [FMQ05, FM03, QLY+16, QV03]. **Geometries** [GK10, LCZ+22, MMPS17]. **Geometry** [BS10, EE09, LE05a, Nøe13]. **Geometry-Based** [LE05a]. **geostrophic** [LR08]. **Geothermal** [KJ16]. **Germ** [CMMS13]. **Giant** [BM09]. **Gilbert** [CDM+22]. **Ginzburg** [GT18, SST23]. **Given** [WF14]. **Giving** [DHZ22]. **Glassy** [Cal07]. **Gliding** [CHS17]. **Glioma** [DKSS22]. **Global** [AEJ08, BS07, CD06, CL09, GKP+14, HC14, HCC+23, MAG21, ZBK+06, ZBFO10]. **Globally** [LL19]. **GMsFEM** [CP19]. **GMsFEMs** [Li19]. **Gordon** [BDW10, FY21, MZZ20]. **Governed** [DD14]. **Governing** [WOW19]. **Grad** [ÖS07, Tor06]. **Gradient** [ADY20, AG05, DWZ20a, DFL22, HCC+23, LLY19, ST17, WY18]. **Gradient-Based** [HCC+23]. **Gradients** [PC15]. **Grain** [GPP+17, QGZX22, SBMA22]. **Grained** [DK14, HL24]. **Graining** [AE11, BHKT23, BLPV15, EAW04, HL20, MSAW10, ÖS07]. **Granular** [CPT11]. **Graph** [DR20, HTS+18, HHO+18, JSZ20, RSB11, SST23]. **Graph-Based** [HHO+18]. **Graph-Structured** [JSZ20]. **Graphene** [BCMQ23, CJLM20]. **Graphs** [BF12, KCH03]. **Gravity** [GKS22]. **Gray** [BCV03]. **Grayscale** [CFM17]. **Greater** [Aar04]. **Grid** [DIW20, EP10, Fan19, GDCB18, Gui24]. **Grid-Particle** [EP10]. **Grids** [AKL06, MSAW10, PEPL16]. **Gross** [HP23, IW10]. **Ground** [Bao04]. **Group** [BFMR03, BFIL20, DRLS04, WYG07]. **Groups** [BRV12]. **Growth** [ABM05, BV06, BCP06, CL03a, CEK08, CDG+21, CMMS13, HJV07, JL05b, LMS17, LXY16, MC08, Rey14, SPM18, SCE11]. **Guiding** [Bos07]. **Guiding-Center** [Bos07]. **Gyrokinetic** [Bos10]. **Gyroscopic** [BM17].

Hadamard [LSBQ23, LQB18, QSLB21]. **Hadamard-Babich** [LSBQ23]. **Half** [AIL05, MCG23]. **Half-Space** [AIL05, MCG23]. **Hall** [BM09]. **Hamilton** [GSS21, GGSVE14, LYZ11, OTV09]. **Hamiltonian** [GKS22, HVS10, PR10, TOM10]. **Hamiltonians** [LYZ11]. **Härm** [GP11]. **Harmonic** [BN05, CM14, NDEG11, QLY+16, SST18, Sou05]. **Hash** [Rey14]. **HDMR** [JMW14]. **HDWT** [Dur09]. **Heart** [WiOT+13]. **Heat** [AE09, ARR18, BP14, CD03, CL21, CGHP18, EF24, HCY12, HC14, MS23, SW19]. **Heating** [GTY21]. **Heavy** [AVE08]. **Heeger** [CD23]. **Helices** [CCOS06]. **Helmholtz** [CHW23, EY11, FLCG21, HP22, HL17, LY16, LSBQ23, OV18]. **Heteroepitaxial** [HJV07]. **Heteroepitaxy** [RS06]. **Heterogeneity** [FZW07]. **Heterogeneous** [AE06, AS05, Abd05, AE08, AG11, AGS14, AB15a, AS21, AV21, AKN14, ABJ06, AR14, AR17, BST16, BGP18, CY03, CES05, CD06, CL09, CLLW21, CHW23, Che08, CCEL21, CEL14, DIW20, DM10, EAW04, Ebe05, EGT12, FAO22, FDJ11, Fre22, FCZ22, FCZ24, GGS12, HPV15, HMT08, HMS19, JFD03, KR15, LPSV18, LR22, LBB11, LMT12, Li18, Li19, LE05b, LH11, LZ07, MM24, MR18a, MNLD15, Nøe13, Ohl05, OV18, PVB24, SE06, SJF+11, TTD19,

VM24, YM11, ZCL14]. **Heterostructures** [MCLO18, MCL23]. **Heuristics** [Cal07]. **Hidden** [Pap12, TOM10, WN10]. **Hierarchical** [AKL06, BEH13, CCOS06, DP18, FLYZN19, KJ16, Mil05, MDHY16, PEV10, TNV04, ZBPR21]. **Hierarchically** [HHLZ19]. **Hierarchies** [AMR03, BGH11, MT09]. **Hierarchy** [DHZ22]. **High** [AKSZ06, ACCS20, BF12, BGW14, BELS15, CKLM21, CW21, CHW23, CCG15, CE10, CEL18, CM17, EA08, ELW+22, FAO22, FA22, FHV11, GE10a, GE10b, GTY21, Gor15, HZZ14, HS05, JJ15, JRX17, JLP18, JL22, KC15, KB11, LMT12, LR10a, LR10b, LSBQ23, LQB16, Mit23, NOR+06, OV18, OZ11, QLY+16, QSLB21, XH14, YZX23, YC23, Yin15a, Yin15b]. **High-Contrast** [BELS15, CCG15, CE10, CEL18, GE10a, Gor15]. **High-Dimensional** [CM17, HS05, KB11, NOR+06]. **High-Entropy** [YZX23]. **High-Fidelity** [ELW+22]. **High-Frequency** [GTY21, LSBQ23, QLY+16]. **High-Order** [HZZ14, FAO22, JL22, Mit23]. **Higher** [AG05, BCW22, CE16, Sti07]. **Higher-Order** [CE16]. **Highly** [BCW22, CLMZ17, DN19, EGT12, FDJ11, FCZ22, FCZ24, ILW11, KZ16, LJ07, PS12, SG09, TW17]. **Hilliard** [BEG07, CFM17, DD14, DLM22, LZZ13, PM21, SP24]. **Hindrance** [SPM18]. **Hitting** [SH10]. **HLL** [CG18]. **HMM** [BJ11]. **Holes** [SWY21]. **Homentropic** [NM10]. **Homeostasis** [MB10]. **Homogeneous** [DLO10, DOS12, OYS+11]. **Homogenization** [AT05, APV12, AHV15, AD19, AAP23, AB05, AE09, AD17, AAPP10, AL11, AD03, Arb11, AGNB22, BGMO08, Bal08, Bal10, BLS18, BM06, BP14, BGZ10, BS10, Boy08, BELS15, BGP18, CEL+20, CDE24, CGM15, CY03, CCSY08, CLLW22, CE16, CL04, CP06, DRZ07, DLS14, DR20, DW11, Dun15, Eck04b, EF24, EP03, EP04, EKL15, FG23, GP17, GSS21, GTY21, Glo06, Glo08, GSF06, GW05, GM21, GK10, GR16, GM16, HL23, HKP20, HLL24, HE21, HM19, IZ12, JZ14, JL22, JZ23, KS08a, KNR14, KB16, KY16, KMP23, LM15b, LM04, LZ18b, LCZ21, LYZ11, MCM12, MK21, MS08, MS22, NV18, OTV09, Ohl05, OZ05, OPS16, OZ11, Owh15, PP17, PL24, Pta13, QHL13, SRK05, SEK+05, Sjö05, ST21b, Wol22]. **Homogenization-Based** [Arb11]. **Homogenized** [BLST23, BMP05, CK23, JLW16, MP19, ZML+24]. **Homology** [DKW09]. **Honeycomb** [CW21, XZ21]. **Hookean** [LZ06]. **Hopping** [CJLM15, FL18, JQZ11]. **Huge** [KCH03]. **Human** [FKH07, MP05]. **Huygens** [QLY+16]. **Hybrid** [BST16, CWD+08, CLLW15, DP08, DBGA10, EP10, HPV15, HM13b, HH21, JMW14, LPSV18, LB16, MB14, MLSH12, MTV14, OSAND13, SMC20, VVVR07, VKK+19, WSK13b, WSK13a]. **Hybrid-Mixed** [HPV15, LPSV18]. **Hydrated** [CSB08]. **Hydraulic** [LBB11]. **Hydrodynamic** [CKPS20, CHS17, OSAND13]. **Hydrodynamics** [DGM07, DBGA10, FZW07, FMKS06, ÖS07, QW05, TZ19, UBDB+12, WBG08]. **Hydrophobic** [FRK+20, KN06]. **Hygroscopic** [CTP13]. **Hyperbolic** [ADGP20, AW13, CES05, CNPT10, DH22, DQS23, DR19, FMQ05, GS15, JJ15, LY12, MN11, STY14]. **Hyperbolic-Transport** [ADGP20]. **Hyperbolicity** [HCC+23]. **Hypergraph** [SCS19]. **Hypocoercivity** [LJ18]. **Hysteresis** [BP05, GT17, XXZ23].

Ice [DSC24, SEZ+18]. **Identification** [CEK08, Man06]. **Identifying** [Che08, HHO+18]. **II** [AKSZ06, CWS10, CSB04, DP08, FZW05, Glo08, HCC+23, LZ18b, RND+12b]. **Illustrations** [ST21b]. **Image**

[ACF12, BEG07, BCM05, COS10, CC06, CFM17, CCBL11, CMM11, DJS17, GO07, GO09, GST14, HWZ21, HW05, HNW08, JZZ11, KBP+11, LV05, LM05, MSE08, OSV03, OBG+05, Pey08, TNV04, YLY15]. **Images** [ACHR06, BCCF14, EW14, GR07, KOJ05, LAG09, Nik05]. **Imaging** [AIKK05, AGJ13, ARS17, BP07, BdCPT09, BdCPT10, BGS19, Gar05]. **Immersion** [KAO05]. **Immiscible** [AAPP10, JR03]. **Immune** [GGM+05]. **Immunodeficiency** [MP05]. **Impact** [KDMT24]. **Imperfect** [VMM11]. **Implants** [HPČ+09]. **Implementation** [MMO23, XGBD16]. **Implicit** [CNPT10, GKP+14, Gui24, MBC+13, PR10, SG09]. **Implicit-Explicit** [CNPT10, SG09]. **Importance** [DSW12, SM20b, TASY+05]. **Improvable** [Sha16]. **Improved** [Aar04, BFY22, XH24]. **Improvement** [GR17, LRZ10]. **Improving** [KN06]. **Impulse** [MI03]. **Impulsive** [BSK07]. **In-** [OSZ14]. **In-Plane** [FZW05]. **Included** [WF14]. **Including** [BMP05, LM04]. **Inclusion** [Nøe13]. **Inclusions** [AIKK05, AIL05, BGMO08, DFL22, EKH06, FFJD09, MMN17, RKM13]. **Incoherent** [BAZC10]. **Incommensurate** [CLT17, EMLO20, MLO17, MCLO18]. **Incompressible** [DFMAN20, HP15, HYR08, HH23]. **Incorporating** [HL10a]. **Incorporation** [CD06]. **Increased** [Aar04]. **Indefinite** [Yin15c]. **Independent** [BK11, HM17, MR03]. **Indeterminacy** [FKMW05]. **Induced** [BCC+10, CPO+20, FKMW05, JS10, SWFM13, SWF+14, SB20]. **Induction** [NSD+18]. **Inelastic** [MR03]. **Inertial** [PS03]. **Inference** [BGS21, Cal07, CVE09, GS18, JO18, LYTP13, RSM+11, RND+12b]. **Infinite** [BKL+10, DLPD12, Sch14]. **Infinitely** [GH11]. **Influence** [LYZ+15]. **Information** [AEJ08, CMCS10a, CMCS10b, Che08, HW05, KDMT24]. **Ingredients** [SE07]. **Inhomogeneous** [CqC23, LSBQ23, LQB16, NK11, QLY+16, VMM11, XEMK09, YC23]. **Initial** [Bos07, PYSF22]. **Initialization** [VVR08]. **Initio}** [LXY17]. **Injury** [LSD+20]. **Inpainting** [ACF12, BEG07, CFM17]. **Input** [LOT05]. **Input/Output** [LOT05]. **Inputs** [DPZ24, JL17, JLP18, LJ18]. **Insight** [CMMS13]. **Instabilities** [HI12]. **Instability** [ARRV12, YCF+08]. **Instanton** [FG21]. **Instantons** [GGSVE14]. **Insulators** [BM22]. **Integer** [WBE+18]. **Integral** [AdHW12, CDY09, CLHQ22, FRK+20, LYY15, LS16a, MDHY16, SGNR23, dHUVW13]. **Integrals** [Yin15b]. **Integrate** [DXZ24]. **Integrate-and-Fire** [DXZ24]. **Integrated** [OSP10]. **Integration** [BRDVE14, GK08, SGOK05, SG09, TOM10, WSK13a, WSK13b]. **Integrative** [TW06]. **Integrator** [FY21, LSBQ23, MI03]. **Integrators** [CW22, FG18, LS18, LW14]. **Interacting** [BBT10, BKN+17, FHV11, GPV20, JLS22, KT14, MK06]. **Interaction** [AP13, CEP18, DKMO03, HPČ+09, HKY03, JS10, LZ23, MBL20, Str05, ZMC21]. **Interactions** [BT14, BDZ17, CHS17, DR20, GPR17, KX05, Peu16, Zha21]. **Interatomic** [OW23, Sha16]. **Intercalation** [HLL24]. **Interception** [DBGS08]. **Interface** [AD16, BF12, DW11, EFM12, GPW+12, GBS17, HKP20, HH13, MCM12, MMB12, SP24, SE06, VMM11, WOW19]. **Interfaces** [Bre23, KÖ24, QHL13, TCB24]. **Interfacial** [BGP16, VMM11]. **Interferometry** [BPT06]. **Interlaced** [CR11]. **Intermediate** [JO18]. **Internal** [DKMO03, VY21]. **Interplay** [RV15, RV18]. **Interpolation** [BCV03]. **Interpretable** [WLL22]. **Interpretation** [PC15]. **Intracellular** [GSF09]. **Intrawave** [THS14]. **Intrinsic** [BZZ19, LZZ20]. **Invariance** [GMO17, KAO05, KD05]. **Invariant** [KMOW18, KMOW20]. **Invariants** [BM22]. **Invasion**

[AWA06, BM18, DKSS22, SMC20, TLCW13]. **Inverse** [AD19, AGZ20, BFOS07, CGK21, FLR11, GLM15, HMS14, LW21, LLW23, dHGS24]. **Inversion** [LDZN22, SSO21]. **Investigation** [LH14]. **Inviscid** [NM09]. **Involving** [KvNP11]. **Ion** [MZCJ16]. **Irregular** [FAAC09]. **Irregularly** [ACHR06]. **Irreversible** [GL24, LS18, MS04]. **Island** [CL03a, LE05a]. **Islet** [GSF09]. **Isothermal** [DGM07]. **Isotropic** [JFD03, LS16a, OYS+11]. **Issue** [AHGJ05]. **Itô** [OSP10, PRS07]. **Iterated** [BRV12, DN19, LCZ21]. **Iteration** [FOSS22, XH24]. **Iterative** [BSK07, CW22, HKLW20, LXQ09, OBG+05, YCD18].

Jacobi [GSS21, LYZ11, OTV09]. **Jacobian** [GPW+12, GKP+14]. **Joint** [BCV03, CLY+11]. **Joint-MAP** [CLY+11]. **Jump** [CVE09, GAK15, Giv07, GK08, Kat22, MSVE09, NK11, SH10]. **Jump-Diffusion** [GAK15, Giv07, GK08]. **Justification** [ÁGMR08, BMT10, CS14, CS22].

Kalman [AGZ20, ZG04]. **KdV** [GMWZ14]. **Keeping** [BKL+10]. **Kernel** [BGMS21, SSO21]. **Kernels** [BRV12]. **Key** [SE07]. **Kinetic** [AS21, AMR03, AR05, BP07, BCCD16, BDZ17, BS07, BJPR20, BSS14, BV24, CY13, CLHQ22, CKP20, CJLM20, DDNP17, DLM06, DP08, DP20, DQS23, FZW05, FHV11, Gos14, HM13b, HT17, HS19, JLP18, LJ18, MC08, MT09, Neg18, PM14, Rey14, RBSS+21, RBHK13, ST18, ST17, TZ19, VY21, VHPT17, ZHY19, ZFW05]. **Kinetic-Controlled** [TZ19]. **Kinetic/Fluid** [CKP20]. **Kinetics** [AH12, ARR23, BEHL16, CMMS13, Eng09, MBS08, WF14]. **Kink** [BV06]. **Klein** [BDW10, FY21, Gos21, MZZ20]. **Kohn** [CDG+14, DWZ20a, LZN19, XH24]. **Kolmogorov** [KLX22, SXZ09]. **Kontorova** [AL08]. **Koopman** [SSW21]. **Kramers** [Gos21, HNV12]. **Krylov** [DRZZ18]. **Kubo** [EMLO20]. **Kuramoto** [Sti04]. **Kutta** [HS19].

L [NOR+06]. **Lagrange** [Neg21]. **Lagrange-Multiplier** [Neg21]. **Lagrangian** [BK06, BFM+05, CLMZ17, DQS23, FLR11, KLX22, Sch14]. **Laminates** [Mil05]. **Landau** [CLZ16, CDM+22, GT18, LR22, SST23]. **Langevin** [AHLW19, GLLL23, HS08, HL20, JS12, JS13, LMC+08, LS18, PSV23, ST18]. **Laplace** [GN12]. **Laplacians** [BGP18]. **Large** [Bal10, BK07b, CS06, CLMT05, CMV15, CF10, DLS14, DRZZ18, GL23, HKY03, HL17, JZ23, LRZ10, LXY17, LOT05, Lun21, SWFM13, ST17, TS06]. **Large-** [HKY03]. **Large-Eddy** [TS06]. **Large-Scale** [CS06, DRZZ18, LOT05]. **Larmor** [BF16, CCP23]. **Laser** [BN05]. **Lasers** [AAHM14]. **Latent** [LYTP13]. **Lateral** [Dun15, PRS07]. **Lattice** [BSS14, CK23, JC13, LE05b, LCZ+22, OSAND13, VVVR07, VV12, YY14, ZHY19]. **Lattice-Gas** [LE05b]. **Lattices** [GMWZ14, VO13]. **Law** [BGMP03, GPY13, MCM12]. **Laws** [AW13, BZZ19, CE16, PKC05]. **Lax** [BS19, CS14, CS22, Kac24]. **Layer** [AKSZ06, BdCPT09, CL03b, CEP18, EF24, FA22, GGS20, KNR14]. **Layered** [BPT06, BS16, Gar05, Gom23, QHL13]. **Layering** [BdCPT10, GS10]. **Layers** [EY11, FG23, HE21, MLO17]. **Leap** [MTV14]. **Leaping** [CL17, Li07, RPCG05]. **Learned** [COW22, OW23]. **Learning** [BLST23, BKV22, CLLW22, CM17, HCC+23, MSE08, ZML+24]. **Least** [CCJ18, Nik05]. **Least-Squares** [CCJ18, Nik05]. **Legendre** [LRLH22]. **Length** [DKMO03, Mom13, Rob09]. **Level** [BKL+10, BIL+08, DYOD08, LBM05].

Level-Set [LBM05]. **Levels** [BCV03]. **Leverett** [WTJT13]. **Li** [FG09]. **Lie** [CCH+19, WYG07]. **Life** [HK05]. **Lifetime** [OW11]. **Lifshitz** [CDM+22, CLZ16, LR22]. **Lifting** [KN06, VV12, VV16]. **Light** [DBGS08, KM11, ZMC21]. **Like** [DH22, HT17, HMS14, LQB16, OPS16, BFRD13]. **Likelihood** [HS08, MDHY17, PS14]. **Likelihood-Based** [HS08]. **Limb** [FKH07]. **Limit** [BS17, BR12, BLL14, BCM13, CY13, CG18, DLPD12, DW22, EA08, FG08, GNR21, GL23, GPK12, Gos21, GM16, Kat23, KK14, MZZ20, Sch14, SíZ23, VHPT17]. **Limited** [AEJ08, DKSS22, LFY21]. **limiting** [VM24]. **Limits** [APV12, BK07a, Bal08, BDW10, BP23, CDV16, GPV20, MT09, PS03, PS05, SP24, STY14, ST17]. **Line** [JC13, KG13, RBSS+21, SE07]. **Linear** [Abr12, BL11b, BM17, CHW21, CELL20, CDGH21, DLY05, FLR11, GO07, HVS10, HM13b, HL24, LY12, SSO21, SS23, ZJL+23, EFS14, McC05]. **Linearized** [AHV15]. **Liners** [MRTV14]. **Lines** [DDNP17, SP24]. **Linked** [Peu16]. **Linking** [MS04]. **Lipid** [FRK+20]. **Lippmann** [Yin15d]. **Lipschitz** [BKL+10, GM21]. **Liquid** [Eck04a, MZ15]. **Liquid-Solid** [Eck04a]. **Liver** [CKS08]. **Living** [HL10a]. **Local** [AAP23, ACHR06, BL11a, BLI07, CL09, CHO07, CNPT10, GP17, HFOC05, HFOC08, Kat22, Kat23, LL19, LAG09, MO06, Nøe13, PEV10, SS22, TTD19, Yin15b]. **Local-Global** [CL09]. **Local-Nonlocal** [TTD19]. **Locality** [CO16, CBL18]. **Localization** [BIT10, Che08, DL18, Dur09, HM17, TTD19]. **Localized** [CD23, DLM06, HP22, HP23, LLM24, OZ11]. **Locally** [AR17, HKP+18, HLZ17a, Pta13, Pta15]. **Locating** [AIL05, LLZ14]. **Log** [NYY11]. **Log-Exp** [NYY11]. **Lognormal** [JFD03]. **Long** [AGS14, AFM06, AR14, BFY22, CSPD06, EKM18, FY21, GS09b, GH11, GPR17, Gom23, MI03, PS19, SWHH04, Zha21]. **Long-Range** [GS09b, GPR17, Gom23, Zha21]. **Long-Term** [SWHH04]. **Long-Time** [AGS14, BFY22, CSPD06, EKM18, FY21]. **Looping** [AKH12]. **Lorentzian** [MS23]. **Low** [CLLW21, CCOS06, CKL+08, CTHC06, DW22, FLMN+18, FG21, HLZ17a, HLZ17b, Li18, OLJ20]. **Low-Rank** [CLLW21, Li18, OLJ20]. **Low-Resolution** [CCOS06, CTHC06]. **LU** [SGNR23]. **Lungs** [CGM15]. **Lymph** [DWC15].

Mach [FLMN+18]. **Machine** [COW22, HCC+23, OW23]. **Machine-Learned** [COW22, OW23]. **Macro** [CHS17, CBRFK23, CKP20, CJLM20, DPZ24, GFKR22, HDL08, PCCL24, VZS20, YDL05]. **Macrodiffusion** [ABJ06]. **Macromolecular** [SWF+14]. **Macroscale** [DR20]. **Macroscopic** [BLL14, DLM06, DKSS22, FG08, FZW07, HDL08, KT14, MT09, Peu16, QM10, ST17, VV12]. **Magnetic** [Bos07, DDNP17, NSD+18, WTT05]. **Magnetism** [KS08a]. **Magnetized** [NP16, Neg18]. **Magnetoquasistatic** [NSD+18]. **Main** [BCC+10]. **Mandel** [vDM21]. **Manifold** [CLLW22, KAO05, RDS+05, SW20, XY09]. **Manifold-Valued** [RDS+05, SW20, XY09]. **Manifolds** [ASST12, BCCF14, CM17, GLLL23, GMO17, LLZ16]. **Manufacturing** [CRS23]. **Many** [HNV12, LB16, Mar12, Mar13, MMN17]. **Many-Body** [Mar12, Mar13]. **Many-Particle** [HNV12]. **Map** [BGW14, LAG09, CLY+11]. **Mapping** [CGHP18]. **Maps** [CKL+08, LFY21, ZML+24]. **Market** [MTW16, OSP10, ZYL05]. **Market-Microstructure** [OSP10].

Markov [AH12, CWS16, CVE09, DSS12, KS18, Lun21, MSVE09, NT10, Pap12, SNS10, SH10, TWZ15, WPA18, WBE+18, WN10, dWMH13]. **Markovian** [BLST23, KTY09, LS16b]. **Mass** [BFRD13, CD03, Mic11, Neg18, PR10, SWY21, XX14]. **Mass-matrix** [PR10]. **Mass-Spring** [BFRD13]. **Massive** [DMZ17]. **Master** [CTL16, GL23, Jah11, MBS08, MB10, MLSH12]. **Matched** [BMT10, EY11]. **Matching** [JT06, ZBFO10]. **Material** [Sjö05]. **Materials** [AKSZ06, CM14, CLLW15, CGLL24, DH20, DFMAN20, EAC09, EKH06, HK05, HCY12, HDL08, KCL+20, Nøe13, OPS16, WCW15]. **Mathematical** [ALZ20, AL14, ABRE16, BCMQ23, DdGYZ23, GP17, GGM+05, LLZ23, LSD+20, Neg21, ÖS07, STY14, vDM21]. **Matrices** [FLYZN19, HLZ17b, HHLZ18, SSO21]. **Matrix** [Bla19, DG09, DRLS04, HHLZ19, PS12, SMC20, WOW19, PR10]. **Matrix-Valued** [WOW19]. **Maturity** [Mic11]. **Maximizing** [OW11]. **Maximum** [Mil05, MDHY17, PS14]. **Maxwell** [Bos07, BS10, CLLW15, CE16, Fre22, HMS19, JZ14, LPSV18, LW21, LQB16, LQB18, QLY+16, SW11, SEK+05, Sjö05]. **MD** [RND+12a, RND+12b]. **Mean** [AKH12, AGK+11, BKN+17, CGCY15, CWS10, DWC15, FJK09, GPV20, IWWM21, KT19, Mar12, Mar13, Pap12, PWPK10, STY14, TK15]. **Mean-Field** [BKN+17, CGCY15, STY14]. **Mean-Reverting** [Pap12]. **Measure** [ALT08, LAG09]. **Measurements** [CPO+20, LR10b]. **Measures** [JV21, TMC+17]. **Mechanical** [ASST12, CSB08]. **Mechanics** [FGS24, SP24, VFEK11]. **Mechanism** [DD14]. **Mechanisms** [PB09]. **Media** [AE06, AB15a, AKN14, ABJ06, AAPP10, ACCS20, ACH22, AR17, BGMO08, Bal04, BP07, Bal08, BJ11, BPT06, BGW14, BS16, BGS19, BGMP03, BBPR16, BvWP20, BEH13, CTP13, CD03, CY03, CGCY15, CCEL21, CEPT12, CEL14, DIW20, DR20, EAW04, Ebe05, ED03, EGT12, FAO22, FFJD09, FCZ24, GE10a, GE10b, GTY21, Gar05, GS09a, GS09b, Gar21, Gom23, GV19, GGS12, GS13, HSW23, HWY06, IW10, IMP08, ILW11, JLT04, JCM12, JMW14, JT06, KdL15, KR15, KB16, LPSV18, LMS11, LJ17, LSBQ23, LZ07, MK21, MS24, Mom13, MNLD15, NDEG11, Nor09, PKC05, PB09, QLY+16, QSLB21, Sha04, VK10, YM11, tTP05]. **Mediated** [BDZ17, KSNdR21]. **Medium** [Alm14, BP14, CLMT05, CP06, EF24, HB05, JFD03, LMWW18, LQB16, MCM12, MWW15, SJF+11, vN09]. **Medium-to-Large** [CLMT05]. **Membrane** [CPO+20, TASY+05]. **Membranes** [BLS18]. **Memory** [BR12, GS23, MR03, PS19]. **Mesh** [XGBD16]. **Meshfree** [GZ06, KT14, Sch14]. **Meso** [BR12]. **Mesoscale** [BCP06, LE05b, MMN11, MMN16, PKC05, VVR08]. **Mesoscopic** [BEHL16, GS13, HL10a, HHL12]. **Messaging** [LYTP13]. **Metabolic** [CS06]. **Metabolism** [CKS08]. **Metadynamics** [GL24]. **Metallic** [DdGYZ23, ZMC21]. **Metals** [KSH03]. **Metamaterials** [ACCS20]. **Metastability** [HDFS06]. **Metastable** [HS10, WKWD07]. **Metasurfaces** [ACCS20, ALZ20, ALLZ24]. **Method** [Aar04, AE06, AKL06, AG11, AGS14, AB15a, AHV15, AJS16, AST06, AB05, AV21, APWY07, AGNB22, BCGP10, BS17, BSK07, BST16, BBK07, BMT10, BK06, BLO17, BIL+08, BEH13, BP16, CWD+08, CC22, CqC23, CM07, CFL+17, CES05, CCSY08, CGCL15, CMZ20, CLLW21, CCEL21, CEPT12, CEL18, CELL20, CR11, CJLM20, CCL21, DL18, DRZ07, DN19, DW14, DQS23, DBGA10, DM10, EGM13,

EKCO13, Fan09, FJS18, FAO22, FMTV05, Fre22, FLR11, FLCG21, FCZ22, GKP+14, GMP10, GM21, GZ06, GZ10, HPV15, HP15, HM13b, HFOC05, HFOC08, HP13, HOS14, HMT08, HZZ14, Hoa09, HMS19, HKLW20, HMZ19, HS19, HNW08, ILW11, JJ15, JLT04, JRX17, JQZ11, JL17, JLS22, KR15, KT14, KT19, LZ06, LMT12, LLO12, LS16a, LL17, LCJ19, LMS11, LXQ09, LCD+22, LCZ+22, LMM22, LY17, LQB18, LJ07, LL09].
Method [MSO14, MDO10, MWW15, MY09, MX16, MS24, MNLD15, Ohl05, OV18, OSAND13, OBG+05, OLJ20, PCCL24, Pta15, PC23, QGZX22, RS06, San03, SS15, SBMA22, SCE11, THS14, VL19, VZS20, VBMS04, WLS08, WY18, WLT06, XX14, Xu20, YY14, YC23, ZKK04, ZBFO10, ZCH15, ZJL+23, ZC23, ZJ17, LPSV18].
Methodologies [MNLD15]. **Methods** [AEJ08, AE08, ALS12, ABS13, AKN14, AW13, AK12, AET09, AR14, AR17, AWA06, BL11a, BFY22, BCK05, BP23, Bla19, COS10, CEGL16, CC10, CO16, CLZ16, CO17, CCJ18, CLLW20, COW22, CHW23, CLHQ22, CGH18, CEL14, CEL15, CNPT10, CBL18, CLMZ17, DP08, DP20, DPZ24, DW22, EV23, EP10, FRK+20, GPV20, Gui24, HZZ15, IWWM21, JZZ11, JCM12, JP12, JMW14, KZ16, KS08b, LLM19, LM15a, LR22, LCZ18, Liu10, LY12, Mål11, MZZ20, McC05, NPP08, Nor09, OSZ14, PA06, QLY+16, Sch14, SWOP05, SE06, ZBK+06].
Metric [OTV09]. **Metropolis** [BRDVE14, Kat23]. **Metropolized** [ACH+21]. **Meyer** [SAC06]. **Micro** [BR12, CHS17, CBRFK23, CKP20, CJLM20, DPZ24, GFKR22, HDL08, PCCL24, VZS20, YDL05]. **Micro-Macro** [CHS17, CBRFK23, CKP20, CJLM20, DPZ24, GFKR22, HDL08, PCCL24, VZS20].
Micro-to-Meso [BR12]. **Microcolony** [JL05b]. **Microdomain** [RH11].
Microenvironmental [CPO+20].
Microflow [Tor06]. **Micromechanical** [RCMD09]. **Microresonators** [KS08a].
Microscale [BBK13, CM14, GN05, KvNP11].
Microscopic [FZW07, HHL12, LKGK03, YM11].
Microscopic-Macroscopic [FZW07].
Microstructure [CSB08, CP06, CHO07, Eck04a, Mar12, Mar13, MBL20, OSP10, PB09].
Microstructure-Based [CSB08].
Microstructured [TCB24].
Microstructures [BP16, Che08, DM10, GW05, GK10, JV21, KCL+20, Pta13, Pta15, YM11].
Microvascular [VKK+19]. **Migration** [AAPP10]. **Milestoning** [ABRE16].
Mimetic [LMS11]. **Mineral** [GFKR22].
Minimal [FG09, RWF21, WF14].
Minimization [ACHR06, HNW08, LY17, OSV03, RSB10].
Minimizers [HP23]. **Minimizing** [CCEL21, LCJ19, Nik05, PC23, YC23, ZC23].
Minimum [VL19]. **Mismatch** [FYW11].
Missing [KIH15]. **Mixed** [Aar04, AKL06, AEJ08, APWY07, Arb11, CCJ18, CEL15, CP19, CBL18, GSS21, GST14, HPV15, HHL12, JCM12, JMW14, LPSV18, MMN11, SWOP05, WBE+18].
Mixed-Integer [WBE+18].
Mixed-Locality [CBL18]. **Mixing** [CO17, GJL+03, GBS17]. **Mixture** [BRV12, CLY+11, CKP20, CBS04, CSB04].
Mixtures [Eck04b]. **MM** [CO16, CO17, COW22]. **Mobile** [LTK17].
Mobilities [PM21]. **Mobility** [DD14, PSV23]. **Modal** [CGLL24]. **Mode** [DD13, KZ16, TY20, WSK13a, WSK13b].
Model [AD19, ABM05, ADM+08, AMR03, AL08, AK07, BV06, BCCD16, BKL+10, BMT10, BM04, BLL14, BRR13, BEG07, BIL+08, BMP05, BML18, BGH11, CKS08, CPO+20, CCGB05, CEK08, CGM15, CJLM15, CG18, CF10, CLY+11, CGCY15, CO16, CCBL11,

CMMS13, CCPT17, CJLM20, DWZ20a, DPV06, DGHK07, DQS23, DR19, DLY05, DAG09, Eck04a, Eck04b, Eck07, ED03, EGT12, EE09, FMQ05, Fil04, FYW11, FG08, FG09, GT18, GKP+14, GJL+03, GLG05, GPP+17, GN06, GBS17, GS13, GABD17, HJV07, HT17, HDFS06, HKDS08, Hor11, HMZ19, HCY12, HDL08, JS10, JLW16, JO18, JLZ22, JN06, JL05b, KJ16, KX05, LOS13, LS20, LZ06, LM14, LSZ21, Li21, LSD+20, LH06, LOT05, LLB18, MR18a, MC08, MZ15, MB21, MR03, MT16, MR18b, PM14, PEV10, PG21, Peu16, QGZX22]. **Model** [QV03, Rob09, RTE17, RBHK13, SP12, SMC20, SST23, STY14, Sto08, TW06, TWZ15, TLCW13, VO13, VV12, VFEK11, VM24, WG19, XGBD16, XYZ18, YGO07, YDL05, ZBPR21, ZYL05, ZJL+23]. **Model-Based** [CMMS13]. **Modeling** [AS21, AHGJ05, ARR23, AMK03, ÁGMR08, BP23, BM06, BLO17, BEHL16, BN05, BE03, BvWP20, BL05, CM14, CLMT05, CTP13, CNG+18, CSB08, Che08, CCH+19, CBRFK23, CPT11, DBGS08, DGN+08, DPV03, DK14, DSC24, DKSS22, DRE16, DD13, ECS07, EAC09, EKH06, ELW+22, EO05, EMLO20, FKH07, FHV11, FSS09, GSF09, GP11, GR07, GS13, HK05, HWY06, JK12, KS18, KSH03, LMWW18, LMS17, LE05a, MBS08, MB10, Mic11, MRTV14, MZCJ16, NSD+18, NN13, RCMD09, RTE17, RJM05, SD06, SE07, SEZ+18, STHS18, SWOP05, WGM10, WLS08, WLT06, XEMK09, YM11, ZBPR21, ZBFO10, ZPC+20]. **Modelling** [DFL10, Fil04, Neg18, PB09]. **Models** [AE11, ABG05, AK12, AR05, AG05, AWA06, BK07a, BP07, BCMQ23, BS07, BHKT23, BR12, BF12, BLST23, BFRD13, BV24, BET10, BGH11, BCP06, Cal07, CS06, CD03, CD06, CDG+14, COW22, CPT21, CCOS06, CEPT12, CL21, CD23, DdGYZ23, DLM06, DHZ22, DSS12, DMZ17, DRZZ18, EFM12, FG09, GGM+05, GFKR22, Gos14, GDCB18, Had07, HM13a, HL10a, HKDS08, HS08, HCC+23, IHM09, Jah11, JLP18, Kac24, KB11, LYZ+15, Mai16, MBC+13, MTW16, MMN16, NM13, NV18, Pap12, PG21, PP17, PS19, SSJ+15, SNS10, SP24, Sch06, SíZ23, Sti07, ST17, TTD19, TZ19, VKK+19, WN10, YZX23, ZHY19, ZG05, ZK08]. **Moderate** [SM20b, WG19]. **Modes** [ABCF23, BG14, CD23]. **Modified** [JV21]. **Modulated** [ACH22]. **Molecular** [BHKT23, CSPD06, CTHC06, FKKL11, FMKS06, GZ06, HCY12, KS18, MI03, MLS12, MZ15, QW05, RSM+11, RS19, SPGL09, TPC09, XYZ18, OSAND13]. **Molecules** [BGP16, MO06, PL21, XYZ18]. **Mollified** [MI03]. **Moment** [DH22, HCC+23, JR03, KT18, LSZ21, LZ07, ÖS07, Sha16, Str05, Tor06]. **Moment-Equation** [LZ07]. **Moments** [CFL+17, GABD17]. **Momentum** [BV24, MCLO18, MCL23]. **Monotone** [AHV15, EP03, Glo06, Hoa09, LCZ21]. **Monte** [ABS13, AH12, AHS18, BSS14, CC22, CqC23, CLHQ22, DW22, EKL15, PM14, Rey14, RBSS+21, dWMH13]. **Mori** [HL20, Sti07]. **Morozov** [FLR11]. **Morphological** [CSSB04]. **Morse** [CSSB04]. **Mortar** [APWY07, GPW+12, GKP+14, MB14]. **Mossotti** [Alm14]. **Motif** [HTS+18]. **Motif-Based** [HTS+18]. **Motile** [RJM05]. **Motility** [VFEK11]. **Motion** [BGS21, CLHQ22, CK24, CCM16, CR06, HS12, KK14, KNR14, LW14]. **Motions** [CMM11, HKY03]. **Motivated** [FK19]. **Mountain** [TQR07]. **Moving** [BGS19, EY11, SP24, TLCW13]. **MPFA** [PEPL16]. **MRA** [JSZ18]. **MsFEM** [BJ11, LLL14, LRLH22]. **Mullins** [BFRD13]. **Mullins-like** [BFRD13]. **Multi** [CTL16, CqC23, HP22, LDZN22]. **Multi-Finite** [CTL16]. **Multi-Frequency** [LDZN22]. **Multi-Resolution** [HP22]. **Multi-valley** [CqC23]. **Multiagent**

[CT18, SBMA22]. **Multiband** [CJLM15]. **Multicomponent** [Bao04]. **Multidimensional** [HS08, HJMS08, KR15, LYY15]. **Multiflocks** [ST21a]. **Multifrequency** [LL23]. **Multigrid** [AW13, CCBL11, KCH03, Rob09, RSB10, RS06]. **Multigrid-Fourier** [RS06]. **Multilabel** [BCGP10]. **Multilattices** [ALS12, OOWZ23]. **Multilayer** [BPW+16]. **Multilayered** [CGCY15]. **Multilevel** [ABS13, AH12, BCK05, CC06, CC10, EKL15, HL17, LFY21, McC05, SCS19, LMS11]. **Multiname** [FSS09]. **Multiphase** [AP06, CFL+17, FFJD09, JLT04, Nor09, PG21, WLL22]. **Multiplane** [BBK07]. **Multiple** [ADGP20, AS21, ABM05, AGK+11, CRK05, DGHK07, DP20, FR20, HS05, HKLW20, HL10b, LLZ14, LBW17, LTK17, Liu10, LJ18, LS18, Rob09, TKM15, WN14]. **Multiple-Permeability** [HKLW20]. **Multiplex** [TPM21, TPM22]. **Multiplicative** [Abr13, JLZ22]. **Multiplier** [Neg21]. **Multiresolution** [HHLZ19, TY20, ZBK+06]. **Multiscale** [Aar04, AE06, AKL06, AEJ08, AS05, Abd05, AE08, AG11, ABS13, AGS14, AB15a, AHV15, AJS16, AD19, AGZ20, AP06, Abr12, Abr13, AST06, AHGJ05, AB05, AV21, AKN14, AdHW12, APWY07, Arb11, AET09, ASST12, AR14, AR17, ARR23, AMK03, ACH+21, ÁGMR08, AWA06, AK07, BL11a, BM22, BCCF14, BP05, BST16, BP23, BFRD13, BLI07, BEH13, BP16, BGMS21, CM14, CEGL16, CCGB05, CLLW15, CEK08, CNG+18, CSB08, CES05, CCSY08, CCJ18, CMZ20, CHW21, CH22, CDM+22, CHW23, CCEL21, CPT21, CCOS06, CGH18, CEPT12, CHL20, CE10, CEL14, CEL15, CEL18, CELL20, CK24, CMMS13, CCPT17, CHO07, CBL18, CBRFK23, CCP23, CPT11, CVE11, CDV16, DBGS08, DRZ07, DW14, DSC24, DKSS22, DP08, DP20, DRE16, DMZ17, DM10, DXZ24, DSW12, ECS07, EAC09, EP10, EGM13]. **Multiscale** [EKH06, EK21, Eng09, EF14, EO05, Fan09, FLYZN19, FKH07, FAO22, FMQ05, FPSS03, FSS09, FH20, FMTV05, FG18, Fre22, FRK+20, FLCG21, FCZ22, FMKS06, GS18, GE10a, GE10b, GPW+12, GR17, GGS20, Gil12, GMP10, GK08, GSF09, GZ06, GS17, HL23, HPV15, HKP20, HM17, HW05, HP13, HOS14, HMT08, HZZ14, HZZ15, Hoa09, HMS19, HK05, HYR08, HMZ19, HJZ24, HC14, ILW11, JLT04, JSZ20, JCM12, JP12, JMW14, JO18, JLZ22, KORS22, KBP+11, KZ16, KRK17, KR15, KT14, KT19, KK05, KN06, KS18, KY16, KB11, KSH03, KPK13, LNL17, LLM24, LPSV18, LLM19, LM15a, LMQ17, LR22, LMS17, LMT12, LLZ14, LYY15, LCZ18, LCJ19, LZZ20, LL23, LA07, LBM05, LMS11, Liu10, LSH15, LMM22, LH11, LS18, LJ07, LL09, MI03, Mål11, MBS08, MS04, MR18a, MV22, MSE08, Man06, MKBK19]. **Multiscale** [MT19a, MT19b, MAG21, Mic11, MHW13, MX16, MS24, MRTV14, MNLD15, NSD+18, NPP08, Nor09, Ohl05, OV18, OLJ20, PS14, PK07, PEPL16, PB09, PA06, PV20, PC23, QY10, QHL13, QV03, RDS+05, RTE17, RSB11, RJM05, SSJ+12, SD06, SP12, SMC20, ST21a, SB20, Spi15, Sto08, STHS18, SWOP05, SE06, SCE11, SGNR23, TNV04, TOM10, TLCW13, VM24, VZ08, VBMS04, WLS08, WCW15, WPA18, WLL22, WiOT+13, WLT06, XH14, XXZ23, XX14, XEMK09, XK05, XGBD16, YC23, YGO07, YWS11, YYW13, ZCL14, ZCH15, ZPC+20, ZMC21, ZML+24, ZC23, ZG04, ZG05, dHUVW13, DFL22, HWZ21, LCZ21]. **Multiscale-Linking** [MS04]. **Multiscaling** [FKMW05]. **Multistability** [SBMA22]. **Multitone** [KX05]. **Multivalley** [CC22]. **Multivalued** [VHPT17]. **Multivariate** [CFL+17]. **MUSIC** [AIL05]. **Myocytes** [CNG+18].

Nagumo [GR18]. **Naïve** [MB10]. **Nano** [CGLL24, CL21]. **Nano-Bubbles** [CGLL24]. **Nano-Scale** [CL21]. **Nanoindentation** [HFOC05, HFOC08]. **Nanoparticles** [ARR18, MS23]. **Nanopore** [FMKS06]. **Nanorod** [YCF+08]. **Nanoscale** [WTT05]. **Nanostructure** [ZMC21]. **Nanostructures** [ZCL14]. **Nanotube** [BFRD13, MMPS17]. **Nanowire** [Rey14]. **Narrow** [AGK+11, BCGP10, Bre21, BS22, Bre23, CWS10, PWPK10, RH11]. **Natural** [GR07]. **Nature** [CDE24, LKGK03]. **Navier** [FG23, BML18, CF10, FLMN+18, HKY03, HYR08, JS10]. **Navier-Slip** [FG23]. **Near** [AE08, CPO+20, CDGH21, CM17, KK14, SSO21, ZYL05]. **Near-Brownian-Limit** [KK14]. **Near-cloaking** [CDGH21]. **Near-Linear** [SSO21]. **Near-Optimal** [ZYL05]. **Néel** [DKMO03]. **Negative** [CL13]. **Neighborhood** [KBP+11]. **Neighborhood-Wise** [KBP+11]. **Nematic** [FZW05, XYZ18, ZFW05]. **Nested** [CW22]. **Net** [WLL22]. **Network** [ABG05, CEPT12, DGHK07, DHZ22, FLYZN19, HL23, KMP23, LDZN22, NV18, SWF+14, SEZ+18, WLL22, Yin17]. **Network-Based** [SWF+14]. **Networked** [YWS11, YYW13]. **Networks** [AHLW19, BDZ17, BBK07, BPW+16, BGH11, CSB08, Coh10, DHL14, DXZ24, HJN+24, HTS+18, HHO+18, IHM09, KDMT24, KRK17, LBB11, LM04, LB18, LDZN22, PA06, SSVE10, SWFM13, TMC+17, TPM21, TPM22, VKK+19]. **Neumann** [BGW14, MX16]. **Neural** [CK24, FLYZN19, HL23, KMP23, LDZN22, WLL22]. **Neuron** [DXZ24]. **Neuronal** [GH15]. **Neutral** [CDV16]. **Neutrality** [DPV03]. **Newton** [SSW21]. **Newtonian** [YY14]. **Ni** [RSM+11]. **Ni/Al** [RSM+11]. **NLS** [BCM13]. **Nodal** [DKW09]. **Nodes** [DWC15]. **Noise** [BSK07, CM07, GS15, GPV20, GM21, JLZ22, LB18, OSP10, PS03, PS05, SSJ+12, SSJ+15, Sha04, TKM15]. **Noises** [GST14]. **Noisy** [ACHR06, DXZ24, Gar05]. **Non** [DSH16, GM21, HNV12, HS14, LS16b, Wol22]. **Non-Kramers** [HNV12]. **Non-Lipschitz** [GM21]. **Non-Markovian** [LS16b]. **Non-Periodically** [Wol22]. **Non-Poissonian** [DSH16]. **Non-Self-Adjoint** [HS14]. **Nonclassical** [KR15]. **Nonconforming** [CCSY08, FAO22, MNLD15]. **Nonconservative** [MN11]. **Nonconvex** [BK11, Nik05]. **Nondivergence** [JZ23, ST21b]. **Nondivergence-Form** [ST21b]. **Nonequilibrium** [DRLS04, GLG05, HS10, JS12, JS13]. **Nonintrusive** [TOM10]. **Nonisothermal** [BBPR16, BGH11]. **Nonlinear** [AHV15, Abr13, BT14, BM06, BM17, BN05, BKV22, BFMR03, CW22, CC10, CLLW22, CL21, CRK05, DRL05, DPZ24, DJS17, DLY05, EP04, FY21, Fil04, GPW+12, GL23, Hoa09, HJMS08, IW10, JLZ22, KAO05, KD05, KX05, LZ19, LSZ21, LLB18, MDO10, MZZ20, NSD+18, Pap12, Sch06, SPM18, SW11, Sti12, VM24, WF08, XZ21, Xu20, YCD21]. **Nonlinearity** [LCZ21]. **Nonlinearly** [AMK03]. **Nonlocal** [BL11b, CBL18, DWZ20b, DYOD08, GO07, GO09, GP11, GL10, KX05, KOJ05, MY09, PC15, Pey08, SM20a, TTD19, XGBD16, ZMC21]. **Nonoverlapping** [MR12]. **Nonperiodic** [PS12]. **Nonperturbative** [LLB18, XT04]. **NonReciprocal** [ACH22]. **Nonrelativistic** [CW22, MZZ20]. **Nonreversible** [CWS16, WBE+18, RWF21]. **Nonrotating** [EKH06]. **Nonseparated** [OZ11]. **Nonsmooth** [DM10]. **Nonstationary** [BKV22, HKP+18, Hor11, KS18, LZ07]. **Nonuniform** [AKL06, DKMW14, EF14]. **Norm** [SAC06]. **Normal** [CR06, DWZ20b, TS06]. **Normalizing** [ACT+10]. **Note** [FG18]. **Novel** [GMP10]. **Nuclear** [AAPP10]. **Nucleation** [BCP06, HFOC05, HFOC08, LZZ13, Sha04].

Nudging [MMO23]. **Number** [BBPR16, CMV15, FLMN+18]. **Numbers** [HL17]. **Numerical** [ALS12, AHV15, AD19, AAP23, AP06, AST06, AB05, AL11, AK12, AAHM14, AET09, ÁGMR08, AGNB22, BT14, BK11, BMT10, BP23, BGZ19, Bla19, BN05, BFIL20, BvWP20, BGP18, CDE24, CDCLLZ11, CF04, CNG+18, CY03, CLZ16, CL04, CKP20, CCP23, DdGYZ23, DP09, DSH16, EP03, EP04, EKL15, EFM12, FLMN+18, FG18, GSS21, GJL+03, Glo06, Glo08, GPV20, Gos14, GP11, GK10, GLM15, HM19, HKY03, HJMS08, IWWM21, IZ12, JL22, KY16, KMP23, LS20, LMC+08, LCZ21, LW14, LH14, MV22, MZZ20, Mom13, MN11, MNLD15, Owh15, Peu16, QGZX22, ST21b, SE07, Sti12, VV12, VY21, vN09]. **Numerically** [CCH+19]. **Nunziato** [PG21].

Object [AFM06]. **Oblique** [CDG+21]. **Obscure** [CCM16]. **Observables** [MCL23]. **Observation** [LL23]. **Observations** [Man06]. **Obstacle** [Yin15a]. **Obstacles** [tTP05]. **Obstructions** [DR20]. **Obtaining** [LB16]. **Occlusion** [GR07]. **Ocean** [AFM06, Med05]. **Octaalanine** [NOR+06]. **ODE** [CRK05, QV03]. **ODEs** [FMQ05, TOM10]. **Off** [BSS14]. **Off-Lattice** [BSS14]. **One** [ABCF23, BLL14, BP23, BCM05, CDCLLZ11, CLT17, CCG15, CJLM20, EA08, Gos14, LOS13, LM14, MBC+13, MY09, NM10, PM14, Sha11, VV16, WY18, XGBD16, ZJ17]. **One-Dimension** [WY18]. **One-Dimensional** [BLL14, BP23, CDCLLZ11, CLT17, CCG15, Gos14, LOS13, LM14, MBC+13, MY09, NM10, VV16, ZJ17]. **One-Step** [PM14]. **Online** [CP19, JLZ22, PC23]. **Operator** [CVE11, DOS12, HS14, LXY17, LL09, VV12, VV16, VMK05, ZML+24]. **Operators** [AdHW12, CDY09, CZ23, CW21, DRL05, DLTZ18, DWZ20b, EP03, EP04, GPW+12, GO09, Glo06, KMOW18, KS08b, LL18, LYY15, LL19, MDHY16, dHUVW13, KMOW20]. **Opinion** [CT18]. **Optical** [ARS17, KG13, NLS20]. **Optics** [FM03, LLB18, QLY+16]. **Optimal** [AE08, BL11a, Ber07, BMKS23, CDCLLZ11, FG21, FK19, GLLL23, GMO17, HP23, KS08b, LWZ23, MMPS17, MMO23, MR12, SSVE10, SS22, Sch14, ST21b, Sti04, TWZ15, WN14, ZYL05]. **Optimization** [AJS16, CCS20, CC06, CRS23, CVE09, DH20, DW22, FH20, HMZ19, IWWM21, KCH03, LTK17, LOT05, MR18a, OPS16, STWZ20, TCB24]. **Optimization-Based** [CC06]. **Optimized** [MKBK19]. **Optimizing** [AZ20, Mil05]. **Orbital** [HFOC05, HFOC08, LY17]. **Orbital-Free** [HFOC05, HFOC08]. **Orbits** [KLX22]. **Order** [AD19, AG05, BCW22, Bos10, BCC+10, BEZ15, CE16, CPT21, CCBL11, CDV16, DMZ17, FA22, FG08, HVS10, HZZ14, HS19, JLW16, JRX17, JLP18, JLS22, KB11, LMT12, LL19, LWZ23, PS19, Sti07, Sto08, Str05, VO13, WSK13a, WSK13b, YZX23, FAO22, JL22, Mit23]. **Ordering** [BGP+11, LE05b]. **Ordinary** [JL22]. **Organization** [RSB11]. **Orientation** [SE07]. **Orthogonal** [HP22, HP23, LLM24, WSK13a, WSK13b]. **Oscillating** [GN06, GR18, MX16, MS22]. **Oscillations** [ALT08, TASY+05]. **Oscillators** [AET09]. **Oscillatory** [BKL+10, BCW22, CLMZ17, DSH16, DW11, HS14, KC15, KZ16, LL17, SM20a, SG09]. **Out-of-Plane** [DD13]. **Output** [LOT05]. **Ovarian** [CMMS13]. **Overdamped** [GPK12, HL20]. **Oversampling** [CEGL16, Glo08, HP13, Li19]. **Ovulation** [ECS07, Mic11].

P [CMCS10a, CMCS10b]. **P-Splines** [CMCS10a, CMCS10b]. **Packets** [XZ21]. **Packing** [CCOS06, LH06]. **Pair** [CF15]. **Pairs** [KBP+11, PL21]. **Pancreas** [GSF09]. **Parabolic** [AHV15, ABG05, Bla19, CES05,

EP04, LLM24, LCZ18, LCJ19, LMM22, MTW16, SS22, STY14]. **Paradigm** [EO05]. **Parallel** [AL20, DLPD12, DW22, Eng09, WPA18]. **Parameter** [CS06, CEK08, EGT12, GPP+17, HKLW20, LBM05, MP19, SAC06]. **Parameter-Dependent** [EGT12]. **Parameter-Robust** [HKLW20]. **Parameters** [RND+12b, Sjö05, WTJT13]. **Parametric** [SSJ+15]. **Parametrizations** [NT10]. **Parametrized** [GGSVE14, ZBPR21]. **Paraxial** [BG14, GS09a, GS14, GS15, Gom23]. **Parity** [CKLM21]. **Part** [AKSZ06, CEL+20, CO16, CO17, COW22, CWS10, Glo08, MNLD15, PWPK10, RND+12a, RND+12b]. **Partial** [BFIL20, HJZ24, LLM24, YF09]. **Partially** [BS22, PL24]. **Particle** [AVE08, BDZ17, BCK05, BK06, CCM16, CR06, DSC24, DRE16, DBGA10, EP10, Fan09, FHV11, Gui24, HNV12, JS10, JLS22, KT14, KT19, KSNdR21, KSH03, LBW17, LHKT21, MHW13, Sch14]. **Particle-Based** [DRE16, KSNdR21]. **Particle-Continuum** [DSC24, DBGA10]. **Particle-in-Cell** [Gui24]. **Particle-Wavelet** [BK06]. **Particles** [CKLM21, DH22, DPV06, HT17, Kac24, Neg18, OSAND13, PS03]. **Particulate** [Zha21]. **Partitioned** [LBB11]. **Partitioning** [SCS19]. **Passage** [CLHQ22, CWS10, DWC15, IWWM21, LBW17, LTK17, PWPK10, TK15]. **Passing** [Che08]. **Passive** [AGJ13]. **Patch** [BMT10, CLY+11]. **Patches** [PL24]. **Path** [CCL21, GLLL23, MSVE09, Plo09]. **Pathology** [Fan19]. **Paths** [GL24, VL19]. **Pathway** [STY14, ST17, ZJL+23]. **Pathway-Based** [STY14, ST17, ZJL+23]. **Pathways** [LLZ16, NOR+06]. **Pathwise** [LZ19]. **Pattern** [EO05, ZJL+23]. **Patterns** [BLS18, LL23, LE05b]. **PCA** [SSO21]. **PDE** [CH22, Kat23, LS20, MDO10, QV03, VV12, ZML+24]. **PDE-Based** [MDO10]. **Pdes** [HMZ19, OLJ20, ABS13, CHW21, DKSS22, DJS17, FMQ05, HM19, HLZ17a, JLZ22, KD05, KSNdR21, LRZ10, LCZ18, LZZ20, McC05, ZCH15]. **Péclet** [BBPR16]. **Pedestrian** [CCM16]. **Penalization** [BEZ15, PR10]. **Percolation** [HTS+22, SWFM13, SWF+14]. **Percolation-Induced** [SWFM13, SWF+14]. **Perfect** [LLY19]. **Perfectly** [EY11]. **Perforated** [FG23, LLL14, LLM19, MMN11, Wol22, FLCG21]. **Peridynamics** [SPGL09, XGBD16]. **Perimeter** [BKL+10]. **Periodic** [AD17, AD03, AR17, BO16, BLS18, Boy08, BFMR03, CZ23, CK23, CCG15, DOS12, GSS21, GTY21, Gar21, Hoa09, HJMS08, JZ23, KMOW18, KMOW20, KdL15, LM04, LZ18a, LZ18b, LJ17, Mar12, Mar13, MS24, MS08, NX03, OW11, Pta13, Pta15, QHL13, SW11, YCD21, Yin15c]. **Periodically** [Wol22]. **Permafrost** [PVB24]. **Permanent** [BFRD13]. **Permeability** [BFPS09, HKLW20, Man06]. **Permittivity** [NDEG11]. **Perspective** [BK07b]. **Perturbation** [FL18, IWWM21, KS18, ZKK04]. **Perturbative** [RS19]. **Perturbed** [BG20, FMTV05, GPY13, GMP10]. **Petrovsky** [SXZ09]. **pH** [CPO+20]. **Phase** [AKL06, AKN14, AAPP10, BCCD16, BCW22, BvWP20, BL05, CMV15, CD06, CL09, CEPT12, DRZZ18, Eck04a, Eck04b, Eck07, FG08, FCZ24, GKP+14, GPV20, HJV07, HLL24, HNV12, HWY06, KCL+20, LMWW18, LZZ13, Li21, LMS11, LR10b, LCZ+22, LS16b, MK21, MWW15, Sto08, Mit23]. **Phase-Field** [LMWW18, LCZ+22, MK21, MWW15]. **Phase-Preconditioned** [DRZZ18]. **Phases** [XYZ18]. **Phason** [BM17]. **Phenomena** [DRLS04, MCM12]. **Phenomenon** [BGZ19]. **Phonon** [LXY17]. **Photonic** [BGZ10, DD13]. **Photovoltaics** [FK19]. **Physical** [GN06]. **Physics** [EV23, GDCB18, Xu20].

Physics-Preserving [GDCB18]. **Picard** [CW22]. **Piecewise** [JK12]. **Piezoelectric** [Mit23, VS11]. **Pipeline** [BGH11]. **Piskunov** [SXZ09]. **Pitaevskii** [HP23, IW10]. **Planar** [CLHQ22, LMMM03, RSB10]. **Planck** [CWXY21, DPZ24, DSS05, HS14, LL18, LF06, PKC05, VHPT17, ZJ17]. **Plane** [BL11b, DD13, FZW05, HL17, ZFW05]. **Planewave** [LCD+22, LY17]. **Plant** [PP17]. **Plasma** [CWD+08, DPV03]. **Plasmas** [Neg18]. **Plasmonic** [ARR18, ALZ20, CL13]. **Plasticity** [CHO07]. **Plate** [CEP18, Sch06]. **Platelet** [LSD+20]. **Plywood** [Pta13]. **Point** [BG17, DAG09, GS14, HMS14, LL18, LS16a, LQB16, LQB18, LXY21, MLS12, QSLB21, SST18]. **Point-Like** [HMS14]. **Point-Source** [LQB16, LQB18, QSLB21]. **Poisson** [CWXY21, ZJ17, AST06, BF16, CDV16, CLMZ17, EA08, HE21, ZCL14]. **Poissonian** [DSH16]. **Polarizability** [LXY17]. **Polarization** [AK03, LLB18, VFEK11]. **Polarized** [JJ15, KM11]. **Policies** [DGHK07]. **Policy** [FOSS22]. **Polls** [CT18]. **Polyatomic** [GMWZ14]. **Polycrystal** [BG08, EW14]. **Polydisperse** [FFJD09, KB16]. **Polymer** [AKH12, BGMP03, CF04, FZW07, LMC+08, WGM10]. **Polymeric** [HDL08, YDL05]. **Polymers** [BS07, CBS04, CSB04, FZW05, ZFW05]. **Polynomials** [LRLH22]. **Pontryagin** [Mil05]. **Population** [AK12, AHS18]. **Pore** [MB14, MK21, PVB24]. **Pore-Scale** [PVB24]. **Poroelastic** [LMWW18, MT16]. **Poroelasticity** [HKLW20, vDM21]. **Porosity** [BBPR16]. **Porous** [AE06, AB15a, AKN14, ABJ06, AAPP10, BGMP03, BBPR16, BvWP20, BP16, CTP13, CD03, CY03, CEPT12, CP06, DIW20, EAW04, Ebe05, EF24, ED03, FCZ24, HLL24, HWY06, IMP08, ILW11, JLT04, JCM12, JMW14, KR15, KB16, LMS11, LZ07, MCM12, MK21, MWW15, Nor09, PKC05, PB09, VK10, vN09]. **Portfolio** [FH20]. **Posedness** [CCGB05]. **Position** [LYTP13]. **Positive** [HLZ17b, HHLZ18, LLO12]. **Positivity** [HS19]. **Positivity-Preserving** [HS19]. **Possessing** [CRK05]. **Posteriori** [BET10, BE03, Ohl05, WY18]. **Potential** [AKSZ06, Bal10, Cal07, DPV06, HB05, HH23, LLW23, NM10, XZ21]. **Potentials** [BFY22, CMZ20, DW11, FA22, GR16, HJMS08, OW23, Sha11, Sha16, Str05]. **Potts** [SP12]. **Power** [GDCB18]. **Practical** [CM07]. **Precipitation** [BvWP20, vN09]. **Preconditioned** [DRZZ18, HHLZ19, SST23]. **Preconditioner** [EY11, FCZ24, GPW+12, LY16, Yin15a, Yin15d, Yin15c]. **Preconditioners** [GE10a, GE10b, HL17, XX14]. **Preconditioning** [HWW+13, LY17]. **Predict** [DR20]. **Predicted** [MO06]. **Prediction** [Ber07, CCOS06, HFOC05, HFOC08, KN06, PS19, Sti04]. **Predictor** [BLO17]. **Predictor-Corrector** [BLO17]. **Premixed** [BK07b]. **Presence** [BML18, FKMW05, OSP10, XEMK09]. **Preserving** [BCM13, BV24, BRR22, CY13, CWXY21, CMV15, DDN10, DN19, DN07, FNP19, FLMN+18, GDCB18, HS19, JL17, JLP18, LL17, TOM10, VS11, WXZ21, ZJL+23, ZJ17]. **Pressure** [GS10, GJL+03, Man06, MCM12]. **Price** [MTW16]. **Primitive** [Med05]. **Principle** [GL23, Mil05, SWHH04, TPC09, FLR11]. **Prior** [CLY+11]. **Priori}** [Abd05]. **Prisms** [GH11]. **Probabilistic** [BP05, LHKT21]. **Probabilities** [BM18, GPY13, PHSN11]. **Probability** [DSH16, HS14, WKWD07, WN10]. **Problem** [AAP23, AD16, AE09, AGK+11, BM06, Bla19, BFPS09, Bre21, BS22, Bre23, CEL+20, CDCLLZ11, CCN07, ECS07, FG23, HL10b, LLY19, LW21, MMN17, MX16, PVB24, RH11, dHGS24]. **Problems**

[AS05, AHV15, AJS16, AD19, AGZ20, AST06, AL11, Arb11, AR14, AR17, BL11a, BCGP10, BK11, BGMS21, CM07, CES05, CCSY08, CCG15, CWS10, CE10, CEL18, DGY+11, DRZ07, DDN10, DW14, DLTZ18, DM10, EGM13, FOSS22, FMTV05, FR20, FLR11, FK19, GSS21, GMP10, GGS12, GL10, HL23, HPV15, HP22, HKP20, HM17, HZZ14, HZZ15, HS05, Hoa09, IWWM21, KORS22, KC15, KY16, LLM19, LMT12, Li18, Li19, LMM22, Mål11, MR18a, MT19a, MT19b, MMN11, Neg21, NSD+18, NPP08, Ohl05, OZ05, PS14, PYSF22, PEV10, PS12, PWPK10, SRK05, San03, SS22, ST21b, SG09, WLL22, Xu20, YCD18, YCD21, YC23, FLCG21]. **Procedure** [ÖS07]. **Procedures** [Cal07]. **Process** [Kat22, MDHY17, NK11, PV20]. **Processes** [AK12, AHS18, BvWP20, CWS16, CVE09, CCL21, DSS05, GN06, HHL12, JK12, Lun21, MSVE09, NN13, OSP10, PSVE09, PHSN11, RWF21, SH10, WBE+18, dWMH13]. **Processing** [EE09, GO09, Pey08]. **Product** [BRV12]. **Production** [CCOS06]. **Products** [Gos14]. **Programming** [WBE+18]. **Projection** [DRL05, HP15, LZN19, McC05]. **Projection-Based** [LZN19]. **Projections** [SVZ11]. **Projective** [JL05a]. **Projectors** [LL19]. **Proof** [vDM21]. **Propagating** [BG14, MWW15, MMB12]. **Propagation** [AB15b, ACH22, AR14, AR17, BAZC10, Bal24, BP05, BS16, BGS19, BG20, CGM15, CCEL21, CEL14, DRZZ18, FS05, GS09b, Gar21, JT06, RND+12a, tTP05]. **Proper** [WSK13a, WSK13b]. **Properties** [ADGP20, AK03, AKSZ06, FG09, GS13, HL24, LXY16, MO06, Mil05, MD19, Nøe13, SVZ11, SHB+14, VK10, WYG07, XY09, YWS11, ZBK+06]. **Protected** [BCMQ23]. **Protein** [CCOS06, CSPD06, DK14, KN06, VBMS04]. **Protein-DNA** [VBMS04]. **Proximal** [CW05]. **Pseudospectral** [Yin15c]. **Puff** [DRE16]. **Pulsating** [CP06]. **Pulse** [BS16, BG17, BN05, GS09b]. **Pulsed** [RK17]. **Pulses** [GR18]. **Pump** [Sou05].

Q [MZ15]. **Q-Tensor** [MZ15]. **QM** [CO16, CO17, COW22]. **QM/MM** [CO16, CO17, COW22]. **QNL** [OSZ14]. **QNL-Type** [OSZ14]. **QPAX** [CKLM21]. **Quadrature** [CFL+17, GZ10, KT18, CKLM21]. **Quadrature-Based** [KT18]. **Quadrature-Rule** [GZ10]. **Quality** [SNS10]. **Quantification** [RND+12a, RND+12b, ZK08]. **Quantifying** [LYZ+15, SSJ+15]. **Quantized** [BT14, KORS22]. **Quantum** [AL20, CJLM15, DGM07, FGS24, HMP17, HJZ24, JN06, WTT05, Xu20]. **Quasi** [BL11b, BGZ10, CE16, CDV16, DPV03, DFL22, EFS14, GP17, GZ10, HFOC05, HFOC08, JZ14, LM14, LR08, MMO23, McC05, MY09, MP05]. **Quasi-Continuum** [GZ10, HFOC08, MY09, HFOC05, LM14]. **Quasi-Convergence** [MMO23]. **Quasi-geostrophic** [LR08]. **Quasi-linear** [EFS14, McC05]. **Quasi-Local** [GP17]. **Quasi-Neutral** [CDV16]. **Quasi-Nonlocal** [BL11b]. **Quasi-Species** [MP05]. **Quasi-Static** [DFL22, CE16, JZ14]. **Quasicontinuum** [AL08, DLO10, DOS12, EKCO13, LLO12, SS15]. **Quasiconvex** [Glo06]. **Quasicrystals** [BM17]. **Quasigeostrophic** [GLM15]. **Quasistatic** [BL23]. **Quaternions** [DFMAT18].

Radiation [HC14, OW11]. **Radiative** [AE09, CLLW21, EGO15, GLG05, GPR17, HSW23, HH21, HCC+23, LSZ21, MCG23, PCCL24]. **Radius** [BF16, CCP23, OSAND13]. **Ramified** [AST06]. **Random** [Alm14, AB15b, AGJ13, AL11, Bal04, BP07, Bal08, Bal10, BJ11, BO16, BPT06, BdCPT10, BIT10, BG14, BG17, BGS19, BZZ19, CEK08, CMZ20, CW24, DG09, DPZ24, DR20, Dun15,

EP04, FFJD09, GGN07, GS09a, GS09b, GS10, GS14, GS15, Gar21, Gom09, GV19, GR16, GS13, HLZ17a, HMZ19, JMW14, JL17, JLP18, JLS22, KCL+20, LB16, LZZ20, LW21, LLW23, LJ18, NDEG11, OLJ20, PS03, SXZ09, SWFM13, Spi15, SHB+14, SJF+11, XT04, XK05, YWS11, ZCH15, dHGS24]. **Randomization** [LRZ10]. **Randomized** [CEGL16, CLLW20]. **Randomly** [AS21, BS16, BG20, BL15, CP06, Gar05, GMP10, Gom23, LZ07, MCG23, tTP05]. **Range** [GS09b, GPR17, Gom23, Zha21, YZX23]. **Rank** [CLLW21, HLZ17b, Li18, OLJ20]. **Ranking** [KDMT24]. **Rapidly** [GR18]. **Rare** [Spi15]. **Rarefied** [ADM+08, GABD17, KT18, Str05]. **Raster** [Fan19]. **Rate** [BK11, Giv07, LZZ13, MR03]. **Rate-Independent** [BK11, MR03]. **Rates** [BLPV15, HP23, Li19, PL21, ST21b]. **Ratio** [CKLM21]. **Rational** [CBS04, CSB04, DRZZ18]. **Rattling** [GT17]. **Ray** [AAHM14]. **Rayleigh** [GBS17, JC13]. **Reachability** [ECS07]. **Reacting** [Li07]. **Reaction** [AHLW19, BBK07, BRR13, BMKS23, BEHL16, CL17, EK21, GAK15, HHL12, JK12, KRK17, KSNdR21, LZ19, LB18, LWZ23, MM24, NX03, PA06, RPCG05, VVVR07, ZK08]. **Reactions** [LE05b, LF06]. **Reactive** [BST16, BLS18, BBPR16, CD03, GNR21, GFKR22, HPV15, KB16, KvNP11, PL24]. **Rebinding** [RWF21, WF14]. **Receptor** [DKSS22]. **Recognition** [SAC06]. **Recombination** [ACH+21]. **Reconciling** [FA22]. **Reconstruction** [CLY+11, LL23, LHKT21]. **Reconstructions** [Gui24]. **Recovery** [CL03b, CW05, LR10a, LR10b, Nik05, TW17, WY18]. **Recovery-Type** [WY18]. **Recursive** [MHDY17, YWS11]. **Redheffer** [Gos14]. **Redistricting** [ACH+21]. **Reduced** [Boy08, CMZ20, CE10, DMZ17, GE10b, HZZ15, HKDS08, Jah11, KB11, LMS17, PCCL24, PS19, WSK13a, WSK13b]. **Reduced-Basis** [Boy08]. **Reduced-Contrast** [CE10]. **Reduced-Order** [DMZ17, KB11, WSK13a, WSK13b]. **Reducing** [CT18]. **Reduction** [AD19, CDE24, CCPT17, CRK05, CKL+08, DP20, EGT12, EK21, FG23, GN06, HDFS06, HKDS08, Hor11, HMZ19, JLZ22, KRK17, LM15b, LZZ20, LF06, LOT05, PK07, PEV10, TPC09, WG19, ZBPR21]. **Reduction-Based** [LOT05]. **Reductions** [GDCB18]. **Redundancy** [Dur09, KBP+11]. **Reentrant** [AR05]. **Refinement** [CCOS06, WBG08, XGBD16]. **Reflected** [SWY21]. **Reflection** [BG17]. **Reflective** [TK15]. **Refocusing** [FN03, GN05]. **Regime** [BS17, BEHL16, BF16, CW22, CM14, CCP23, DFL22, FLMN+18, GS14, GP11, Kat22, KK14, LZ18a, NP16, Pap12, SS23, TWZ15, YYW13, dWMH13]. **Regime-Switching** [TWZ15, YYW13]. **Regimes** [BRR22, LZ18b]. **Region** [KG13]. **Regions** [SBMA22]. **Registration** [CCBL11, HWZ21, HW05]. **Regression** [HMP17, KIH15]. **Regular** [FAAC09]. **Regularity** [GPR17, HC14]. **Regularization** [DN07, GO07, HL09, Man06, NM10, OBG+05, SW20, SAC06]. **Regularized** [BS07, Nik05, Tor06, YGO07]. **Regulation** [IHM09]. **Related** [AL11, CD23]. **Relation** [Neg18]. **Relations** [CL13]. **Relative** [GPP+17]. **Relaxation** [CHO07, DQS23, DR19, JZZ11, MK06, NM13, PS05, QM10, RSB11, SCS19]. **Relaxation-Based** [RSB11, SCS19]. **Relaxed** [MCL23]. **Release** [GS10, GH15, VZ08]. **Remarks** [PSVE09]. **Remote** [LAG09]. **Removal** [BSK07]. **Renormalization** [BFMR03, BFIL20, Cho03, DRLS04, WTT05]. **Renormalized** [PS19]. **Replica** [WPA18]. **Repository** [AAPP10, BMP05]. **Representation** [CGK21, CKL+08, LNL17, LSH15, Plo09,

TNV04, THS14]. **Representations** [HKP+18, KLY21, MSE08, RDS+05]. **Representative** [HJN+24]. **Repulsive** [DKMO03]. **Reservoir** [Aar04, HWW+13]. **Reservoirs** [KSNdR21]. **Resetting** [BS22]. **Residual** [San03, STHS18, WY18]. **Residual-Based** [STHS18]. **Residual-Free** [San03]. **Residual-Type** [WY18]. **Residue** [CCOS06]. **Resistance** [MP05]. **Resistor** [SWFM13]. **Resolution** [CCOS06, CTHC06, FNP19, HP22, RTE17]. **Resonance** [AAP23, CDE24]. **Resonances** [ALLZ24, GW05, LLZ23]. **Resonant** [AF17, CGLL24]. **Resonators** [ADY20, ABCF23, LZ23]. **Resourceful** [JP12]. **Response** [Abr12, GGM+05, SS23]. **Restoration** [ACHR06, COS10, CMM11, DYOD08, DJS17, GST14, HNW08, MSE08, OSV03, OBG+05]. **Restraints** [MO06]. **Results** [AWA06, BM17, DSS05, GPK12, KAO05]. **Retarded** [BKN+17]. **Retraction** [NYY11]. **Reuss** [DIW20]. **Reversal** [BV04, FS05, FS03, GS23, Gom09]. **Reversed** [FN03]. **Reverting** [Pap12]. **Review** [BCM05]. **Revisited** [BGH11, MS24]. **Reynolds** [BCC+10]. **Rheochaos** [FZW07]. **Rhythms** [HKP+18]. **Ribbon** [GH15]. **Ribosomal** [CTHC06]. **Ridgelet** [EGO15]. **Riemannian** [BCCF14]. **Right** [GH11]. **Rigid** [CS14, CS22, EKH06, FZW07, HTS+18, WGM10]. **Rigid-Rod** [FZW07]. **Rigidity** [HTS+18, HTS+22]. **Rigorous** [BK07b, GPK12]. **Rim** [EKM18]. **Ring** [BS10, KLY21]. **Rippling** [CLT17]. **Robin** [YCD21]. **Robin-Type** [YCD21]. **Robust** [HKLW20]. **Robustness** [FYW11, LB18, YCF+08]. **Rod** [AKH12, DH22, FZW07, HT17, HTS+22, SWF+14]. **Rod-Like** [DH22, HT17]. **Rod-Polymer** [AKH12]. **Rods** [BJPR20, CL13, SíZ23]. **Role** [LB18]. **Rotating** [MZZ20, TK15]. **Rotationally** [KMOW18, KMOW20]. **Rough** [AS05, Kat22, Kat23, MX16, QHL13, XXZ23]. **Roughness** [BCC+10]. **Roughness-Induced** [BCC+10]. **Rouse** [RTE17]. **Route** [GLM13]. **Ruijgrok** [Fil04]. **Rule** [GZ10, LXY21, ZYL05]. **Runge** [HS19]. **Runs** [VVR08, VV16].

S [CTHC06]. **Sampled** [ACHR06]. **Samplers** [LS18]. **Samples** [STWZ20]. **Sampling** [AZ20, BLK16, CKS08, CLLW20, DSW12, EF14, FAAC09, KLY21, MKBK19, PR10, SSJ+12, SSJ+15, SM20b]. **Sampling-Based** [CKS08]. **Scaffold** [DH20]. **Scalable** [KB11]. **Scalar** [GPY13]. **Scale** [AF17, ADGP20, ABM05, AD17, BR12, BEG07, BK07b, CS06, CTP13, CDM+22, CE16, CL21, CRS23, CBS04, CSB04, DKMO03, DRZZ18, Eck04a, Eck07, EGT12, EFM12, FKH07, Giv07, HKY03, HL10b, KTY09, KMP23, LWZ23, LXY17, LE05b, LOT05, LAG09, MK21, PVB24, Pta13, Pta15, SAC06, TWZ15, VZS20, WG19, XT04, ZYL05, ZML+24]. **Scale-Separated** [VZS20]. **Scaled** [AHS18]. **Scales** [APV12, CRK05, DLS14, FR20, GGM+05, HS05, Liu10, LJ18, OZ11, Rob09, RTE17, San03, TKM15, TASY+05]. **Scaling** [BFPS09, BZZ19, GR07, GM16, Kat22, Kat23, LXY16, PKC05, SWFM13]. **Scalings** [JL17]. **Scatterers** [GS14, HMS14, LLZ14]. **Scattering** [AS21, AIL05, BS19, CGK21, CKLM21, CS14, CS22, CLLW21, CGLL24, DW11, GW05, HMP17, HMS14, HL10b, Kac24, LL17, LLW23, LZ18a, LZ18b, LLZ23, Yin15a]. **Scheme** [AP06, BCM13, CY13, CWXY21, CMV15, CG18, CL17, CKP20, DDN10, FNP19, Gos21, JLP18, LKGK03, LZ06, LOT05, NYY11, PYSF22, SSJ+12, SRK05, VVR08, VY21, WXZ21]. **Schemes** [BRDVE14, BRR22, CKPS20, CCP23, CDV16, GK08, GLM15, JZZ11, Li07, RPCG05, UBDB+12, VVVR07, WYG07, XY09]. **Schrieffer** [CD23]. **Schrödinger**

[BDW10, BT14, CC10, CLZ16, CMZ20, EA08, GR16, HJMS08, IW10, JQZ11, KMOW18, KMOW20, LS16b, PRS07, Sti12, XZ21, ZCL14]. **Schrödinger/Gross** [IW10]. **Schroedinger** [CZ23]. **Schwarz** [CLLW21]. **Schwinger** [Yin15d]. **Sciences** [HK05]. **SDEs** [CM07, HL24, TOM10]. **Sea** [DSC24, SEZ+18]. **Seamless** [TTD19]. **Search** [GH15, KG13]. **Searching** [DWC15]. **Second** [Bos10, BN05, BEZ15, CPT21, FG08, HVS10, HS19, JLW16, JLS22, LL19, Sou05, Sto08, Str05, VO13]. **Second-Harmonic** [Sou05]. **Second-Order** [BEZ15, HVS10, HS19]. **Section** [AD03, EAC09, HK05, SD06]. **Sediment** [JLW16]. **Sedimentation** [DH22, HT17]. **Segmentation** [GO07]. **Segmentations** [BKL+10]. **Segments** [KN06]. **Segregation** [HJV07]. **Selection** [Hor11, MB21, SAC06]. **Self** [AD16, Bal04, BFPS09, BRDVE14, BFIL20, CLMT05, CF04, HS14, PRS07, XEMK09, XH24, ZBFO10]. **Self-Adjoint** [BRDVE14]. **Self-Assembling** [ZBFO10]. **Self-Averaging** [Bal04, PRS07]. **Self-Consistent** [CLMT05, CF04, XEMK09, XH24]. **Self-Similar** [AD16, BFPS09, BFIL20]. **Selling** [ZYL05]. **Semi** [CLMZ17, DQS23, Gui24, KLX22, Kat23]. **Semi-Empirical** [Kat23]. **Semi-Implicit** [Gui24]. **Semi-Lagrangian** [CLMZ17, DQS23, KLX22]. **Semiclassical** [Bal24, BCM13, CJLM15, FL18, FM03, JN06]. **Semiconductor** [AT05, CC22, CqC23, Gos14, JL17]. **Semidefinite** [HLZ17b]. **Semidilute** [RBHK13, YCF+08]. **Semidirect** [BRV12]. **Semigeostrophic** [CR06]. **Semigroup** [GL23]. **Semiparametric** [KPK13]. **Semipermeable** [BLS18, Bre23]. **Senescence** [AK07]. **Senescence-Structured** [AK07]. **Sensing** [EFS14, LAG09]. **Sensitivity** [AKSZ06, LJ18, MAG21, Nøe13, PHSN11, TCB24]. **Sensitivity-Based** [TCB24]. **Separate** [APV12]. **Separated** [VZS20]. **Separation** [ARS17, ADY20, Gil12, Had07, HLL24, LXQ09, WG19]. **Sequence** [KN06]. **Sequential** [KB16, MLS12]. **Series** [BKV22, HKDS08, HS10, Hor11, dWMH13]. **Set** [BKL+10, CCN07, DYOD08, LL19, LBM05]. **Setting** [Bos10, Boy08, ZBPR21]. **Several** [DLY05]. **Shallow** [ELW+22, LR08]. **Sham** [CDG+14, DWZ20a, LZN19, XH24]. **Shape** [BR12, CRS23, DH20, LMMM03, MR03]. **Shape-Memory** [MR03]. **Shape-Memory-Alloy** [BR12]. **Shaped** [RJM05]. **Shapes** [BS19, CS14, CS22]. **Sharp** [DLO10, EFM12, KÖ24, SP24, WXZ21]. **Sharp-Interface** [EFM12, SP24]. **Shear** [BP05, GGS20, JS12, JS13, KNR14, NX03, SXZ09]. **Sheared** [SWF+14, YCF+08]. **Shell** [MT16]. **Shock** [GPY13, HI12, KR15]. **Shocks** [SW11]. **Short** [CSPD06, YZX23]. **Short-range** [YZX23]. **Short-Time** [CSPD06]. **Shrinkage** [DJS17]. **Signal** [ARS17, CCS20, CW05, EO05]. **Signaling** [PV20]. **Signals** [Gar05, JSZ20, Nik05, THS14]. **Similar** [AD16, BFPS09, BFIL20, HM19]. **Similarities** [BCCF14]. **Similarity** [CLY+11, ZBK+06]. **Simple** [Abr12, Abr13, PG21, RJM05]. **Simple-Shaped** [RJM05]. **Simplified** [DFL10]. **Simulating** [KB11, Li07, RBSS+21, VKK+19, VBMS04]. **Simulation** [Aar04, AE06, ADGP20, AP13, AVE08, ÁGMR08, BAZC10, BMT10, CWD+08, CqC23, CMV15, CNG+18, CF10, DGM07, DP09, DP18, EF24, Eng09, FRK+20, GM21, GK10, HHL12, HWW+13, HJMS08, IWWM21, KT18, KSH03, KS08b, LMS17, LE05a, LWZ23, LE05b, MS04, MZCJ16, OYS+11, PK07, PV20, Spi15, TS06, WiOT+13, WLT06, ZMC21, ZK08]. **Simulations**

[AAHM14, BBK07, BK07b, BGH11, CSPD06, CTHC06, DMZ17, FZW05, FZW07, GR17, GP11, KSNdR21, LKGK03, LH11, LZ07, MI03, MHW13, MN11, Peu16, QV03, Rey14, RND+12a, RND+12b, SSJ+12, SSJ+15, Tor06, WTT05, WN14, ZFW05]. **Simultaneous** [HKDS08]. **Sinclair** [Hod21]. **Sinclair-Type** [Hod21]. **SINDy** [MB21, ZS19]. **Single** [AKN14, CEPT12, CHO07, EFM12, FCZ24, MO06, Sto08]. **Single-Crystal** [CHO07]. **Single-Phase** [FCZ24]. **Singular** [BDW10, GNR21, Gor15, KD05, Sjö05, ZKK04]. **Singularities** [CY03, DW11]. **Singularity** [HH23, PM21, Sti12]. **Singularly** [FMTV05]. **Sintering** [Rey14]. **Sites** [BLS18, PL21]. **Sivashinsky** [Sti04]. **Six** [DP18]. **Six-Dimensional** [DP18]. **Size** [Hüt03, Lun21, MTW16]. **Skeletonization** [MDHY16, MDHY17, MHDY17, Yin17]. **Skeletonization-Based** [MDHY16]. **Skew** [RTW+06]. **Slip** [EKM18, FG23]. **Slits** [LZ18a, LZ18b]. **Slots** [JT06]. **Slow** [Abr12, Abr13, ASST12, BGS21, GMO17, NN13, SM20b, TOM10, WG19, ZKK04]. **Slow-Fast** [BGS21, SM20b, WG19]. **Slowly** [ALT08, BEH13, GN06]. **SMA** [Sto08]. **Smagorinsky** [BIL+08]. **Smale** [BCCD16, Li21]. **Small** [AIKK05, AIL05, AD03, BFY22, BS19, CM07, CS14, CS22, CMV15, DWC15, GH15, HB05, HKY03, Kac24, NMJ11, PL21, San03, SW19, SWY21, TK15, YCD21]. **Small-Scale** [HKY03]. **Smoothness** [WYG07, XY09]. **Sociology** [Hor11]. **Soft** [Kac24, LXQ09]. **Soft-Constrained** [LXQ09]. **Softening** [BL05]. **Solid** [Eck04a, MMN17, NMJ11]. **Solidification** [Hüt03]. **Solids** [AG05, LXY21, MMN16, WLS08]. **Solitary** [GGN07, GN05, KdL15]. **Solitons** [DD13, HI12, IW10]. **Solute** [ABJ06, AMK03]. **Solution** [BK11, CTL16, CF04, FG09, GGS12, JJ15, LFY21, MLSH12, NM09, PYSF22]. **Solutions** [BS07, BRR13, CCN07, FLMN+18, GN12, LMC+08, LLY19, MMN11, MMN16, Sti12, WTJT13]. **Solvation** [LYZ+15]. **Solver** [DXZ24, GLLL23, Hod21, HHLZ18, SGNR23]. **Solvers** [YCD18]. **Solving** [GMP10, HLZ17a, LZN19]. **Somatic** [CMMS13]. **Some** [AST06, AL11, BS07, BML18, Cal07, CCN07, Man06]. **Sorption** [ARR23]. **Sound** [CGM15, Kac24]. **Sound-Soft** [Kac24]. **Source** [BAZC10, BIT10, LW21, LXQ09, LQB16, LQB18, QSLB21]. **Sources** [LL23, LSBQ23]. **Space** [ACT+10, AIL05, ACH22, CqC23, CJLM20, Dur09, LWZ23, LR10b, LMM22, LS16b, MCLO18, MCL23, VV16, MCG23]. **Space-Frequency** [Dur09]. **Space-Time** [ACH22, LMM22, LS16b]. **Spaces** [BL11a, GE10b, HP23, KC15, SS22]. **Sparse** [BMKS23, BLK16, DRZ07, Gui24, Hoa09, HLZ17b, LL23, LSH15, MSE08, MDO10, Plo09, STWZ20, SW20, THS14, WLL22]. **Sparsifying** [Yin15d, Yin15c]. **Sparsity** [LYZ+15]. **Spatial** [Bal10, BLPV15, EO05, JL05b, LE05b, MDHY17, NDEG11, Rob09, RTE17, VS11, ZG05]. **Spatially** [BAZC10, CKS08, GT17, NK11, NX03]. **Spatially-Temporally** [NX03]. **Spatiotemporal** [BLK16]. **Special** [AHGJ05, EAC09, HK05, SD06]. **Species** [MP05]. **Speckle** [GS23]. **Spectra** [FG09]. **Spectral** [AKSZ06, CC10, CCG15, DRZ07, GGS20, GPV20, KDMT24, KMOW18, LL19, LJ18, MSO14, Pey08, KMOW20]. **Spectral-Galerkin** [CC10]. **Spectrally** [GT18]. **Spectrum** [DOS12]. **Speed** [Aar04]. **Speeds** [KLX22, NX03, SXZ09]. **Sphere** [CWS10]. **Spheres** [AVE08]. **Spherical** [LBW17, PL21]. **Spin** [CGCY15]. **Spitzer** [GP11]. **Splines** [CMCS10a, CMCS10b]. **Split** [BS10, COS10, HKLW20, JV21]. **Splitting** [BFY22, CM07, CW05, JP12, Med05, FJS18].

Spontaneous [Mai16]. **Spring** [BFRD13, HJN+24, JS10, NV18]. **Square** [HP15]. **Squares** [CCJ18, Nik05]. **Stability** [CDM+22, CDV16, DQS23, DLO10, DKMW14, FYW11, GS23, GV19, LXY21, RPCG05, VL19, ZJL+23, OSZ14]. **Stabilization** [KAO05, OSZ14]. **Stable** [GM21, Kac24, LDZN22, TKM15, WKWD07]. **Staggered** [DIW20, UBDB+12]. **State** [BLPV15, CKS08, CEPT12, CELL20, DSS12, Kat22, KS18, Lun21, Mar12, Mar13, OW11, SNS10, VY21]. **States** [AZ20, Bao04, CHL20, DKMW14, EV23, HSW23, LZ18b, MLO17, Pap12]. **Static** [DFL22, CE16, JZ14]. **Stationary** [Ebe05, EA08, HKP+18, WPA18, WN14, ZCL14]. **Statistical** [BKV22, CS06, EV23, FG18, GS18, GV19, KIH15, KCL+20]. **Statistics** [LB16, LBW17]. **Steadily** [MMB12]. **Steady** [AZ20, CKS08, CEPT12, CELL20, EV23, FDJ11]. **Steady-State** [CEPT12]. **Stefan** [PVB24]. **Stents** [GS17, VZ08]. **Step** [AE11, BV06, HJV07, LXY16, MC08, PM14, SPM18, SE07]. **Step-Flow** [AE11, HJV07]. **Stepped** [QM10]. **Stepping** [CNPT10]. **Steps** [MK06, MT09]. **Steric** [CHS17, SPM18]. **Sticky** [DWC15]. **Stiff** [ASST12, Bla19, CM07, CR11, DQS23, FNP19, GN05, HS19, Neg21, PR10, TOM10]. **Stiffness** [MC08, SE07]. **Stochastic** [ABS13, AK12, AGNB22, BBK07, BEHL16, BKV22, BRR22, BS22, CK24, CR11, Coh10, CKL+08, CCH+19, CM17, DG09, DPZ24, EK21, Eng09, FOSS22, FPSS03, FH20, GAK15, Giv07, GM21, GLM15, GM16, GS13, HL10a, HHL12, HKDS08, JK12, JR03, JP12, JLZ22, JL17, JLP18, KRK17, KK05, LLM24, LS20, LYTP13, LMQ17, LM15b, LB16, LB18, LE05a, LZZ13, Liu10, LJ18, LF06, LZ07, MI03, MB10, MAG21, MHW13, MZCJ16, NV18, NT10, NN13, PK07, PS05, PG21, PA06, SSJ+12, SBMA22, Sti04, TKM15, VZS20, WGM10, WXZ21, WiOT+13, WG19, YZX23, YWS11, YYW13, ZCH15, ZK08, MLSH12]. **Stochasticity** [Mai16]. **Stokes** [AB15a, BML18, BEH13, CMV15, CF10, ER21, FG23, FLMN+18, FAO22, HKY03, HYR08, JS10, MNLD15, MS22, Wol22]. **Strain** [CDG+21, Che08, VM24]. **Strain-limiting** [VM24]. **Strained** [HJV07]. **Straits** [HS12]. **Strategies** [LMS11]. **Strengths** [YCD18]. **Stress** [HKLW20, Zha21]. **Strictly** [LY12]. **String** [VL19]. **Strip** [VMM11]. **Stripe** [CDG+21]. **Strong** [Bos07, DW11, EKM18, Giv07, LW14, MHDY17]. **Strongly** [DDN10, NP16, Neg18]. **Structural** [BL05, MMB12, ZBK+06]. **Structurally** [TW06]. **Structure** [CM14, CLZ16, CCOS06, CGH18, DGY+11, DLL19, EKM18, FZW05, GDCB18, HLZ17a, LCD+22, OW11, QGZX22, TOM10, VMM11, VS11, WF08, WXZ21, YCD21, YYW13, ZFW05, JSZ18]. **Structure-** [GDCB18]. **Structure-Preserving** [WXZ21]. **Structured** [AWA06, AK07, JSZ20, LBW17, PEPL16, STWZ20]. **Structures** [BKN+17, CZ23, CGK21, CW21, CL03b, CWS16, DH20, Pta13, SW11, WiOT+13, Yin15c]. **Studies** [IZ12]. **Study** [BT14, DSH16, LM14, Neg21]. **Sub** [ARS17]. **Sub-Cellular** [ARS17]. **Subcellular** [BL15]. **Subdiffusive** [BEHL16, Mom13]. **Subdivision** [NYY11, WYG07, XY09]. **Subgrid** [BET10, ED03, ELW+22, HWY06]. **Subject** [BST16]. **Submonolayer** [LE05a]. **Subsampled** [CH22]. **Subsonic** [BS17]. **Subspace** [KY16]. **Subspaces** [DRZZ18]. **Substances** [SEZ+18]. **Substitutional** [HJV07]. **Substrates** [CBS04, CSB04]. **Subsurface** [LJ07, MB14, WLT06]. **Subunit** [CTHC06]. **Subwavelength** [ADY20, ABCF23, BBT10, LZ23, LZ18a, LZ18b, LLZ23]. **Superconducting** [GT18]. **Superparameterization** [HM13a, LMQ17]. **Superresolution** [Gom09]. **Supervised** [GO07]. **Supply** [AMR03, AR05, DGHK07].

Surface [AV21, BLO17, CJLM15, DPV06, DYOD08, Dun15, FL18, FN03, JQZ11, Kat22, Kat23, LZ18b, LBW17, LE05b, LHKT21, NM13, NMJ11, PV20]. **Surface-Breaking** [NMJ11]. **Surfaces** [AS05, GT18, MK06, PM14, Pta15, QM10, RV15, RV18, XXZ23]. **Surrogate** [LYZ+15, SSJ+15]. **Surrogates** [KMP23]. **Surrounding** [MWW15]. **Survey** [KAO05]. **Survival** [DSH16, HS14]. **Suspension** [LH11]. **Suspensions** [CCGB05, DH22, RBHK13]. **Swapping** [DLPD12]. **Swarming** [AP13, BV24, MN11]. **Sweeping** [DHL14, EY11, LY16, QLY+16]. **Swelling** [DFMAN20]. **Switching** [AGK+11, BL15, IHM09, LB16, MBL20, TWZ15, YWS11, YYW13]. **Symmetric** [HLZ17b, JJ15]. **Symmetries** [VO13]. **Symmetry** [CT18, GS13, NYY11]. **Synapses** [GH15]. **Synaptic** [RH11]. **Synchronization** [DXZ24]. **Synchronization-Capturing** [DXZ24]. **Synchrosqueezed** [YLY15]. **Synthetic** [SS23]. **System** [Abr12, Abr13, BS17, Bos07, BF16, CWXY21, CLZ16, CL17, CE16, CCM16, CDV16, DFL10, EA08, GS15, HE21, KAO05, KTY09, Lun21, Mic11, MN11, MS22, RSM+11, SM20a, WCW15, Wol22, ZCL14, ZJ17]. **Systematic** [EGT12]. **Systematically** [KIH15, Sha16]. **Systems** [AW13, ASST12, BCW22, BHKT23, BO16, BGS21, BGP16, CS06, CY13, CK23, CRK05, CW24, CKL+08, CNPT10, CT18, CM17, DH22, DD14, DdGYZ23, DQS23, DR19, ER21, EK21, FHV11, FGS24, Fre22, GFKR22, Giv07, GK08, GR18, HVS10, HTS+22, HNV12, HKLW20, HDFS06, HL17, Hüt03, JK12, JJ15, JLS22, KJ16, KD05, KZ16, KT14, KB11, LRZ10, LM15a, LYZ+15, Li07, Liu10, LY12, LOT05, MAG21, NOR+06, NN13, PK07, PS05, PR10, RPCG05, STWZ20, ST21a, SBMA22, TOM10, TKM15, TW17, VVVR07, WGM10, WKWD07, WTT05, WG19, YWS11, YYW13, Yin15c, Zha21].

T [DWC15, MB10]. **Table** [Rey14]. **Tails** [SWFM13]. **Target** [Bre21, LBW17]. **Targeted** [MI03]. **Targets** [BS22]. **Tau** [Li07, RPCG05, MTV14]. **Tau-Leap** [MTV14]. **Tau-Leaping** [Li07, RPCG05]. **Taylor** [GBS17, RTW+06]. **Technique** [ARS17, ASST12, EGT12, JL05a, JP12, MDHY16, Neg21]. **Techniques** [AKSZ06, Li19, MS23, ZBPR21]. **Temperature** [AL14, DW22, FG21, LXY21, SL17]. **Tempered** [DLTZ18]. **Tempering** [DLPD12]. **Temporal** [BPW+16, HL09, RTE17, TMC+17, TPM21, TPM22]. **Temporally** [NX03]. **Ten** [ÖS07]. **Ten-Moment** [ÖS07]. **Tensile** [DLO10]. **Tension** [SE07]. **Tensor** [AGNB22, FOSS22, KORS22, KLY21, MZ15, Sha16, WF08, XYZ18, Yin17]. **Tensor-Based** [AGNB22]. **Tensors** [AK03, GP17]. **Term** [AFM06, DN07, SWHH04, VV16]. **Terms** [Bla19, FNP19]. **Terrace** [BV06]. **Terrace-Step-Kink** [BV06]. **Test** [BGMS21, HM13a]. **Textile** [GK10, OPS16]. **Textile-Like** [OPS16]. **Texture** [Gil12, Had07]. **Their** [JCM12, KDMT24, SH10, TTD19]. **Theoretical** [ÁGMR08]. **Theories** [AL11]. **Theory** [BJ11, BDZ17, BLPV15, CEL+20, CF04, CF15, CBS04, CSB04, CCL21, DWZ20a, DdGYZ23, DFMAN20, FL18, FK19, GP17, GLLL23, GPK12, GW05, HFOC05, HFOC08, IWWM21, LOS13, LM15b, LMC+08, LZN19, LLZ23, LMMM03, McC05, MSVE09, PM14, Peu16, Sch06, SíZ23, XYZ18, XH24, ZHY19, HJV07]. **Thermal** [AIKK05, BR12, DFL10, HC14, MR18b]. **Thermalized** [AR05]. **Thermodiffusion** [MR18b]. **Thermodynamic** [GL23].

Thermoelastic [WCW15]. **Thermostatting** [JL05a]. **Thin** [BK07a, CL03a, CGK21, CEP18, DKMW14, FG23, GNR21, JN06, JT06, SíZ23, VMM11]. **Three** [BG14, Bos10, Bre21, CSB04, FDJ11, FCZ24, GKS22, HYR08, HL17, HHO+18, KORS22, LQB16, MBC+13, OYS+11, QLY+16, SGNR23, dHGS24]. **Three-Dimensional** [BG14, Bre21, FDJ11, FCZ24, GKS22, HYR08, HL17, HHO+18, LQB16, MBC+13, OYS+11, QLY+16, dHGS24]. **Three-Scale** [CSB04]. **Threshold** [KIH15]. **Tide** [AFM06]. **Tie** [DKMO03]. **Tight** [CO16]. **Time** [AGS14, AKH12, AGK+11, ACH22, AH12, AR14, BV04, BFY22, BHKT23, BLS18, BS16, BGS21, BKV22, CLLW15, CGLL24, CLHQ22, CWS10, CSPD06, CCPT17, CNPT10, DLS14, DSH16, Eng09, EKM18, FOSS22, FL18, FJS18, FS05, FKH07, FY21, FS03, FN03, FR20, GS18, Gar21, GS23, Giv07, Gom09, GR16, GH15, HM13b, HKDS08, HS10, Hor11, IWWM21, JLW16, JO18, Kac24, KX05, KK14, KTY09, LWZ23, Liu10, LSH15, LMM22, LS16b, LH14, MV22, Med05, MS23, NDEG11, NYY11, PCCL24, PWPK10, PS19, QLY+16, Rob09, SWY21, SH10, TWZ15, THS14, TKM15, TASY+05, TK15, WPA18, WG19, ZYL05, dWMH13]. **Time-Dependent** [CLLW15, Gar21, GR16, HM13b, LWZ23, MV22, PCCL24]. **Time-Domain** [CGLL24, Kac24, MS23, SWY21]. **Time-Frequency** [LSH15, THS14]. **Time-Harmonic** [NDEG11, QLY+16]. **Time-Reversal** [FS03, GS23, Gom09]. **Time-Reversed** [FN03]. **Time-Scale** [FKH07]. **Time-Splitting** [BFY22, FJS18]. **Time-Symmetry** [NYY11]. **Times** [DWC15, DSS05, LTK17, PS05]. **Timoshenko** [VS11]. **Tissue** [HPČ+09]. **Tissues** [PP17]. **Tokamak** [Neg18]. **Tomographic** [CLY+11]. **Tomography** [ARS17, NLS20]. **Tonelli** [TPC09]. **Tool** [CRK05]. **Tooth** [SRK05]. **Topographic** [LAG09]. **Topography** [GGN07]. **Topological** [BM22, FA22, TCB24]. **Topologically** [BCMQ23]. **Topologies** [YYW13]. **Torsion** [SíZ23]. **Torsional** [MO06]. **Tortorelli** [BEZ15]. **Total** [ACHR06, BFOS07, CC06, EE09, HNW08, LV05, LZ18b, OSV03, OBG+05, SAC06, YGO07]. **Totally** [GH11]. **Touching** [ADY20, HB05, LZ23]. **Toy** [LOS13]. **Tracer** [BFPS09]. **Tracers** [LMQ17]. **Tracing** [VK10]. **Tracking** [SE06]. **Traffic** [CPT21, Fil04, GLM13, TZ19, VHPT17]. **Traffic-Flow** [Fil04]. **Train** [FOSS22]. **Training** [LFY21]. **Trajectories** [LHKT21, MLS12, TPC09]. **Transduction** [EO05]. **Transfer** [AE09, CD03, CLLW21, EF24, GLG05, GPR17, HCY12, HC14, HCC+23, LSZ21, MCG23, PCCL24]. **Transform** [EGO15, JSZ20, LA07, LS16b, Plo09]. **Transformation** [BL05]. **Transformations** [Sto08, dHUVW13]. **Transforms** [CDDY06, QY10, YLY15, YF09]. **Transient** [AF17, BHKT23, SB20, ZMC21]. **Transition** [BLPV15, CCL21, DDNP17, GLLL23, GL24, LZZ13, LLZ16, Li21, MSVE09, NOR+06, dWMH13]. **Transitions** [BCCD16, Eck04a, FZW05, GPV20, HNV12, NOR+06]. **Translocation** [FMKS06]. **Transmembrane** [KN06]. **Transmission** [AD16, GS10, LS20, LZ18b, RBSS+21]. **Transport** [ADGP20, ABJ06, AL20, AMK03, BCMQ23, Bla19, CD03, CY03, CD06, CL09, CCH+19, Ebe05, ED03, EGO15, FNP19, GNR21, GV19, HM13b, HL10a, HH21, JLT04, JLW16, JN06, KB16, LL17, MCM12, MB14, Mom13, MZCJ16, Neg21, Nøe13, SEZ+18, SHB+14, TASY+05, VY21]. **Transportation** [Sch14]. **Transverse** [HI12]. **Trap** [TK15]. **Trapped** [DPV06]. **Trapping** [CLHQ22]. **Traps**

[Bre23, DWC15, LBW17, LTK17]. **Traveling** [BRR13]. **Treating** [LJ07]. **Treatment** [VM24]. **Trees** [DBGS08]. **Triadic** [DHZ22]. **Tridomain** [GSF09]. **Truncated** [LHKT21]. **Truncation** [HVS10]. **Trust** [KG13]. **Tuberculosis** [GGM+05]. **Tubular** [CGK21]. **Tumor** [ABM05, AWA06, LMS17]. **Tunable** [TPM21, TPM22]. **Tuning** [LFY21]. **Tunnel** [CCM16]. **Tunneling** [AF17]. **Turbulence** [DP09, FS05, FKMW05, GLM15, Mai16, OYS+11]. **Turbulent** [BK07b, CL03b, CFL+17, GGS20, LM15a, LMQ17]. **Turning** [BG17]. **Turnover** [GBS17]. **TV** [CCN07]. **TVL1** [DAG09]. **Twisted** [BCMQ23]. **Two** [AKL06, AD17, AAPP10, BEG07, BGZ19, BIL+08, CD06, CL09, CDM+22, CE16, CRS23, CKP20, CBS04, DIW20, DN19, Eck04a, Eck07, EMLO20, EFM12, Fil04, GKP+14, GFKR22, Giv07, GJL+03, Gos21, HWZ21, HWY06, HL10b, JRX17, KORS22, KCL+20, KX05, KC15, KT18, KTY09, LMWW18, LWZ23, LZ23, LMS11, LCZ+22, MCL23, MK21, Mit23, PS05, PWPK10, Plo09, Pta13, Pta15, RJM05, Sha11, TWZ15, Tor06, TASY+05, XT04, ZYL05]. **Two-Body** [Sha11]. **Two-Dimensional** [BGZ19, EMLO20, Gos21, HWZ21, KX05, KC15, KT18, MCL23, PWPK10, Plo09, RJM05, Tor06]. **Two-Grid** [DIW20]. **Two-Level** [BIL+08]. **Two-Mineral** [GFKR22]. **Two-Phase** [AKL06, AAPP10, CD06, CL09, GKP+14, HWY06, KCL+20, LMS11, LCZ+22, MK21, Mit23]. **Two-Scale** [AD17, BEG07, CDM+22, CE16, CRS23, CBS04, Eck04a, Eck07, EFM12, HL10b, Pta13, Pta15, XT04]. **Two-Time-Scale** [Giv07, KTY09, LWZ23, TWZ15, ZYL05]. **Two-Velocity** [Fil04]. **Type** [AE11, AL11, BCCD16, GZ10, Hod21, LLL14, LM15b, OSZ14, PG21, WY18, YCD21, KZ16, WOW19]. **Ultrathin** [SíZ23]. **Uncertain** [WTJT13]. **Uncertainties** [DP20]. **Uncertainty** [LYZ+15, RND+12a, RND+12b, SSJ+15, XT04, ZJ17, ZK08]. **Unconfined** [MCM12]. **Undepleted** [Sou05]. **Undepleted-Pump** [Sou05]. **Underground** [BMP05]. **Understanding** [GGM+05, GN06]. **Unfolding** [DK14, NV18, Pta15]. **Unidirectionally** [QHL13]. **Unified** [DL18]. **Uniform** [BS17, BFY22, CR11, FY21]. **Uniformly** [CW22, CLMZ17, Kac24]. **Uniqueness** [LSH15]. **United** [CCOS06]. **United-Residue** [CCOS06]. **Unknown** [GST14]. **Unstable** [BL23]. **Unsteady** [DKMW14, XK05]. **Unstructured** [PEPL16]. **Updates** [BM04]. **Updating** [MDHY16]. **upon** [AKL06, BLPV15]. **Upscaled** [CD06]. **Upscaling** [AR17, BBPR16, BvWP20, CL09, CH22, DG09, DLM06, EAW04, Ebe05, FDJ11, IMP08, LR22, MV22, Mom13, PC15, PVB24, SPGL09, VMK05]. **Use** [Aar04]. **Using** [AEJ08, ARS17, BM04, CMCS10a, CMCS10b, CTL16, CGCL15, CVE09, DP09, DP18, DN07, GGM+05, HMZ19, IWWM21, JO18, KT18, LV05, LRLH22, LZ07, LQB18, MCM12, Mil05, MS23, OSV03, PSV23, Rey14, SSJ+15, San03, STWZ20, Sjö05, SWOP05, TNV04, THS14, WPA18, YLY15, BKV22, FOSS22, HKP+18, KZ16, KN06, NSD+18].

V [McC05]. **V-cycle** [McC05]. **Vacuum** [CHL20, DPV03]. **valley** [CqC23]. **Value** [BM06, GL10, MT19a, MT19b, MMN11, PYSF22, Sjö05, YCD21, YC23]. **Valued** [RDS+05, SW20, WOW19, XY09]. **Variable** [QSLB21]. **Variables** [NT10]. **Variance** [DP20, LM15b, LMS17, PK07]. **Variance-Reduced** [LMS17]. **Variate** [LM15b]. **Variates** [DP20, PSV23, RS19]. **Variation** [ACHR06, BFOS07, CC06, EE09, HNW08, LV05, OSV03, OBG+05, SAC06, YGO07].

Variation-Based [OBG+05]. **Variational** [ACF12, BSK07, BKL+10, BMKS23, BKV22, CWXY21, CLZ16, CCBL11, DLL19, ILW11, NN13, Nor09, SFO09, SG09, STHS18]. **Variations** [MZ15]. **Varying** [BEH13, PS12, RTE17]. **Vector** [BCV03, GL10, TU10]. **Vectorial** [LZ19]. **Vectors** [BZZ19]. **Vehicles** [CPT21, TZ19]. **Vehicular** [GLM13]. **Velocity** [BK07a, Fil04, GABD17, Mai16, NK11]. **Velocity-Adaptive** [GABD17]. **Velocity-Jump** [NK11]. **Verified** [DKW09]. **Version** [CFM17]. **versus** [GPP+17, KG13]. **Very** [STWZ20]. **Vesicular** [GH15]. **Vessels** [MBC+13]. **Via** [HHLZ18, LDZN22, BS17, BLK16, CHW21, CH22, Che08, CGHP18, DL18, DRZZ18, FG21, FRK+20, GL23, GMO17, HL20, KLX22, KAO05, KSH03, LNL17, MBS08, MB10, MDHY17, MS23, OPS16, SHB+14, TOM10, Yin15b, YDL05]. **Video** [MSE08]. **View** [DAG09]. **Viral** [ARRV12, LH06]. **Virus** [MP05]. **Viscoelastic** [CEP18, EKH06]. **Viscoelasticity** [BLST23]. **Viscosity** [CL03b, HH23, JS12, JS13]. **Viscous** [HP15, LR08]. **Visualization** [BGZ19, CMM11]. **Vlasov** [CDV16, Bos07, Bos10, BF16, CWXY21, CCP23, CLMZ17, DP18, ZJ17]. **Voids** [MMN16, NMJ11]. **Voigt** [DIW20]. **Volatility** [FPSS03, OSP10]. **Voltage** [HB05, LM04]. **Volume** [Alm14, AKN14, BST16, CKPS20, DGY+11, HJN+24, HH21, HMT08, JLT04, LS20, LJ07, LL09, PEPL16, WLT06, XX14]. **Volumetric** [ACCS20]. **Vortex** [BT14, DFL10, EP10]. **Vortices** [RV15, RV18]. **Vorticity** [OYS+11].

Walk [DR20]. **Walkers** [LB16]. **Walks** [SHB+14]. **Wall** [DKMO03, FKMW05, TS06]. **Wall-Induced** [FKMW05]. **Wall-Normal** [TS06]. **Walls** [Bal24, DKMO03]. **Wannier** [DL18, DLL19]. **Waste** [AAPP10, BMP05]. **Water** [ELW+22, FN03, GKS22, LR08]. **Wave** [AG11, AGS14, AB15b, ACH22, AR14, AR17, BAZC10, Bal04, BP05, BRR13, BGS19, BG20, CCEL21, CEL14, DLS14, DRZZ18, FS05, FY21, GS10, GS12, GS14, Gar21, Gom23, GN05, HL17, JT06, LR10a, LR10b, MV22, QY10, QSLB21, VMK05, XH14, XZ21, dHGS24, tTP05]. **Wave-Fronts** [Gom23]. **Wavefield** [DMZ17]. **Waveguide** [AGJ13, BG17]. **Waveguides** [AB15b, BIT10, BG14, BG20, Gom09]. **Wavelet** [BK06, CL04, DJS17, FLCG21, HKP+18, HP15, HMP17, Plo09, SW20]. **Wavelet-Based** [CL04, FLCG21]. **Wavelets** [BM04, DP09, Dur09]. **Wavepacket** [QY10]. **Waves** [AS21, ÁGMR08, FN03, GGN07, GS09a, GGS20, GKS22, HI12, JJ15, JC13, KdL15, KR15, LLW23, MCG23, NDEG11, Sha04, SWY21, TQR07]. **Weak** [AK12, BS07, FKKL11, FYW11, MB21, MR18b, SVZ11]. **Weakly** [AL11, BG20, CM14]. **Wear** [MRTV14]. **Weather** [HKDS08]. **Weight** [NMJ11, VMM11]. **Weighted** [AZ20]. **Weighting** [FAO22]. **Well** [CCGB05, CKPS20, CY03, Gos21, WLT06]. **Well-Balanced** [CKPS20, Gos21]. **Well-Posedness** [CCGB05]. **Wetting** [GH11]. **while** [BKL+10]. **White** [GS15, PS03, PS05]. **White-Noise** [GS15]. **Wide** [LDZN22]. **Wide-Band** [LDZN22]. **Wideangle** [GS12]. **Wiener** [BAZC10]. **Wigner** [FM03, LS16b]. **Willis** [DGN+08]. **Wind** [AFM06]. **Window** [LA07]. **Windowing** [Glo08]. **Wise** [KBP+11]. **within** [MMB12]. **Without** [Li19]. **Wu** [Fil04].

X [AAHM14]. **X-Ray** [AAHM14]. **XFEL** [AAHM14].

Yeast [JL05b]. **Young** [ALT08, JV21].
Yukawa [BDW10].

Zakharov [BS17]. **Zone** [BMP05]. **Zoom** [ACHR06]. **Zwanzig** [HL20, Sti07].

References

Antonelli:2014:NSX

[AAHM14] Paolo Antonelli, Agissilaos Athanassoulis, Zhongyi Huang, and Peter A. Markowich. Numerical simulations of X-Ray Free Electron Lasers (XFEL). *Multiscale Modeling & Simulation*, 12(4):1607–1621, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2023:ELP

[AAP23] Assyr Abdulle, Doghonay Arjmand, and Edoardo Paganoni. An elliptic local problem with exponential decay of the resonance error for numerical homogenization. *Multiscale Modeling & Simulation*, 21(2):513–541, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1452123`.

Amaziane:2010:HIC

[AAPP10] B. Amaziane, S. Antontsev, L. Pankratov, and A. Piatnitski. Homogenization of immiscible compressible two-phase flow in porous media: Application to gas migration in a nuclear waste repository. *Multiscale Modeling & Simulation*, 8(5):2023–2047, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p2023_s1`.

Aarnes:2004:UMM

[Aar04] Jorg E. Aarnes. On the use of a mixed multiscale finite element method for greater flexibility and increased speed or improved accuracy in reservoir simulation. *Multiscale Modeling & Simulation*, 2(3):421–439, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sambin/dbq/article/60065`.

Allaire:2005:MFE

[AB05] Grégoire Allaire and Robert Brizzi. A multiscale finite element method for numerical homogenization. *Multiscale Modeling & Simulation*, 4(3):790–812, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sambin/dbq/article/61123`.

Abdulle:2015:AFE

[AB15a] A. Abdulle and O. Budác. An adaptive finite element heterogeneous multiscale method for Stokes flow in porous media. *Multiscale Modeling & Simulation*, 13(1):256–290, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Alonso:2015:EWP

[AB15b] Ricardo Alonso and Liliana Borcea. Electromagnetic wave propagation in random waveguides. *Multiscale Modeling & Simulation*, 13(3):847–889, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2023:EMS

[ABCF23] Habib Ammari, Silvio Barandun, Jinghao Cao, and Florian Feppon. Edge modes in subwavelength resonators in one dimension. *Multiscale Modeling & Simulation*, 21(3):964–992, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1549419`.

Abdulle:2005:PEA

[Abd05] Assyr Abdulle. On *a Priori* error analysis of fully discrete heterogeneous multiscale FEM. *Multiscale Modeling & Simulation*, 4(2):447–459, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60713`.

Ali:2005:PDA

[ABG05] Giuseppe Alì, Andreas Bartel, and Michael Günther. Parabolic differential-algebraic models in electrical network design. *Multiscale Modeling & Simulation*, 4(3):813–838, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61069`.

Amaziane:2006:EMS

[ABJ06] Brahim Amaziane, Alain Bourgeat, and Mladen Jurak. Effective macrodiffusion in solute transport through heterogeneous porous media. *Multiscale Modeling & Simulation*, 5(1):184–204, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Alarcon:2005:MSM

[ABM05] T. Alarcón, H. M. Byrne, and P. K. Maini. A multiple scale model for tumor growth. *Multiscale Modeling & Simulation*, 3(2):440–475, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60376`.

Abramov:2012:SLR

[Abr12] Rafail V. Abramov. A simple linear response closure approximation for slow dynamics of a multiscale system with linear coupling. *Multiscale Modeling & Simulation*, 10(1):28–47, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v10/i1/p28_s1`.

Abramov:2013:SCA

[Abr13] Rafail V. Abramov. A simple closure approximation for slow dynamics of a multiscale system: Nonlinear and multiplicative coupling. *Multiscale Modeling & Simulation*, 11(1):134–151, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Aristoff:2016:MFE

[ABRE16] David Aristoff, Juan M. Bello-Rivas, and Ron Elber. A mathematical framework for exact milestoning. *Multiscale Modeling & Simulation*, 14(1):301–322, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2013:MMC

[ABS13] Assyr Abdulle, Andrea Barth, and Christoph Schwab. Multilevel Monte Carlo methods for stochastic elliptic multiscale PDEs. *Multiscale Modeling & Simulation*, 11(4):1033–1070, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2020:EMG

[ACCS20] Habib Ammari, Durga Prasad Challa, Anupam Pal Choudhury, and Mourad Sini. The equivalent media generated by bubbles of high contrasts: Volumetric metamaterials and metasurfaces. *Multiscale Modeling & Simulation*, 18(1):240–293, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Arias:2012:AVF

[ACF12] P. Arias, V. Caselles, and G. Facciolo. Analysis of a variational framework for exemplar-based image inpainting. *Multiscale Modeling & Simulation*, 10 (2):473–514, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Autry:2021:MMF

[ACH+21] Eric A. Autry, Daniel Carter, Gregory J. Herschlag, Zach Hunter, and Jonathan C. Mattingly. Metropolized multiscale forest recombination for redistricting. *Multiscale Modeling & Simulation*, 19(4):1885–1914, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2022:NWP

[ACH22] Habib Ammari, Jinghao Cao, and Erik Orvehed Hiltunen. NonReciprocal wave propagation in space-time modulated media. *Multiscale Modeling & Simulation*, 20(4):1228–1250, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1449427`.

Almansa:2006:RZI

[ACHR06] Andrés Almansa, Vicent Caselles, Gloria Haro, and Bernard Rougé. Restoration and zoom

of irregularly sampled, blurred, and noisy images by accurate total variation minimization with local constraints. *Multiscale Modeling & Simulation*, 5 (1):235–272, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Agnelli:2010:CCT

[ACT+10] J. P. Agnelli, M. Cadeiras, E. G. Tabak, C. V. Turner, and E. Vanden-Eijnden. Clustering and classification through normalizing flows in feature space. *Multiscale Modeling & Simulation*, 8(5):1784–1802, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1784_s1`.

Aoki:2003:HFP

[AD03] K. Aoki and P. Degond. Homogenization of a flow in a periodic channel of small section. *Multiscale Modeling & Simulation*, 1(2):304–334, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40993`.

Achdou:2016:TPA

[AD16] Yves Achdou and Thibaut Deheuvels. A transmission problem across a fractal self-similar interface. *Multiscale Modeling & Simulation*, 14(2):708–736, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Alouges:2017:CAT

[AD17] François Alouges and Giovanni Di Fratta. Cell averaging two-scale convergence: Applications to periodic homogenization. *Multiscale Modeling & Simulation*, 15(4):1651–1671, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2019:NHM

[AD19] Assyr Abdulle and Andrea Di Blasio. Numerical homogenization and model order reduction for multiscale inverse problems. *Multiscale Modeling & Simulation*, 17(1):399–433, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abreu:2020:CPM

[ADGP20] Eduardo Abreu, Ciro Díaz, Juan Galvis, and John Pérez. On the conservation properties in multiple scale coupling and simulation for Darcy flow with hyperbolic-transport in complex flows. *Multiscale Modeling & Simulation*, 18(4):1375–1408, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Andersson:2012:MDA

[AdHW12] Fredrik Andersson, Maarten V. de Hoop, and Herwig Wendt.

Multiscale discrete approximation of Fourier integral operators. *Multiscale Modeling & Simulation*, 10(1):111–145, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Aoki:2008:DMR

[ADM+08] K. Aoki, P. Degond, L. Mieussens, S. Takata, and H. Yoshida. A diffusion model for rarefied flows in curved channels. *Multiscale Modeling & Simulation*, 6(4): 1281–1316, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2020:CTA

[ADY20] Habib Ammari, Bryn Davies, and Sanghyeon Yu. Close-to-touching acoustic subwavelength resonators: Eigenfrequency separation and gradient blow-up. *Multiscale Modeling & Simulation*, 18(3):1299–1317, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Aarnes:2006:AMM

[AE06] Jørg E. Aarnes and Yalchin Efendiev. An adaptive multiscale method for simulation of fluid flow in heterogeneous porous media. *Multiscale Modeling & Simulation*, 5(3):918–939, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2008:FEH

[AE08] Assyr Abdulle and Bjorn Engquist. Finite element heterogeneous multiscale methods with near optimal computational complexity. *Multiscale Modeling & Simulation*, 6(4): 1059–1084, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Allaire:2009:HCR

[AE09] Grégoire Allaire and Karima El Ganaoui. Homogenization of a conductive and radiative heat transfer problem. *Multiscale Modeling & Simulation*, 7(3): 1148–1170, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ackerman:2011:BCB

[AE11] David M. Ackerman and J. W. Evans. Boundary conditions for Burton–Cabrera–Frank type step-flow models: Coarse-graining of discrete 2D deposition–diffusion equations. *Multiscale Modeling & Simulation*, 9(1):59–88, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p59_s1`.

Aarnes:2008:MMF

[AEJ08] J. E. Aarnes, Y. Efendiev, and L. Jiang. Mixed multiscale finite element methods using lim-

ited global information. *Multiscale Modeling & Simulation*, 7 (2):655–676, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ariel:2009:NMM

[AET09] Gil Ariel, Bjorn Engquist, and Richard Tsai. Numerical multiscale methods for coupled oscillators. *Multiscale Modeling & Simulation*, 7(3):1387–1404, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdallah:2017:DSF

[AF17] N. Ben Abdallah and A. Faraj. A double scale fast algorithm for the transient evolution of a resonant tunneling diode. *Multiscale Modeling & Simulation*, 15 (2):696–722, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ailliot:2006:LTO

[AFM06] P. Ailliot, E. Frénod, and V. Monbet. Long term object drift forecast in the ocean with tide and wind. *Multiscale Modeling & Simulation*, 5 (2):514–531, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Arndt:2005:DHO

[AG05] M. Arndt and M. Griebel. Derivation of higher order gradient continuum models from atomistic models for crystalline solids. *Multiscale Modeling & Simulation*, 4(2):531–562, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60873`.

Abdulle:2011:FEH

[AG11] Assyr Abdulle and Marcus J. Grote. Finite element heterogeneous multiscale method for the wave equation. *Multiscale Modeling & Simulation*, 9(2):766–792, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p766_s1`.

Ammari:2013:PAC

[AGJ13] Habib Ammari, Josselin Garnier, and Wenjia Jing. Passive array correlation-based imaging in a random waveguide. *Multiscale Modeling & Simulation*, 11 (2):656–681, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2011:MET

[AGK+11] Habib Ammari, Josselin Garnier, Hyeonbae Kang, Hyundae Lee, and Knut Sølna. The mean escape time for a narrow escape problem with multiple switching gates. *Multiscale Modeling & Simulation*, 9(2):817–833, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print),

1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p817_s1`.

Avila:2008:MME

[ÁGMR08] A. Ávila, G. Griso, B. Miara, and E. Rohan. Multiscale modeling of elastic waves: Theoretical justification and numerical simulation of band gaps. *Multiscale Modeling & Simulation*, 7(1):1–21, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ayoul-Guilmard:2022:TBN

[AGNB22] Quentin Ayoul-Guilmard, Anthony Nouy, and Christophe Binetruy. Tensor-based numerical method for stochastic homogenization. *Multiscale Modeling & Simulation*, 20(1):36–71, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/18M1191221`.

Abdulle:2014:FEH

[AGS14] Assyr Abdulle, Marcus J. Grote, and Christian Stohrer. Finite element heterogeneous multiscale method for the wave equation: Long-time effects. *Multiscale Modeling & Simulation*, 12(3):1230–1257, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2020:EKF

[AGZ20] Assyr Abdulle, Giacomo Garegnani, and Andrea Zanoni. Ensemble Kalman filter for multiscale inverse problems. *Multiscale Modeling & Simulation*, 18(4):1565–1594, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Anderson:2012:MMC

[AH12] David F. Anderson and Desmond J. Higham. Multilevel Monte Carlo for continuous time Markov chains, with applications in biochemical kinetics. *Multiscale Modeling & Simulation*, 10(1):146–179, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Alber:2005:SIM

[AHGJ05] Mark Alber, Thomas Hou, James A. Glazier, and Yi Jiang. Special issue on multiscale modeling in biology. *Multiscale Modeling & Simulation*, 3(2):xii–xiii, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/97417`.

Anderson:2019:CLE

[AHLW19] David F. Anderson, Desmond J. Higham, Saul C. Leite, and Ruth J. Williams. On constrained Langevin equations and (bio)Chemical reaction networks. *Multiscale Modeling &*

Simulation, 17(1):1–30, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Anderson:2018:CCA

[AHS18] David F. Anderson, Desmond J. Higham, and Yu Sun. Computational complexity analysis for Monte Carlo approximations of classically scaled population processes. *Multiscale Modeling & Simulation*, 16(3):1206–1226, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2015:LNH

[AHV15] A. Abdulle, M. E. Huber, and G. Vilmart. Linearized numerical homogenization method for nonlinear monotone parabolic multiscale problems. *Multiscale Modeling & Simulation*, 13(3): 916–952, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2005:DAT

[AIKK05] Habib Ammari, Ekaterina Iakovleva, Hyeonbae Kang, and Kyoungsun Kim. Direct algorithms for thermal imaging of small inclusions. *Multiscale Modeling & Simulation*, 4(4): 1116–1136, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62026`.

Ammari:2005:MAL

[AIL05] Habib Ammari, Ekaterina Iakovleva, and Dominique Lesselier. A MUSIC algorithm for locating small inclusions buried in a half-space from the scattering amplitude at a fixed frequency. *Multiscale Modeling & Simulation*, 3(3): 597–628, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61085`.

Abdulle:2016:OBC

[AJS16] Assyr Abdulle, Orane Jecker, and Alexander Shapeev. An optimization based coupling method for multiscale problems. *Multiscale Modeling & Simulation*, 14(4):1377–1416, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2003:PGP

[AK03] Habib Ammari and Hyeonbae Kang. Properties of the generalized polarization tensors. *Multiscale Modeling & Simulation*, 1(2):335–348, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40455`.

Ayati:2007:MMB

[AK07] Bruce P. Ayati and Isaac Klapper. A multiscale model of biofilm as a senescence-structured fluid. *Multiscale*

Modeling & Simulation, 6(2): 347–365, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Anderson:2012:WEA

[AK12] David F. Anderson and Masanori Koyama. Weak error analysis of numerical methods for stochastic models of population processes. *Multiscale Modeling & Simulation*, 10(4):1493–1524, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Amitai:2012:AMF

[AKH12] A. Amitai, I. Kupka, and D. Holcman. Analysis of the mean first looping time of a rod-polymer. *Multiscale Modeling & Simulation*, 10(2):612–632, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Aarnes:2006:HMM

[AKL06] Jorg E. Aarnes, Stein Krogstad, and Knut-Andreas Lie. A hierarchical multiscale method for two-phase flow based upon mixed finite elements and nonuniform coarse grids. *Multiscale Modeling & Simulation*, 5 (2):337–363, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Alyaev:2014:ACV

[AKN14] Sergey Alyaev, Eirik Keilegavlen, and Jan Martin Nordbotten. Analysis of control volume heterogeneous multiscale methods for single phase flow in porous media. *Multiscale Modeling & Simulation*, 12(1):335–363, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2006:LPT

[AKSZ06] Habib Ammari, Hyeoenbae Kang, Sofiane Soussi, and Habib Zribi. Layer potential techniques in spectral analysis. Part II: Sensitivity analysis of spectral properties of high contrast band-gap materials. *Multiscale Modeling & Simulation*, 5(2): 646–663, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Arndt:2008:EEA

[AL08] Marcel Arndt and Mitchell Luskin. Error estimation and atomistic-continuum adaptivity for the quasicontinuum approximation of a Frenkel–Kontorova model. *Multiscale Modeling & Simulation*, 7(1):147–170, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Anantharaman:2011:NAR

[AL11] A. Anantharaman and C. Le Bris. A numerical approach related to defect-type theories for some weakly random problems in homogenization. *Multiscale Modeling & Simulation*, 9(2):513–544, ???? 2011. CODEN MM-

SUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p513_s1`.

Aristoff:2014:MAT

[AL14] David Aristoff and Tony Lelièvre. Mathematical analysis of temperature accelerated dynamics. *Multiscale Modeling & Simulation*, 12(1):290–317, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

An:2020:QDP

[AL20] Dong An and Lin Lin. Quantum dynamics with the parallel transport gauge. *Multiscale Modeling & Simulation*, 18(2): 612–645, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2024:FRA

[ALLZ24] Habib Ammari, Bowen Li, Hongjie Li, and Jun Zou. Fano resonances in all-dielectric electromagnetic metasurfaces. *Multiscale Modeling & Simulation*, 22(1):476–526, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Almog:2014:CMF

[Alm14] Y. Almog. The Clausius–Mossotti formula in a dilute random medium with fixed volume fraction. *Multiscale Modeling & Simulation*, 12(4):1777–1799, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2012:NMM

[ALS12] Assyr Abdulle, Ping Lin, and Alexander V. Shapeev. Numerical methods for multilattices. *Multiscale Modeling & Simulation*, 10(3):696–726, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Artstein:2008:YMA

[ALT08] Zvi Artstein, Jasmine Linshiz, and Edriss S. Titi. Young measure approach to computing slowly advancing fast oscillations. *Multiscale Modeling & Simulation*, 6(4):1085–1097, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2020:MAE

[ALZ20] Habib Ammari, Bowen Li, and Jun Zou. Mathematical analysis of electromagnetic plasmonic metasurfaces. *Multiscale Modeling & Simulation*, 18(2):758–797, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Attinger:2003:MMN

[AMK03] Sabine Attinger, Jiva Dimitrova Micha, and Wolfgang Kinzelbach. Multiscale modeling of nonlinearly adsorbing solute transport. *Multiscale Modeling & Simulation*, 1(3):

408–431, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41240`.

Armbruster:2003:KFM

[AMR03] D. Armbruster, D. Marthaler, and C. Ringhofer. Kinetic and fluid model hierarchies for supply chains. *Multiscale Modeling & Simulation*, 2(1):43–61, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41961`.

Abgrall:2006:AEM

[AP06] Rémi Abgrall and Vincent Perrier. Asymptotic expansion of a multiscale numerical scheme for compressible multiphase flow. *Multiscale Modeling & Simulation*, 5(1):84–115, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Albi:2013:BIA

[AP13] G. Albi and L. Pareschi. Binary interaction algorithms for the simulation of flocking and swarming dynamics. *Multiscale Modeling & Simulation*, 11(1): 1–29, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdallah:2012:DHL

[APV12] Naoufel Ben Abdallah, Marjolaine Puel, and Michael S. Vogelius. Diffusion and homogenization limits with separate scales. *Multiscale Modeling & Simulation*, 10(4):1148–1179, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Arbogast:2007:MMM

[APWY07] Todd Arbogast, Gergina Pencheva, Mary F. Wheeler, and Ivan Yotov. A multiscale mortar mixed finite element method. *Multiscale Modeling & Simulation*, 6(1):319–346, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Armbruster:2005:TKF

[AR05] D. Armbruster and C. Ringhofer. Thermalized kinetic and fluid models for reentrant supply chains. *Multiscale Modeling & Simulation*, 3(4):782–800, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60163`.

Arjmand:2014:AHM

[AR14] Doghonay Arjmand and Olof Runborg. Analysis of heterogeneous multiscale methods for long time wave propagation problems. *Multiscale Modeling & Simulation*, 12(3):1135–1166, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Arjmand:2017:EUE

[AR17] Doghonay Arjmand and Olof Runborg. Estimates for the upscaling error in heterogeneous multiscale methods for wave propagation problems in locally periodic media. *Multiscale Modeling & Simulation*, 15(2):948–976, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Arbogast:2011:HBM

[Arb11] Todd Arbogast. Homogenization-based mixed multiscale finite elements for problems with anisotropy. *Multiscale Modeling & Simulation*, 9(2):624–653, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p624_s1`.

Ammari:2018:HGP

[ARR18] Habib Ammari, Francisco Romero, and Matias Ruiz. Heat generation with plasmonic nanoparticles. *Multiscale Modeling & Simulation*, 16(1):356–384, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Astuto:2023:MMS

[ARR23] Clarissa Astuto, Antonio Raudino, and Giovanni Russo. Multiscale modeling of sorption kinetics. *Multiscale Modeling & Simulation*, 21(1):374–399, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1463872`.

Aland:2012:BIV

[ARRV12] Sebastian Aland, Andreas Rätz, Matthias Röger, and Axel Voigt. Buckling instability of viral capsids — a continuum approach. *Multiscale Modeling & Simulation*, 10(1):82–110, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ammari:2017:SST

[ARS17] Habib Ammari, Francisco Romero, and Cong Shi. A signal separation technique for subcellular imaging using dynamic optical coherence tomography. *Multiscale Modeling & Simulation*, 15(3):1155–1175, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdulle:2005:HMF

[AS05] Assyr Abdulle and Christoph Schwab. Heterogeneous multiscale FEM for diffusion problems on rough surfaces. *Multiscale Modeling & Simulation*, 3(1):195–220, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60077`.

Akian:2021:KMM

[AS21] Jean-Luc Akian and Eric Savin. Kinetic modeling of multiple

scattering of acoustic waves in randomly heterogeneous flows. *Multiscale Modeling & Simulation*, 19(3):1394–1424, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ariel:2012:MTF

[ASST12] G. Ariel, J. M. Sanz-Serna, and R. Tsai. A multiscale technique for finding slow manifolds of stiff mechanical systems. *Multiscale Modeling & Simulation*, 10(4): 1180–1203, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Achdou:2006:MNM

[AST06] Yves Achdou, Christophe Sabot, and Nicoletta Tchou. A multiscale numerical method for Poisson problems in some ramified domains with a fractal boundary. *Multiscale Modeling & Simulation*, 5(3):828–860, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Abdallah:2005:DAH

[AT05] Naoufel Ben Abdallah and Mohamed Lazhar Tayeb. Diffusion approximation and homogenization of the semiconductor Boltzmann equation. *Multiscale Modeling & Simulation*, 4(3): 896–914, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61122`.

Altmann:2021:MMH

[AV21] Robert Altmann and Barbara Verfürth. A multiscale method for heterogeneous bulk-surface coupling. *Multiscale Modeling & Simulation*, 19(1):374–400, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ariel:2008:ASH

[AVE08] Gil Ariel and Eric Vanden-Eijnden. Accelerated simulation of a heavy particle in a gas of elastic spheres. *Multiscale Modeling & Simulation*, 7(1):349–361, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Amarala:2013:MMS

[AW13] Swathi Amarala and Justin W. L. Wan. Multigrid methods for systems of hyperbolic conservation laws. *Multiscale Modeling & Simulation*, 11(2):586–614, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ayati:2006:CMR

[AWA06] Bruce P. Ayati, Glenn F. Webb, and Alexander R. A. Anderson. Computational methods and results for structured multiscale models of tumor invasion. *Multiscale Modeling & Simulation*, 5(1):1–20, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Aristoff:2020:OWE

[AZ20] David Aristoff and Daniel M. Zuckerman. Optimizing weighted ensemble sampling of steady states. *Multiscale Modeling & Simulation*, 18(2):646–673, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bal:2004:SAW

[Bal04] Guillaume Bal. On the self-averaging of wave energy in random media. *Multiscale Modeling & Simulation*, 2(3):398–420, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42629`.

Bal:2008:CLH

[Bal08] Guillaume Bal. Central limits and homogenization in random media. *Multiscale Modeling & Simulation*, 7(2):677–702, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bal:2010:HLS

[Bal10] Guillaume Bal. Homogenization with large spatial random potential. *Multiscale Modeling & Simulation*, 8(4):1484–1510, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bal:2024:SPA

[Bal24] Guillaume Bal. Semiclassical propagation along curved domain walls. *Multiscale Modeling & Simulation*, 22(1):66–105, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bao:2004:GSD

[Bao04] Weizhu Bao. Ground states and dynamics of multicomponent Bose–Einstein condensates. *Multiscale Modeling & Simulation*, 2(2):210–236, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60020`.

Badieirostami:2010:WCE

[BAZC10] Majid Badieirostami, Ali Adibi, Hao-Min Zhou, and Shui-Nee Chow. Wiener chaos expansion and simulation of electromagnetic wave propagation excited by a spatially incoherent source. *Multiscale Modeling & Simulation*, 8(2):591–604, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Barzel:2007:AMM

[BBK07] Baruch Barzel, Ofer Biham, and Raz Kupferman. Analysis of the multiplane method for stochastic simulations of reaction networks with fluctuations. *Multiscale Modeling & Simulation*, 6(3):963–982, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bellomo:2013:MCC

[BBK13] Nicola Bellomo, Abdelghani Bellouquid, and Damian Knopoff. From the microscale to collective crowd dynamics. *Multiscale Modeling & Simulation*, 11 (3):943–963, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bringedal:2016:UNR

[BBPR16] C. Bringedal, I. Berre, I. S. Pop, and F. A. Radu. Upscaling of nonisothermal reactive porous media flow under dominant Péclet number: The effect of changing porosity. *Multiscale Modeling & Simulation*, 14(1):502–533, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Babadjian:2010:EEF

[BBT10] Jean-François Babadjian, Eric Bonnetier, and Faouzi Triki. Enhancement of electromagnetic fields caused by interacting subwavelength cavities. *Multiscale Modeling & Simulation*, 8(4):1383–1418, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bresch:2010:RIE

[BCC+10] Didier Bresch, Catherine Choquet, Laurent Chupin, Thierry Colin, and Marguerite Gisclon. Roughness-induced effect at main order on the Reynolds approximation. *Multiscale Modeling & Simulation*, 8(3):997–1017, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Barbaro:2016:PTK

[BCCD16] Alethea B. T. Barbaro, José A. Cañizo, José A. Carrillo, and Pierre Degond. Phase transitions in a kinetic flocking model of Cucker–Smale type. *Multiscale Modeling & Simulation*, 14 (3):1063–1088, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ballester:2014:MAS

[BCCF14] Coloma Ballester, Felipe Calderero, Vicent Caselles, and Gabriele Facciolo. Multiscale analysis of similarities between images on Riemannian manifolds. *Multiscale Modeling & Simulation*, 12 (2):616–649, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Baeza:2010:NBM

[BCGP10] Antonio Baeza, Vicent Caselles, Pau Gargallo, and Nicolas Papadakis. A narrow band method for the convex formulation of discrete multilabel problems. *Multiscale Modeling & Simulation*, 8(5):2048–2078, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/`

resource/1/mmsubt/v8/i5/p2048_s1.

Bergdorf:2005:MAP

[BCK05] Michael Bergdorf, Georges-Henri Cottet, and Petros Koumoutsakos. Multilevel adaptive particle methods for convection–diffusion equations. *Multiscale Modeling & Simulation*, 4(1):328–357, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/60288.

Buades:2005:RID

[BCM05] A. Buades, B. Coll, and J. M. Morel. A review of image denoising algorithms, with a new one. *Multiscale Modeling & Simulation*, 4(2):490–530, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/61602.

Besse:2013:APS

[BCM13] Christophe Besse, Rémi Carles, and Florian Méhats. An asymptotic preserving scheme based on a new formulation for NLS in the semiclassical limit. *Multiscale Modeling & Simulation*, 11 (4):1228–1260, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bal:2023:MMT

[BCMQ23] Guillaume Bal, Paul Cazeaux, Daniel Massatt, and Solomon Quinn. Mathematical models of topologically protected transport in twisted bilayer graphene. *Multiscale Modeling & Simulation*, 21(3):1081–1121, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/22M1505542.

Burger:2006:MAN

[BCP06] Martin Burger, Vincenzo Capasso, and Livio Pizzocchero. Mesoscale averaging of nucleation and growth models. *Multiscale Modeling & Simulation*, 5 (2):564–592, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ballester:2003:DJI

[BCV03] Coloma Ballester, Vicent Caselles, and Joan Verdera. Disocclusion by joint interpolation of vector fields and gray levels. *Multiscale Modeling & Simulation*, 2 (1):80–123, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/42245.

Bauer:2022:HOP

[BCW22] Werner Bauer, Colin Cotter, and Beth Wingate. Higher order phase averaging for highly oscillatory systems. *Multiscale Modeling & Simulation*, 20(3): 936–956, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

URL https://epubs.siam.org/doi/10.1137/21M1430546.

Borcea:2009:FDL

[BdCPT09] L. Borcea, F. González del Cueto, G. Papanicolaou, and C. Tsogka. Filtering deterministic layer effects in imaging. *Multiscale Modeling & Simulation*, 7 (3):1267–1301, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2010:FRL

[BdCPT10] L. Borcea, F. González del Cueto, G. Papanicolaou, and C. Tsogka. Filtering random layering effects in imaging. *Multiscale Modeling & Simulation*, 8(3):751–781, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bao:2010:SLK

[BDW10] Weizhu Bao, Xuanchun Dong, and Shu Wang. Singular limits of Klein–Gordon–Schrödinger equations to Schrödinger–Yukawa equations. *Multiscale Modeling & Simulation*, 8(5):1742–1769, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1742_s1.

Barre:2017:KTP

[BDZ17] Julien Barré, Pierre Degond, and Ewelina Zatorska. Kinetic theory of particle interactions mediated by dynamical networks. *Multiscale Modeling & Simulation*, 15(3):1294–1323, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Braack:2003:PCM

[BE03] Malte Braack and Alexandre Ern. A posteriori control of modeling errors and discretization errors. *Multiscale Modeling & Simulation*, 1(2):221–238, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/41048.

Bertozzi:2007:ATS

[BEG07] Andrea Bertozzi, Selim Esedoğlu, and Alan Gillette. Analysis of a two-scale Cahn–Hilliard model for binary image inpainting. *Multiscale Modeling & Simulation*, 6(3):913–936, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Brown:2013:EHM

[BEH13] Donald L. Brown, Yalchin Efendiev, and Viet Ha Hoang. An efficient hierarchical multiscale finite element method for Stokes equations in slowly varying media. *Multiscale Modeling & Simulation*, 11(1):30–58, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Blanc:2016:MMS

[BEHL16] Emilie Blanc, Stefan Engblom, Andreas Hellander, and Per Lötstedt. Mesoscopic modeling of stochastic reaction–diffusion kinetics in the subdiffusive regime. *Multiscale Modeling & Simulation*, 14(2):668–707, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Brown:2015:HHC

[BELS15] Donald L. Brown, Yalchin Efendiev, Guanglian Li, and Viktoria Savatorova. Homogenization of high-contrast Brinkman flows. *Multiscale Modeling & Simulation*, 13(2): 472–490, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bernstein:2007:OPB

[Ber07] David Bernstein. Optimal prediction of Burgers's equation. *Multiscale Modeling & Simulation*, 6(1):27–52, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bourlioux:2010:PEE

[BET10] Anne Bourlioux, Alexandre Ern, and Pascal Turbis. A posteriori error estimation for subgrid flamelet models. *Multiscale Modeling & Simulation*, 8 (2):481–497, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Burger:2015:SOE

[BEZ15] M. Burger, T. Esposito, and C. I. Zeppieri. Second-order edge-penalization in the Ambrosio–Tortorelli functional. *Multiscale Modeling & Simulation*, 13(4):1354–1389, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bertozzi:2012:DIM

[BF12] Andrea L. Bertozzi and Arjuna Flenner. Diffuse interface models on graphs for classification of high dimensional data. *Multiscale Modeling & Simulation*, 10 (3):1090–1118, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bostan:2016:EVP

[BF16] Mihaï Bostan and Aurélie Finot. The effective Vlasov–Poisson system for the finite Larmor radius regime. *Multiscale Modeling & Simulation*, 14(4):1238–1275, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Braga:2020:NRG

[BFIL20] Gastão A. Braga, Frederico Furtado, Vincenzo Isaia, and Long Lee. Numerical renormalization group algorithms for self-similar asymptotics of partial differential equations. *Multiscale Modeling & Simulation*, 18(1):131–162, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bhat:2005:LAC

[BFM+05] H. S. Bhat, R. C. Fetecau, J. E. Marsden, K. Mohseni, and M. West. Lagrangian averaging for compressible fluids. *Multiscale Modeling & Simulation*, 3(4):818–837, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60173`.

Braga:2003:RGA

[BFMR03] Gastão A. Braga, Frederico Furtado, Jussara M. Moreira, and Leonardo T. Rolla. Renormalization group analysis of nonlinear diffusion equations with periodic coefficients. *Multiscale Modeling & Simulation*, 1(4): 630–644, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41660`.

Burger:2007:ITV

[BFOS07] M. Burger, K. Frick, S. Osher, and O. Scherzer. Inverse total variation flow. *Multiscale Modeling & Simulation*, 6(2):366–395, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borges:2009:SAT

[BFPS09] M. R. Borges, F. Furtado, F. Pereira, and H. P. Amaral Souto. Scaling analysis for the tracer flow problem in self-similar permeability fields. *Multiscale Modeling & Simulation*, 7 (3):1130–1147, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Blesgen:2013:MMS

[BFRD13] T. Blesgen, F. Fraternali, J. R. Raney, and C. Daraio. Multiscale mass-spring models of carbon nanotube arrays accounting for mullins-like behavior and permanent deformation. *Multiscale Modeling & Simulation*, 11 (2):545–565, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bao:2022:IUE

[BFY22] Weizhu Bao, Yue Feng, and Jia Yin. Improved uniform error bounds on time-splitting methods for the long-time dynamics of the Dirac equation with small potentials. *Multiscale Modeling & Simulation*, 20(3):1040–1062, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M146995X`.

Braides:2008:EBE

[BG08] Andrea Braides and Antoine Gloria. Exact bounds on the effective behavior of a conducting discrete polycrystal. *Multiscale Modeling & Simulation*, 6 (4):1198–1216, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2014:PCP

[BG14] Liliana Borcea and Josselin Garnier. Paraxial coupling of propagating modes in three-dimensional waveguides with random boundaries. *Multiscale Modeling & Simulation*, 12(2): 832–878, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2017:PRR

[BG17] Liliana Borcea and Josselin Garnier. Pulse reflection in a random waveguide with a turning point. *Multiscale Modeling & Simulation*, 15(4):1472–1501, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2020:WPR

[BG20] Liliana Borcea and Josselin Garnier. Wave propagation in randomly perturbed weakly coupled waveguides. *Multiscale Modeling & Simulation*, 18(1): 44–78, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Brouwer:2011:GPM

[BGH11] Jens Brouwer, Ingenuin Gasser, and Michael Herty. Gas pipeline models revisited: Model hierarchies, nonisothermal models, and simulations of networks. *Multiscale Modeling & Simulation*, 9(2):601–623, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p601_s1`.

Baffico:2008:HEM

[BGMO08] L. Baffico, C. Grandmont, Y. Maday, and A. Osses. Homogenization of elastic media with gaseous inclusions. *Multiscale Modeling & Simulation*, 7(1):432–465, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bourgeat:2003:FLP

[BGMP03] Alain Bourgeat, Olivier Gipouloux, and Eduard Marusic-Paloka. Filtration law for polymer flow through porous media. *Multiscale Modeling & Simulation*, 1(3):432–457, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41532`.

Burov:2021:KAF

[BGMS21] Dmitry Burov, Dimitrios Giannakis, Krithika Manohar, and Andrew Stuart. Kernel analog forecasting: Multiscale test problems. *Multiscale Modeling & Simulation*, 19(2):1011–1040, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Backofen:2011:CAD

[BGP+11] Rainer Backofen, Manuel Gräf, Daniel Potts, Simon Praeto-

rius, Axel Voigt, and Thomas Witkowski. A continuous approach to discrete ordering on $\mathbf{S}^2$. *Multiscale Modeling & Simulation*, 9(1):314–334, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p314_s1`.

Braides:2016:IES

[BGP16] Andrea Braides, Adriana Garroni, and Mariapia Palombaro. Interfacial energies of systems of chiral molecules. *Multiscale Modeling & Simulation*, 14(3): 1037–1062, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Brown:2018:NHH

[BGP18] Donald L. Brown, Joscha Gedicke, and Daniel Peterseim. Numerical homogenization of heterogeneous fractional Laplacians. *Multiscale Modeling & Simulation*, 16(3):1305–1332, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2019:WPI

[BGS19] Liliana Borcea, Josselin Garnier, and Knut Solna. Wave propagation and imaging in moving random media. *Multiscale Modeling & Simulation*, 17(1):31–67, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bourguin:2021:DTI

[BGS21] Solesne Bourguin, Siragan Gailus, and Konstantinos Spiliopoulos. Discrete-time inference for slow-fast systems driven by fractional Brownian motion. *Multiscale Modeling & Simulation*, 19 (3):1333–1366, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2014:AAD

[BGW14] Liliana Borcea, Yuliya Gorb, and Yingpei Wang. Asymptotic approximation of the Dirichlet to Neumann map of high contrast conductive media. *Multiscale Modeling & Simulation*, 12 (4):1494–1532, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bouchitte:2010:HDP

[BGZ10] Guy Bouchitté, Sébastien Guenneau, and Frédéric Zolla. Homogenization of dielectric photonic quasi crystals. *Multiscale Modeling & Simulation*, 8(5):1862–1881, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1862_s1`.

Bianchini:2019:TDF

[BGZ19] Roberta Bianchini, Laurent Gosse, and Enrique Zuazua. A two-dimensional "Flea on the elephant" phenomenon and its

numerical visualization. *Multiscale Modeling & Simulation*, 17 (1):137–166, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Baxevani:2023:BTT

[BHKT23] Georgia Baxevani, Vagelis Harmandaris, Evangelia Kalligiannaki, and Ivi Tsantili. Bottom-up transient time models in coarse-graining molecular systems. *Multiscale Modeling & Simulation*, 21(4):1746–1774, December 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borggaard:2008:TLD

[BIL+08] Jeff Borggaard, Traian Iliescu, Hyesuk Lee, John Paul Roop, and Hyunjin Son. A two-level discretization method for the Smagorinsky model. *Multiscale Modeling & Simulation*, 7(2): 599–621, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2010:SLR

[BIT10] Liliana Borcea, Leila Issa, and Chrysoula Tsogka. Source localization in random acoustic waveguides. *Multiscale Modeling & Simulation*, 8(5):1981–2022, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1981_s1`.

Bal:2011:CTM

[BJ11] Guillaume Bal and Wenjia Jing. Corrector theory for Ms-FEM and HMM in random media. *Multiscale Modeling & Simulation*, 9(4):1549–1587, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1549_s1`.

Berlyand:2020:KAA

[BJPR20] Leonid Berlyand, Pierre-Emmanuel Jabin, Mykhailo Potomkin, and Elzbieta Ratajczyk. A kinetic approach to active rods dynamics in confined domains. *Multiscale Modeling & Simulation*, 18(1):1–20, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bergdorf:2006:LPW

[BK06] Michael Bergdorf and Petros Koumoutsakos. A Lagrangian particle-wavelet method. *Multiscale Modeling & Simulation*, 5 (3):980–995, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Babovsky:2007:DLD

[BK07a] Hans Babovsky and Piotr Kowalczyk. Diffusion limits for discrete velocity models in a thin gap. *Multiscale Modeling & Simulation*, 6(2):631–655, ???? 2007. CODEN MMSUBT.

ISSN 1540-3459 (print), 1540-3467 (electronic).

Bourlioux:2007:RAP

[BK07b] Anne Bourlioux and Boualem Khouider. A rigorous asymptotic perspective on the large scale simulations of turbulent premixed flames. *Multiscale Modeling & Simulation*, 6(1): 287–307, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bartels:2011:EAN

[BK11] Sören Bartels and Martin Kruzík. An efficient approach to the numerical solution of rate-independent problems with nonconvex energies. *Multiscale Modeling & Simulation*, 9(3):1276–1300, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1276_s1`.

Barchiesi:2010:VMI

[BKL+10] M. Barchiesi, S. H. Kang, T. M. Le, M. Morini, and M. Ponsiglione. A variational model for infinite perimeter segmentations based on Lipschitz level set functions: Denoising while keeping finely oscillatory boundaries. *Multiscale Modeling & Simulation*, 8(5):1715–1741, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1715_s1`.

Borsche:2017:RMF

[BKN+17] R. Borsche, A. Klar, C. Nessler, A. Roth, and O. Tse. A retarded mean-field approach for interacting fiber structures. *Multiscale Modeling & Simulation*, 15 (3):1130–1154, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Boyko:2022:SLN

[BKV22] Vyacheslav Boyko, Sebastian Krumscheid, and Nikki Vercauteren. Statistical learning of nonlinear stochastic differential equations from nonstationary time series using variational clustering. *Multiscale Modeling & Simulation*, 20(4): 1251–1283, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1403989`.

Bvelik:2005:CMS

[BL05] Pavel Bvelík and Mitchell Luskin. Computational modeling of softening in a structural phase transformation. *Multiscale Modeling & Simulation*, 3(4):764–781, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60433`.

Babuska:2011:OLA

[BL11a] Ivo Babuška and Robert Lipton. Optimal local approximation spaces for generalized finite element methods with application to multiscale problems. *Multiscale Modeling & Simulation*, 9(1):373–406, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p373_s1`.

Belik:2011:AQN

[BL11b] Pavel Belík and Mitchell Luskin. Analysis of the quasi-nonlocal approximation of linear and circular chains in the plane. *Multiscale Modeling & Simulation*, 9(4):1495–1527, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1495_s1`.

Bressloff:2015:ESD

[BL15] Paul C. Bressloff and Sean D. Lawley. Escape from subcellular domains with randomly switching boundaries. *Multiscale Modeling & Simulation*, 13(4):1420–1445, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bhattacharya:2023:QEU

[BL23] Debdeep Bhattacharya and Robert P. Lipton. Quasistatic evolution with unstable forces. *Multiscale Modeling & Simulation*, 21(2):598–623, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1489642`.

Blanc:2019:NMC

[Bla19] Thomas Blanc. Numerical methods for computing an averaged matrix field. application to the asymptotic analysis of a parabolic problem with stiff transport terms. *Multiscale Modeling & Simulation*, 17(1): 531–551, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Breitzman:2007:LFA

[BLI07] Timothy Breitzman, Robert Lipton, and Endel Iarve. Local field assessment inside multiscale composite architectures. *Multiscale Modeling & Simulation*, 6(3):937–962, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bright:2016:CSD

[BLK16] Ido Bright, Guang Lin, and J. Nathan Kutz. Classification of spatiotemporal data via asynchronous sparse sampling: Application to flow around a cylinder. *Multiscale Modeling & Simulation*, 14(2):823–838, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Benoit:2014:MLO

[BLL14] David Benoit, Claude Le Bris, and Tony Lelièvre. Macroscopic limit of a one-dimensional model for aging fluids. *Multiscale Modeling & Simulation*, 12 (3):1335–1378, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Binder:2017:APC

[BLO17] Andrew J. Binder, Mitchell Luskin, and Christoph Ortner. Analysis of a predictor-corrector method for computationally efficient modeling of surface effects in 1D. *Multiscale Modeling & Simulation*, 15(2):892–919, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Binder:2015:ATS

[BLPV15] Andrew Binder, Mitchell Luskin, Danny Perez, and Arthur F. Voter. Analysis of transition state theory rates upon spatial coarse-graining. *Multiscale Modeling & Simulation*, 13(3): 890–915, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bernoff:2018:BHC

[BLS18] Andrew J. Bernoff, Alan E. Lindsay, and Daniel D. Schmidt. Boundary homogenization and capture time distributions of semipermeable membranes with periodic patterns of reactive sites. *Multiscale Modeling & Simulation*, 16(3):1411–1447, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bhattacharya:2023:LMH

[BLST23] Kaushik Bhattacharya, Burigede Liu, Andrew Stuart, and Margaret Trautner. Learning Markovian homogenized models in viscoelasticity. *Multiscale Modeling & Simulation*, 21(2): 641–679, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1499200`.

Bennett:2004:FMU

[BM04] Nicholas N. Bennett and Alberto Malinverno. Fast model updates using wavelets. *Multiscale Modeling & Simulation*, 3(1):106–130, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60146`.

Bhat:2006:HNE

[BM06] Y. S. Bhat and S. Moskow. Homogenization of a nonlinear elliptic boundary value problem modeling Galvanic currents. *Multiscale Modeling & Simulation*, 5(1):149–169, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Briane:2009:GHE

[BM09] Marc Briane and Graeme W. Milton. Giant Hall effect in composites. *Multiscale Modeling & Simulation*, 7(3):1405–1427, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bisconti:2017:ERL

[BM17] Luca Bisconti and Paolo Maria Mariano. Existence results in the linear dynamics of quasicrystals with phason diffusion and nonlinear gyroscopic effects. *Multiscale Modeling & Simulation*, 15(2):745–767, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borchering:2018:CAI

[BM18] Rebecca K. Borchering and Scott A. McKinley. Continuum approximation of invasion probabilities. *Multiscale Modeling & Simulation*, 16(2):551–582, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bal:2022:MIF

[BM22] Guillaume Bal and Daniel Massatt. Multiscale invariants of Floquet topological insulators. *Multiscale Modeling & Simulation*, 20(1):493–523, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1392826`.

Bittracher:2023:ORC

[BMKS23] Andreas Bittracher, Mattes Mollenhauer, Péter Koltai, and Christof Schütte. Optimal reaction coordinates: Variational characterization and sparse computation. *Multiscale Modeling & Simulation*, 21(2):449–488, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1448367`.

Branicki:2018:ASA

[BML18] M. Branicki, A. J. Majda, and K. J. H. Law. Accuracy of some approximate Gaussian filters for the Navier–Stokes equation in the presence of model error. *Multiscale Modeling & Simulation*, 16(4):1756–1794, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bourgeat:2005:HMU

[BMP05] Alain Bourgeat and Eduard Marusic-Paloka. A homogenized model of an underground waste repository including a disturbed zone. *Multiscale Modeling & Simulation*, 3(4):918–939, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60542`.

Bendali:2010:JCM

[BMT10] Abderrahmane Bendali, Abdelkader Makhlouf, and Sébastien

Tordeux. Justification of the cavity model in the numerical simulation of patch antennas by the method of matched asymptotic expansions. *Multiscale Modeling & Simulation*, 8(5):1902–1922, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1902_s1`.

Bourgeade:2005:NML

[BN05] A. Bourgeade and B. Nkonga. Numerical modeling of laser pulse behavior in nonlinear crystal and application to the second harmonic generation. *Multiscale Modeling & Simulation*, 4(4):1059–1090, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61612`.

Bella:2016:CEE

[BO16] Peter Bella and Felix Otto. Corrector estimates for elliptic systems with random periodic coefficients. *Multiscale Modeling & Simulation*, 14(4):1434–1462, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bostan:2007:VMS

[Bos07] Mihai Bostan. The Vlasov–Maxwell system with strong initial magnetic field: Guiding-center approximation. *Multiscale Modeling & Simulation*, 6 (3):1026–1058, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bostan:2010:GVE

[Bos10] Mihai Bostan. Gyrokinetic Vlasov equation in three dimensional setting. second order approximation. *Multiscale Modeling & Simulation*, 8(5):1923–1957, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1923_s1`.

Boyaval:2008:RBA

[Boy08] Sébastien Boyaval. Reduced-basis approach for homogenization beyond the periodic setting. *Multiscale Modeling & Simulation*, 7(1):466–494, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Banks:2005:PMA

[BP05] H. T. Banks and Gabriella A. Pinter. A probabilistic multiscale approach to hysteresis in shear wave propagation in biotissue. *Multiscale Modeling & Simulation*, 3(2):395–412, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60369`.

Bal:2007:KMI

[BP07] Guillaume Bal and Olivier Pinaud. Kinetic models for imag-

ing in random media. *Multiscale Modeling & Simulation*, 6 (3):792–819, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Blanc:2014:HHD

[BP14] Xavier Blanc and Benjamin-Edouard Peigney. Homogenization of heat diffusion in a cracked medium. *Multiscale Modeling & Simulation*, 12(2): 879–906, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Brown:2016:MMP

[BP16] Donald L. Brown and Daniel Peterseim. A multiscale method for porous microstructures. *Multiscale Modeling & Simulation*, 14(3):1123–1152, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bertaglia:2023:MCF

[BP23] Giulia Bertaglia and Lorenzo Pareschi. Multiscale constitutive framework of one-dimensional blood flow modeling: Asymptotic limits and numerical methods. *Multiscale Modeling & Simulation*, 21(3): 1237–1267, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1554230`.

Badia:2008:ACC

[BPB+08] Santiago Badia, Michael Parks, Pavel Bochev, Max Gunzburger, and Richard Lehoucq. On atomistic-to-continuum coupling by blending. *Multiscale Modeling & Simulation*, 7(1): 381–406, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2006:CIF

[BPT06] Liliana Borcea, George Papanicolaou, and Chrysoula Tsogka. Coherent interferometry in finely layered random media. *Multiscale Modeling & Simulation*, 5(1):62–83, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bazzi:2016:CDT

[BPW+16] Marya Bazzi, Mason A. Porter, Stacy Williams, Mark McDonald, Daniel J. Fenn, and Sam D. Howison. Community detection in temporal multilayer networks, with an application to correlation networks. *Multiscale Modeling & Simulation*, 14(1): 1–41, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Benesova:2012:MMS

[BR12] B. Benesová and T. Roubícek. Micro-to-meso scale limit for shape-memory-alloy models with thermal coupling. *Multiscale Modeling & Simulation*, 10 (3):1059–1089, ???? 2012. CO-

DEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bou-Rabee:2014:MIS

[BRDVE14] Nawaf Bou-Rabee, Aleksandar Donev, and Eric Vanden-Eijnden. Metropolis integration schemes for self-adjoint diffusions. *Multiscale Modeling & Simulation*, 12(2):781–831, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bressloff:2021:AAT

[Bre21] Paul C. Bressloff. Asymptotic analysis of target fluxes in the three-dimensional narrow capture problem. *Multiscale Modeling & Simulation*, 19(2):612–632, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bressloff:2023:NCP

[Bre23] Paul C. Bressloff. The 3D narrow capture problem for traps with semipermeable interfaces. *Multiscale Modeling & Simulation*, 21(3):1268–1298, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1535462`.

Berestycki:2013:TWS

[BRR13] H. Berestycki, N. Rodríguez, and L. Ryzhik. Traveling wave solutions in a reaction–diffusion model for criminal activity. *Multiscale Modeling & Simulation*, 11(4):1097–1126, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Brehier:2022:APS

[BRR22] Charles-Edouard Bréhier and Shmuel Rakotonirina-Ricquebourg. On asymptotic preserving schemes for a class of stochastic differential equations in averaging and diffusion approximation regimes. *Multiscale Modeling & Simulation*, 20(1):118–163, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1379836`.

Bruveris:2012:MKI

[BRV12] Martins Bruveris, Laurent Risser, and François-Xavier Vialard. Mixture of kernels and iterated semidirect product of diffeomorphisms groups. *Multiscale Modeling & Simulation*, 10 (4):1344–1368, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Barrett:2007:EGW

[BS07] John W. Barrett and Endre Süli. Existence of global weak solutions to some regularized kinetic models for dilute polymers. *Multiscale Modeling & Simulation*, 6(2):506–546, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bouchitte:2010:HME

[BS10] Guy Bouchitté and Ben Schweizer. Homogenization of Maxwell's equations in a split ring geometry. *Multiscale Modeling & Simulation*, 8(3):717–750, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Borcea:2016:PPT

[BS16] Liliana Borcea and Knut Sølna. Pulse propagation in time dependent randomly layered media. *Multiscale Modeling & Simulation*, 14(1):265–300, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bao:2017:UEB

[BS17] Weizhu Bao and Chunmei Su. Uniform error bounds of a finite difference method for the Zakharov system in the subsonic limit regime via an asymptotic consistent formulation. *Multiscale Modeling & Simulation*, 15 (2):977–1002, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bouzekri:2019:FLA

[BS19] Ali Bouzekri and Mourad Sini. The Foldy–Lax approximation for the full electromagnetic scattering by small conductive bodies of arbitrary shapes. *Multiscale Modeling & Simulation*, 17 (1):344–398, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bressloff:2022:NCP

[BS22] Paul C. Bressloff and Ryan D. Schumm. The narrow capture problem with partially absorbing targets and stochastic resetting. *Multiscale Modeling & Simulation*, 20(2):857–881, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1449580`.

Bar:2007:CIM

[BSK07] Leah Bar, Nir Sochen, and Nahum Kiryati. Convergence of an iterative method for variational deconvolution and impulsive noise removal. *Multiscale Modeling & Simulation*, 6 (3):983–994, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Boateng:2014:ALK

[BSS14] Henry A. Boateng, Tim P. Schulze, and Peter Smereka. Approximating off-lattice kinetic Monte Carlo. *Multiscale Modeling & Simulation*, 12(1): 181–199, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Barajas-Solano:2016:HMF

[BST16] David A. Barajas-Solano and A. M. Tartakovsky. Hybrid multiscale finite volume method

for advection-diffusion equations subject to heterogeneous reactive boundary conditions. *Multiscale Modeling & Simulation*, 14(4):1341–1376, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bao:2014:NSQ

[BT14] Weizhu Bao and Qinglin Tang. Numerical study of quantized vortex interactions in the nonlinear Schrödinger equation on bounded domains. *Multiscale Modeling & Simulation*, 12(2): 411–439, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bal:2004:TRC

[BV04] Guillaume Bal and Ramón Verástegui. Time reversal in changing environments. *Multiscale Modeling & Simulation*, 2(4):639–661, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60083`.

Balykov:2006:DTS

[BV06] Lev Balykov and Axel Voigt. A 2 + 1-dimensional terrace-step-kink model for epitaxial growth far from equilibrium. *Multiscale Modeling & Simulation*, 5 (1):45–61, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bostan:2024:FMK

[BV24] Mihaï Bostan and Anh-Tuan Vu. Fluid models for kinetic equations in swarming preserving momentum. *Multiscale Modeling & Simulation*, 22(1):667–712, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bringedal:2020:PFM

[BvWP20] Carina Bringedal, Lars von Wolff, and Iuliu Sorin Pop. Phase field modeling of precipitation and dissolution processes in porous media: Upscaling and numerical experiments. *Multiscale Modeling & Simulation*, 18 (2):1076–1112, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Bryson:2019:ICS

[BZZ19] Jennifer Bryson, Hongkai Zhao, and Yimin Zhong. Intrinsic complexity and scaling laws: From random fields to random vectors. *Multiscale Modeling & Simulation*, 17(1):460–481, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Calderon:2007:FED

[Cal07] Christopher P. Calderon. Fitting effective diffusion models to data associated with a "Glassy" potential: Estimation, classical inference procedures, and some heuristics. *Multiscale Modeling & Simulation*, 6(2):656–687,

???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Costa:2018:NML

[CBL18] Timothy B. Costa, Stephen D. Bond, and David J. Littlewood. Nonlocal and mixed-locality multiscale finite element methods. *Multiscale Modeling & Simulation*, 16(1):503–527, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crabtree:2023:GCM

[CBRFK23] Ellis R. Crabtree, Juan M. Bello-Rivas, Andrew L. Ferguson, and Ioannis G. Kevrekidis. GANs and closures: Micro-macro consistency in multiscale modeling. *Multiscale Modeling & Simulation*, 21(3):1122–1146, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1517834`.

Cushman:2004:TRDa

[CBS04] John H. Cushman, Lynn S. Bennethum, and Pawan P. Singh. Toward rational design of drug delivery substrates: I. mixture theory for two-scale biocompatible polymers. *Multiscale Modeling & Simulation*, 2(2):302–334, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60035`.

Chan:2006:OBM

[CC06] Tony F. Chan and Ke Chen. An optimization-based multilevel algorithm for total variation image denoising. *Multiscale Modeling & Simulation*, 5(2):615–645, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2010:MSG

[CC10] H.-S. Chen and C.-S. Chien. Multilevel spectral-Galerkin and continuation methods for nonlinear Schrödinger equations. *Multiscale Modeling & Simulation*, 8(2):370–392, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cao:2022:CMC

[CC22] Jiachuan Cao and Liqun Cao. The consistency and the Monte Carlo method for semiconductor Boltzmann equations with multivalley. *Multiscale Modeling & Simulation*, 20(1):282–322, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/19M128750X`.

Chumchob:2011:FOV

[CCBL11] N. Chumchob, K. Chen, and Carlos Brito-Loeza. A fourth-order variational image registration model and its fast multigrid algorithm. *Multiscale Modeling & Simulation*, 9(1):89–128,

????? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p89_s1`.

Cheung:2021:EEC

[CCEL21] Siu Wun Cheung, Eric T. Chung, Yalchin Efendiev, and Wing Tat Leung. Explicit and energy-conserving constraint energy minimizing generalized multiscale discontinuous Galerkin method for wave propagation in heterogeneous media. *Multiscale Modeling & Simulation*, 19(4):1736–1759, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cherednichenko:2015:SAO

[CCG15] K. D. Cherednichenko, S. Cooper, and S. Guenneau. Spectral analysis of one-dimensional high-contrast elliptic problems with periodic coefficients. *Multiscale Modeling & Simulation*, 13(1): 72–98, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cances:2005:WPM

[CCGB05] Eric Cancès, Isabelle Catto, Yousra Gati, and Claude Le Bris. Well-posedness of a multiscale model for concentrated suspensions. *Multiscale Modeling & Simulation*, 4(4):1041–1058, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62122`.

Cotter:2019:NMS

[CCH+19] Colin Cotter, Dan Crisan, Darryl D. Holm, Wei Pan, and Igor Shevchenko. Numerically modeling stochastic Lie transport in fluid dynamics. *Multiscale Modeling & Simulation*, 17(1):192–232, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2018:ALS

[CCJ18] Fuchen Chen, Eric Chung, and Lijian Jiang. Adaptive least-squares mixed generalized multiscale finite element methods. *Multiscale Modeling & Simulation*, 16(2):1034–1058, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cvetkovic:2021:CDM

[CCL21] Nada Cvetković, Tim Conrad, and Han Cheng Lie. A convergent discretization method for transition path theory for diffusion processes. *Multiscale Modeling & Simulation*, 19(1):242–266, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cirillo:2016:ECE

[CCM16] Emilio N. M. Cirillo, Matteo Colangeli, and Adrian Muntean. Effects of communication efficiency and exit capacity on fundamental diagrams for pedestrian motion in an obscure tun-

nel — a particle system approach. *Multiscale Modeling & Simulation*, 14(2):906–922, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Caselles:2007:DSS

[CCN07] Vicent Caselles, Antonin Chambolle, and Matteo Novaga. The discontinuity set of solutions of the TV denoising problem and some extensions. *Multiscale Modeling & Simulation*, 6 (3):879–894, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chinchio:2006:HMA

[CCOS06] M. Chinchio, C. Czaplewski, S. Odłdziej, and H. A. Scheraga. A hierarchical multiscale approach to protein structure prediction: Production of low-resolution packing arrangements of helices and refinement of the best models with a united-residue force field. *Multiscale Modeling & Simulation*, 5(4):1175–1195, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crestetto:2023:MNS

[CCP23] Anaïs Crestetto, Nicolas Crouseilles, and Damien Prel. Multiscale numerical schemes for the collisional Vlasov equation in the finite Larmor radius approximation regime. *Multiscale Modeling & Simulation*, 21(3): 1210–1236, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1496839`.

Clement:2017:DRM

[CCPT17] Frédérique Clément, Frédéric Coquel, Marie Postel, and Kim Long Tran. Dimensional reduction of a multiscale model based on long time asymptotics. *Multiscale Modeling & Simulation*, 15(3):1198–1241, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Caflisch:2020:AEO

[CCS20] Russel Caflisch, Hung Hsu Chou, and Jonathan W. Siegel. Accuracy, efficiency and optimization of signal fragmentation. *Multiscale Modeling & Simulation*, 18(2):737–757, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2008:MFE

[CCSY08] Zhangxin Chen, Ming Cui, Tatyana Y. Savchuk, and Xijun Yu. The multiscale finite element method with nonconforming elements for elliptic homogenization problems. *Multiscale Modeling & Simulation*, 7 (2):517–538, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Charrier:2003:ATM

[CD03] Pierre Charrier and Bruno Dubroca. Asymptotic transport models for heat and mass transfer in reactive porous media. *Multiscale Modeling & Simulation*, 2(1):124–157, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41173`.

Chen:2006:EIG

[CD06] Yuguang Chen and Louis J. Durlofsky. Efficient incorporation of global effects in upscaled models of two-phase flow and transport in heterogeneous formations. *Multiscale Modeling & Simulation*, 5(2):445–475, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Craster:2023:ACL

[CD23] Richard V. Craster and Bryn Davies. Asymptotic characterization of localized defect modes: Su–Schrieffer–Heeger and related models. *Multiscale Modeling & Simulation*, 21(3):827–848, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1511217`.

Casado-Diaz:2011:NAO

[CDCLLZ11] J. Casado-Díaz, C. Castro, M. Luna-Laynez, and E. Zuazua. Numerical approximation of a one-dimensional elliptic optimal design problem. *Multiscale Modeling & Simulation*, 9(3):1181–1216, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1181_s1`.

Candes:2006:FDC

[CDDY06] Emmanuel Candès, Laurent Demanet, David Donoho, and Lexing Ying. Fast discrete curvelet transforms. *Multiscale Modeling & Simulation*, 5(3):861–899, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Carney:2024:NBR

[CDE24] Sean P. Carney, Milica Dussinger, and Björn Engquist. On the nature of the boundary resonance error in numerical homogenization and its reduction. *Multiscale Modeling & Simulation*, 22(2):811–835, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1594492`.

Chen:2014:AFE

[CDG+14] Huajie Chen, Xiaoying Dai, Xingao Gong, Lianhua He, and Aihui Zhou. Adaptive finite element approximations for Kohn–Sham models. *Multiscale Modeling & Simulation*, 12(4):1828–1869, ???? 2014. CODEN MM-

SUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2021:SDO

[CDG+21] Kelly Chen, Zachary Deiman, Ryan Goh, Sally Jankovic, and Arnd Scheel. Strain and defects in oblique stripe growth. *Multiscale Modeling & Simulation*, 19 (3):1236–1260, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Craster:2021:NCL

[CDGH21] Richard Craster, André Diatta, Sébastien Guenneau, and Harsha Hutridurga. On near-cloaking for linear elasticity. *Multiscale Modeling & Simulation*, 19(2):633–664, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2022:MLL

[CDM+22] Jingrun Chen, Rui Du, Zetao Ma, Zhiwei Sun, and Lei Zhang. On the multiscale Landau–Lifshitz–Gilbert equation: Two-scale convergence and stability analysis. *Multiscale Modeling & Simulation*, 20(2):835–856, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1438177`.

Crouseilles:2016:MSB

[CDV16] Nicolas Crouseilles, Giacomo Dimarco, and Marie-Héléne Vignal. Multiscale schemes for the BGK–Vlasov–Poisson system in the quasi-neutral and fluid limits. stability analysis and first order schemes. *Multiscale Modeling & Simulation*, 14(1):65–95, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Candes:2009:FBA

[CDY09] Emmanuel Candès, Laurent Demanet, and Lexing Ying. A fast butterfly algorithm for the computation of Fourier integral operators. *Multiscale Modeling & Simulation*, 7(4):1727–1750, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chung:2010:RCA

[CE10] Eric T. Chung and Yalchin Efendiev. Reduced-contrast approximations for high-contrast multiscale flow problems. *Multiscale Modeling & Simulation*, 8 (4):1128–1153, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cherednichenko:2016:FTS

[CE16] Kirill D. Cherednichenko and James A. Evans. Full two-scale asymptotic expansion and higher-order constitutive laws in the homogenization of the system of quasi-static Maxwell equations. *Multiscale Modeling & Simulation*, 14(4):1513–1539, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Calo:2016:ROG

[CEGL16] Victor M. Calo, Yalchin Efendiev, Juan Galvis, and Guanglian Li. Randomized oversampling for generalized multiscale finite element methods. *Multiscale Modeling & Simulation*, 14(1):482–501, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Capasso:2008:PIR

[CEK08] Vincenzo Capasso, Heinz W. Engl, and Stefan Kindermann. Parameter identification in a random environment exemplified by a multiscale model for crystal growth. *Multiscale Modeling & Simulation*, 7(2):814–841, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chung:2014:GMF

[CEL14] Eric T. Chung, Yalchin Efendiev, and Wing Tat Leung. Generalized multiscale finite element methods for wave propagation in heterogeneous media. *Multiscale Modeling & Simulation*, 12 (4):1691–1721, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chung:2015:MGM

[CEL15] Eric T. Chung, Yalchin Efendiev, and Chak Shing Lee. Mixed generalized multiscale finite element methods and applications. *Multiscale Modeling & Simulation*, 13(1):338–366, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chung:2018:AGM

[CEL18] Eric T. Chung, Yalchin Efendiev, and Wing Tat Leung. An adaptive generalized multiscale discontinuous Galerkin method for high-contrast flow problems. *Multiscale Modeling & Simulation*, 16(3):1227–1257, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cances:2020:ECP

[CEL+20] Eric Cancès, Virginie Ehrlacher, Frédéric Legoll, Benjamin Stamm, and Shuyang Xiang. An embedded corrector problem for homogenization. Part I: Theory. *Multiscale Modeling & Simulation*, 18(3):1179–1209, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chung:2020:GMF

[CELL20] Eric Chung, Yalchin Efendiev, Yanbo Li, and Qin Li. Generalized multiscale finite element method for the steady state linear Boltzmann equation. *Multiscale Modeling & Simulation*, 18(1):475–501, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chardard:2018:AAT

[CEP18] Frédéric Chardard, Alexander Elbert, and Grigory Panasenko.

Asymptotic analysis of a thin elastic plate–viscoelastic layer interaction. *Multiscale Modeling & Simulation*, 16(3):1258–1282, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chu:2012:MMC

[CEPT12] Jay Chu, Björn Engquist, Masa Prodanović, and Richard Tsai. A multiscale method coupling network and continuum models in porous media I: Steady-state single phase flow. *Multiscale Modeling & Simulation*, 10 (2):515–549, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2005:HMM

[CES05] Shanqin Chen, Weinan E, and Chi-Wang Shu. The heterogeneous multiscale method based on the discontinuous Galerkin method for hyperbolic and parabolic problems. *Multiscale Modeling & Simulation*, 3(4): 871–894, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61262`.

Ceniceros:2004:NSP

[CF04] Hector D. Ceniceros and Glenn H. Fredrickson. Numerical solution of polymer self-consistent field theory. *Multiscale Modeling & Simulation*, 2(3):452–474, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60133`.

Chandy:2010:MLE

[CF10] Abhilash J. Chandy and Steven H. Frankel. The t-model as a large eddy simulation model for the Navier–Stokes equations. *Multiscale Modeling & Simulation*, 8(2):445–462, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2015:PDD

[CF15] Huajie Chen and Gero Friesecke. Pair densities in density functional theory. *Multiscale Modeling & Simulation*, 13(4):1259–1289, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chalons:2017:MGE

[CFL+17] C. Chalons, R. O. Fox, F. Laurent, M. Massot, and A. Vié. Multivariate Gaussian extended quadrature method of moments for turbulent disperse multiphase flow. *Multiscale Modeling & Simulation*, 15(4):1553–1583, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cherfils:2017:CVC

[CFM17] Laurence Cherfils, Hussein Fakih, and Alain Miranville. A complex version of the Cahn–Hilliard equation for grayscale image inpainting. *Multiscale*

Modeling & Simulation, 15(1): 575–605, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chalons:2018:AHS

[CG18] C. Chalons and S. Guisset. An antidiffusive HLL scheme for the electronic M_1 model in the diffusion limit. *Multiscale Modeling & Simulation*, 16(2):991–1016, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2015:ACC

[CGCL15] Jingrun Chen, Carlos J. García-Cervera, and Xiantao Li. An atomistic/continuum coupling method using enriched bases. *Multiscale Modeling & Simulation*, 13(3):766–789, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2015:MFM

[CGCY15] Jingrun Chen, Carlos J. GarcÍa-Cervera, and Xu Yang. A mean-field model for spin dynamics in multilayered ferromagnetic media. *Multiscale Modeling & Simulation*, 13(2):551–570, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chinnamsetty:2018:AMA

[CGH18] Sambasiva Rao Chinnamsetty, Michael Griebel, and Jan Hamaekers. An adaptive multiscale approach for electronic structure methods. *Multiscale Modeling & Simulation*, 16(2): 752–776, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Craster:2018:CMH

[CGHP18] R. V. Craster, S. R. L. Guenneau, H. R. Hutridurga, and G. A. Pavliotis. Cloaking via mapping for the heat equation. *Multiscale Modeling & Simulation*, 16(3):1146–1174, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Capdeboscq:2021:ARF

[CGK21] Yves Capdeboscq, Roland Griesmaier, and Marvin Knöller. An asymptotic representation formula for scattering by thin tubular structures and an application in inverse scattering. *Multiscale Modeling & Simulation*, 19(2):846–885, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2024:RMA

[CGLL24] Bochao Chen, Yixian Gao, Yong Li, and Hongyu Liu. Resonant modal approximation of time-domain elastic scattering from nano-bubbles in elastic materials. *Multiscale Modeling & Simulation*, 22(2):713–751, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cazeaux:2015:HMP

[CGM15] Paul Cazeaux, Céline Grandmont, and Yvon Maday. Homogenization of a model for the propagation of sound in the lungs. *Multiscale Modeling & Simulation*, 13(1):43–71, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2022:MEP

[CH22] Yifan Chen and Thomas Y. Hou. Multiscale elliptic PDE upscaling and function approximation via subsampled data. *Multiscale Modeling & Simulation*, 20(1):188–219, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1372214`.

Cheong:2008:ISL

[Che08] Ke-Shen Cheong. Identifying strain localization in heterogeneous microstructures via an information passing modeling approach. *Multiscale Modeling & Simulation*, 6(4):1371–1381, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chu:2020:AEV

[CHL20] Jay Chu, John M. Hong, and Hsin-Yi Lee. Approximation and existence of vacuum states in the multiscale flows of compressible Euler equations. *Multiscale Modeling & Simulation*, 18(1):104–130, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chorin:2003:CER

[Cho03] Alexandre J. Chorin. Conditional expectations and renormalization. *Multiscale Modeling & Simulation*, 1(1):105–118, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40555`.

Conti:2007:CMC

[CHO07] Sergio Conti, Patrice Hauret, and Michael Ortiz. Concurrent multiscale computing of deformation microstructure by relaxation and local enrichment with application to single-crystal plasticity. *Multiscale Modeling & Simulation*, 6(1): 135–157, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cook:2017:MMF

[CHS17] Steven C. Cook, Christel Hohenegger, and Tamar Shinar. A micro-macro framework for analyzing steric and hydrodynamic interactions in gliding assays. *Multiscale Modeling & Simulation*, 15(4):1768–1796, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2021:ECM

[CHW21] Yifan Chen, Thomas Y. Hou, and Yixuan Wang. Exponential convergence for multiscale linear elliptic PDEs via adaptive edge basis functions. *Multiscale Modeling & Simulation*, 19 (2):980–1010, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2023:ECM

[CHW23] Yifan Chen, Thomas Y. Hou, and Yixuan Wang. Exponentially convergent multiscale methods for 2D high frequency heterogeneous Helmholtz equations. *Multiscale Modeling & Simulation*, 21(3):849–883, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1507802`.

Chai:2015:MSM

[CJLM15] Lihui Chai, Shi Jin, Qin Li, and Omar Morandi. A multiband semiclassical model for surface hopping quantum dynamics. *Multiscale Modeling & Simulation*, 13(1):205–230, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crouseilles:2020:MMM

[CJLM20] Nicolas Crouseilles, Shi Jin, Mohammed Lemou, and Florian Méhats. A micro-macro method for a kinetic graphene model in one space dimension. *Multiscale Modeling & Simulation*, 18 (1):444–474, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chambolle:2023:CHE

[CK23] Antonin Chambolle and Leonard Kreutz. Crystallinity of the homogenized energy density of periodic lattice systems. *Multiscale Modeling & Simulation*, 21 (1):34–79, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1442073`.

Cihak:2024:MMD

[CK24] Heather L. Cihak and Zachary P. Kilpatrick. Multiscale motion and deformation of bumps in stochastic neural fields with dynamic connectivity. *Multiscale Modeling & Simulation*, 22(1): 178–203, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Coifman:2008:DMR

[CKL+08] R. R. Coifman, I. G. Kevrekidis, S. Lafon, M. Maggioni, and B. Nadler. Diffusion maps, reduction coordinates, and low dimensional representation of stochastic systems. *Multiscale Modeling & Simulation*, 7(2): 842–864, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Carvalho:2021:QPA

[CKLM21] Camille Carvalho, Arnold Kim, Lori Lewis, and Zoïs Moitier. Quadrature by Parity Asymptotic eXpansions (QPAX) for scattering by high aspect ratio particles. *Multiscale Modeling & Simulation*, 19(4):1857–1884, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crestetto:2020:KFM

[CKP20] Anaïs Crestetto, Christian Klingenberg, and Marlies Pirner. Kinetic/fluid micro-macro numerical scheme for a two component gas mixture. *Multiscale Modeling & Simulation*, 18(2):970–998, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Carrillo:2020:WBF

[CKPS20] José A. Carrillo, Serafim Kalliadasis, Sergio P. Perez, and Chi-Wang Shu. Well-balanced finite-volume schemes for hydrodynamic equations with general free energy. *Multiscale Modeling & Simulation*, 18(1):502–541, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Calvetti:2008:SBA

[CKS08] Daniela Calvetti, Amy Kuceyeski, and Erkki Somersalo. Sampling-based analysis of a spatially distributed model for liver metabolism at steady state. *Multiscale Modeling & Simulation*, 7(1):407–431, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Caflisch:2003:AID

[CL03a] Russel E. Caflisch and Bo Li. Analysis of island dynamics in epitaxial growth of thin films. *Multiscale Modeling & Simulation*, 1(1):150–171, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40720`.

Chai:2003:ETV

[CL03b] Tianfeng Chai and Ching-Long Lin. Estimation of turbulent viscosity and diffusivity in adjoint recovery of atmospheric boundary layer flow structures. *Multiscale Modeling & Simulation*, 1(2):196–220, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41141`.

Chertock:2004:WBN

[CL04] Alina Chertock and Doron Levy. On wavelet-based numerical homogenization. *Multiscale Modeling & Simulation*, 3(1):65–88, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60078`.

Chen:2009:LGT

[CL09] Yuguang Chen and Yan Li. Local-global two-phase upscaling of flow and transport in heterogeneous formations. *Multiscale Modeling & Simulation*, 8 (1):125–153, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2013:DND

[CL13] Yue Chen and Robert Lipton. Double negative dispersion relations from coated plasmonic rods. *Multiscale Modeling & Simulation*, 11(1):192–212, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2017:EAL

[CL17] Chuchu Chen and Di Liu. Error analysis for D-leaping scheme of chemical reaction system with delay. *Multiscale Modeling & Simulation*, 15(4):1797–1829, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chu:2021:NCM

[CL21] Weiqi Chu and Xiantao Li. Nonlinear constitutive models for nano-scale heat conduction. *Multiscale Modeling & Simulation*, 19(1):533–549, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cherry:2022:TPB

[CLHQ22] Jake Cherry, Alan E. Lindsay, Adrián Navarro Hernández, and Bryan Quaife. Trapping of planar Brownian motion: Full first passage time distributions by kinetic Monte Carlo, asymptotic, and boundary integral methods. *Multiscale Modeling & Simulation*, 20(4):1284–1314, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M146380X`.

Cao:2015:MAH

[CLLW15] Liqun Cao, Keqi Li, Jianlan Luo, and Yaushu Wong. A multiscale approach and a hybrid FE-FDTD algorithm for 3D time-dependent Maxwell's equations in composite materials. *Multiscale Modeling & Simulation*, 13(4):1446–1477, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2020:RSB

[CLLW20] Ke Chen, Qin Li, Jianfeng Lu, and Stephen J. Wright. Randomized sampling for basis function construction in generalized finite element methods. *Multiscale Modeling & Simulation*, 18(2):1153–1177, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2021:LRS

[CLLW21] Ke Chen, Qin Li, Jianfeng Lu, and Stephen J. Wright. A low-rank Schwarz method for radiative transfer equation with heterogeneous scattering coefficient. *Multiscale Modeling & Simulation*, 19(2):775–801, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2022:MLN

[CLLW22] Shi Chen, Qin Li, Jianfeng Lu, and Stephen J. Wright. Manifold learning and nonlinear homogenization. *Multiscale Modeling & Simulation*, 20(3):1093–1126, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1377771`.

Canic:2005:SCE

[CLMT05] Suncica Canic, Daniele Lamponi, Andro Mikelic, and Josip Tambaca. Self-consistent effective equations modeling blood flow in medium-to-large compliant arteries. *Multiscale Modeling & Simulation*, 3(3):559–596, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60260`.

Crouseilles:2017:UAF

[CLMZ17] Nicolas Crouseilles, Mohammed Lemou, Florian Méhats, and Xiaofei Zhao. Uniformly accurate forward semi-Lagrangian methods for highly oscillatory Vlasov–Poisson equations. *Multiscale Modeling & Simulation*, 15(2):723–744, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cazeaux:2017:ARI

[CLT17] Paul Cazeaux, Mitchell Luskin, and Ellad B. Tadmor. Analysis of rippling in incommensurate one-dimensional coupled chains. *Multiscale Modeling & Simulation*, 15(1):56–73, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2011:JMT

[CLY+11] Yang Chen, Yinsheng Li, Weimin Yu, Limin Luo, Wufan Chen, and Christine Toumoulin. Joint-MAP tomographic reconstruction with patch similarity based mixture prior model. *Multiscale Modeling & Simulation*, 9(4):1399–1419, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1399_s1`.

Chen:2016:SLL

[CLZ16] Jingrun Chen, Jian-Guo Liu, and Zhennan Zhou. On a Schrödinger–Landau–Lifshitz system: Variational structure and numerical methods. *Multiscale Modeling & Simulation*, 14 (4):1463–1487, ???? 2016. CO-

DEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ceniceros:2007:PSM

[CM07] Hector D. Ceniceros and George O. Mohler. A practical splitting method for stiff SDEs with applications to problems with small noise. *Multiscale Modeling & Simulation*, 6 (1):212–227, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Caiazzo:2014:MMW

[CM14] Alfonso Caiazzo and Joaquín Mura. Multiscale modeling of weakly compressible elastic materials in the harmonic regime and applications to microscale structure estimation. *Multiscale Modeling & Simulation*, 12(2): 514–537, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crosskey:2017:AGA

[CM17] Miles Crosskey and Mauro Maggioni. ATLAS: a geometric approach to learning high-dimensional stochastic systems near manifolds. *Multiscale Modeling & Simulation*, 15(1):110–156, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Calderon:2010:EPS

[CMCS10a] Christopher P. Calderon, Josue G. Martinez, Raymond J. Carroll, and Danny C. Sorensen. Erratum: P-splines using derivative information. *Multiscale Modeling & Simulation*, 8(5):2097, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p2097_s1`. See [CMCS10b].

Calderon:2010:PSU

[CMCS10b] Christopher P. Calderon, Josue G. Martinez, Raymond J. Carroll, and Danny C. Sorensen. P-splines using derivative information. *Multiscale Modeling & Simulation*, 8(4):1562–1580, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [CMCS10a].

Ciomaga:2011:IVR

[CMM11] Adina Ciomaga, Pascal Monasse, and Jean-Michel Morel. Image visualization and restoration by curvature motions. *Multiscale Modeling & Simulation*, 9(2):834–871, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p834_s1`.

Clement:2013:CSC

[CMMS13] Frédérique Clément, Philippe Michel, Danielle Monniaux, and Thomas Stiehl. Coupled somatic Cell kinetics and germ Cell growth: Multiscale model-

based insight on ovarian follicular development. *Multiscale Modeling & Simulation*, 11(3): 719–746, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chalons:2015:ELE

[CMV15] C. Chalons, M. Massot, and A. Vié. On the Eulerian large eddy simulation of disperse phase flows: an asymptotic preserving scheme for small Stokes number flows. *Multiscale Modeling & Simulation*, 13(1):291–315, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2020:MRB

[CMZ20] Jingrun Chen, Dingjiong Ma, and Zhiwen Zhang. A multiscale reduced basis method for the Schrödinger equation with multiscale and random potentials. *Multiscale Modeling & Simulation*, 18(4):1409–1434, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chamakuri:2018:MMN

[CNG+18] Nagaiah Chamakuri, Wilhelm Neubert, Stephen Gilbert, Janine Vierheller, Gerald Warnecke, and Martin Falcke. Multiscale modeling and numerical simulation of calcium cycling in cardiac myocytes. *Multiscale Modeling & Simulation*, 16(3): 1115–1145, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Coquel:2010:LTS

[CNPT10] Frédéric Coquel, Quang Long Nguyen, Marie Postel, and Quang Huy Tran. Local time stepping applied to implicit-explicit methods for hyperbolic systems. *Multiscale Modeling & Simulation*, 8(2):540–570, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2016:QMM

[CO16] Huajie Chen and Christoph Ortner. QM/MM methods for crystalline defects. Part 1: Locality of the tight binding model. *Multiscale Modeling & Simulation*, 14(1):232–264, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2017:QMM

[CO17] Huajie Chen and Christoph Ortner. QM/MM methods for crystalline defects. Part 2: Consistent energy and force-mixing. *Multiscale Modeling & Simulation*, 15(1):184–214, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cohen:2010:SAC

[Coh10] Albert Cohen. A stochastic approach to coarsening of cellular networks. *Multiscale Modeling & Simulation*, 8(2):463–480, ???? 2010. CODEN MMSUBT.

ISSN 1540-3459 (print), 1540-3467 (electronic).

Cai:2010:SBM

[COS10] Jian-Feng Cai, Stanley Osher, and Zuowei Shen. Split Bregman methods and frame based image restoration. *Multiscale Modeling & Simulation*, 8(2): 337–369, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2022:QMM

[COW22] Huajie Chen, Christoph Ortner, and Yangshuai Wang. QM/MM methods for crystalline defects. Part 3: Machine-learned MM models. *Multiscale Modeling & Simulation*, 20(4):1490–1518, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1441122`.

Cioranescu:2006:HPM

[CP06] Doina Cioranescu and Andrey Piatnitski. Homogenization of a porous medium with randomly pulsating microstructure. *Multiscale Modeling & Simulation*, 5(1):170–183, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chung:2019:OAB

[CP19] Eric T. Chung and Sai-Mang Pun. Online adaptive basis enrichment for mixed CEM-GMsFEM. *Multiscale Modeling & Simulation*, 17(4):1103–1122, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Calvetti:2020:CME

[CPO+20] Daniela Calvetti, Jamie Prezioso, Rossana Occhipinti, Walter F. Boron, and Erkki Somersalo. Computational model of electrode-induced microenvironmental effects on pH measurements near a cell membrane. *Multiscale Modeling & Simulation*, 18(2):1053–1075, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cristiani:2011:MMG

[CPT11] Emiliano Cristiani, Benedetto Piccoli, and Andrea Tosin. Multiscale modeling of granular flows with application to crowd dynamics. *Multiscale Modeling & Simulation*, 9(1):155–182, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p155_s1`.

Chiarello:2021:MCG

[CPT21] Felisia Angela Chiarello, Benedetto Piccoli, and Andrea Tosin. Multiscale control of generic second order traffic models by driver-assist vehicles. *Multiscale Modeling & Simulation*, 19(2):589–611, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cao:2023:CDS

[CqC23] Jiachuan Cao and Li qun Cao. Convergence of a direct simulation Monte Carlo method for the space inhomogeneous semiconductor Boltzmann equations with multi-valley. *Multiscale Modeling & Simulation*, 21(3): 884–924, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1469511`.

Cotter:2006:SPM

[CR06] Colin J. Cotter and Sebastian Reich. Semigeostrophic particle motion and exponentially accurate normal forms. *Multiscale Modeling & Simulation*, 5 (2):476–496, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cipcigan:2011:UCI

[CR11] Ioana Cipcigan and Muruhan Rathinam. Uniform convergence of interlaced Euler method for stiff stochastic differential equations. *Multiscale Modeling & Simulation*, 9(3):1217–1252, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1217_s1`.

Clewley:2005:CTR

[CRK05] Robert Clewley, Horacio G. Rotstein, and Nancy Kopell. A computational tool for the reduction of nonlinear ODE systems possessing multiple scales. *Multiscale Modeling & Simulation*, 4(3):732–759, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61553`.

Conti:2023:TSE

[CRS23] Sergio Conti, Martin Rumpf, and Stefan Simon. Two-scale elastic shape optimization for additive manufacturing. *Multiscale Modeling & Simulation*, 21(1):119–142, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1450859`.

Calvetti:2006:LSS

[CS06] Daniela Calvetti and Erkki Somersalo. Large-scale statistical parameter estimation in complex systems with an application to metabolic models. *Multiscale Modeling & Simulation*, 5(4):1333–1366, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Challa:2014:JFL

[CS14] Durga Prasad Challa and Mourad Sini. On the justification of the Foldy–Lax approximation for the acoustic scattering by small rigid bodies of arbitrary shapes. *Multiscale Model-*

ing & Simulation, 12(1):55–108, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Challa:2022:CJF

[CS22] Durga Prasad Challa and Mourad Sini. Corrigendum: On the justification of the Foldy-Lax approximation for the acoustic scattering by small rigid bodies of arbitrary shapes. *Multiscale Modeling & Simulation*, 20(2):882–892, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1456625`.

Cushman:2004:TRDb

[CSB04] John H. Cushman, Pawan P. Singh, and Lynn S. Bennethum. Toward rational design of drug delivery substrates: II. mixture theory for three-scale biocompatible polymers and a computational example. *Multiscale Modeling & Simulation*, 2(2): 335–357, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60036`.

Chandran:2008:MBM

[CSB08] Preethi L. Chandran, Triantafyllos Stylianopoulos, and Victor H. Barocas. Microstructure-based, multiscale modeling for the mechanical behavior of hydrated fiber networks. *Multiscale Modeling & Simulation*, 7(1):22–43, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chodera:2006:LTP

[CSPD06] John D. Chodera, William C. Swope, Jed W. Pitera, and Ken A. Dill. Long-time protein folding dynamics from short-time molecular dynamics simulations. *Multiscale Modeling & Simulation*, 5(4):1214–1226, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Caselles:2004:MDM

[CSSB04] Vicent Caselles, Guillermo Sapiro, Andrés Solé, and Coloma Ballester. Morse description and morphological encoding of continuous data. *Multiscale Modeling & Simulation*, 2(2):179–209, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41655`.

Cristiani:2018:RCM

[CT18] Emiliano Cristiani and Andrea Tosin. Reducing complexity of multiagent systems with symmetry breaking: an application to opinion dynamics with polls. *Multiscale Modeling & Simulation*, 16(1):528–549, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cui:2006:LRM

[CTHC06] Qizhi Cui, Robert K.-Z. Tan, Stephen C. Harvey, and David A. Case. Low-resolution molecular dynamics simulations of the 30S ribosomal subunit. *Multiscale Modeling & Simulation*, 5(4):1248–1263, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cao:2016:ACM

[CTL16] Youfang Cao, Anna Terebus, and Jie Liang. Accurate chemical master equation solution using multi-finite buffers. *Multiscale Modeling & Simulation*, 14 (2):923–963, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Carr:2013:DSM

[CTP13] E. J. Carr, I. W. Turner, and P. Perré. A dual-scale modeling approach for drying hygroscopic porous media. *Multiscale Modeling & Simulation*, 11(1):362–384, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crommelin:2009:DBI

[CVE09] Daan Crommelin and Eric Vanden-Eijnden. Data-based inference of generators for Markov jump processes using convex optimization. *Multiscale Modeling & Simulation*, 7(4):1751–1778, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Crommelin:2011:DEM

[CVE11] Daan Crommelin and Eric Vanden-Eijnden. Diffusion estimation from multiscale data by operator eigenpairs. *Multiscale Modeling & Simulation*, 9(4):1588–1623, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1588_s1`.

Combettes:2005:SRP

[CW05] Patrick L. Combettes and Valérie R. Wajs. Signal recovery by proximal forward-backward splitting. *Multiscale Modeling & Simulation*, 4(4): 1168–1200, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62609`.

Cassier:2021:HCE

[CW21] Maxence Cassier and Michael I. Weinstein. High contrast elliptic operators in honeycomb structures. *Multiscale Modeling & Simulation*, 19(4):1784–1856, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cai:2022:UAN

[CW22] Yongyong Cai and Yan Wang. Uniformly accurate nested Picard iterative integrators for the nonlinear Dirac equation in the nonrelativistic

regime. *Multiscale Modeling & Simulation*, 20(1):164–187, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M133573X`.

Clozeau:2024:ABC

[CW24] Nicolas Clozeau and Lihan Wang. Artificial boundary conditions for random elliptic systems with correlated coefficient field. *Multiscale Modeling & Simulation*, 22(3):973–1029, September 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1603819`.

Caflisch:2008:HMA

[CWD+08] Russel Caflisch, Chiaming Wang, Giacomo Dimarco, Bruce Cohen, and Andris Dimits. A hybrid method for accelerated simulation of Coulomb collisions in a plasma. *Multiscale Modeling & Simulation*, 7(2):865–887, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cheviakov:2010:AAM

[CWS10] Alexei F. Cheviakov, Michael J. Ward, and Ronny Straube. An asymptotic analysis of the mean first passage time for narrow escape problems: Part II: The sphere. *Multiscale Modeling & Simulation*, 8(3):836–870, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Conrad:2016:FDS

[CWS16] Natasa Djurdjevac Conrad, Marcus Weber, and Christof Schütte. Finding dominant structures of nonreversible Markov processes. *Multiscale Modeling & Simulation*, 14(4):1319–1340, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Carrillo:2021:VAP

[CWXY21] Jose A. Carrillo, Li Wang, Wuzhe Xu, and Ming Yan. Variational asymptotic preserving scheme for the Vlasov–Poisson–Fokker–Planck system. *Multiscale Modeling & Simulation*, 19(1):478–505, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Chen:2003:NHW

[CY03] Zhiming Chen and Xinye Yue. Numerical homogenization of well singularities in the flow transport through heterogeneous porous media. *Multiscale Modeling & Simulation*, 1(2):260–303, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41332`.

Carrillo:2013:APS

[CY13] José A. Carrillo and Bokai Yan. An asymptotic preserving

scheme for the diffusive limit of kinetic systems for chemotaxis. *Multiscale Modeling & Simulation*, 11(1):336–361, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Cao:2023:DDC

[CZ23] Ying Cao and Yi Zhu. Double Dirac cones in band structures of periodic Schroedinger operators. *Multiscale Modeling & Simulation*, 21(3):1147–1169, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1539824`.

Duval:2009:TMG

[DAG09] Vincent Duval, Jean-François Aujol, and Yann Gousseau. The TVL1 model: a geometric point of view. *Multiscale Modeling & Simulation*, 8(1):154–189, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Donev:2010:HPC

[DBGA10] Aleksandar Donev, John B. Bell, Alejandro L. Garcia, and Berni J. Alder. A hybrid particle-continuum method for hydrodynamics of complex fluids. *Multiscale Modeling & Simulation*, 8(3):871–911, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

DaSilva:2008:MFM

[DBGS08] David Da Silva, Frédéric Boudon, Christophe Godin, and Hervé Sinoquet. Multiscale framework for modeling and analyzing light interception by trees. *Multiscale Modeling & Simulation*, 7(2):910–933, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dohnal:2013:CME

[DD13] Tomás Dohnal and Willy Dörfler. Coupled mode equation modeling for out-of-plane gap solitons in 2D photonic crystals. *Multiscale Modeling & Simulation*, 11(1):162–191, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dai:2014:CMS

[DD14] Shibin Dai and Qiang Du. Coarsening mechanism for systems governed by the Cahn–Hilliard equation with degenerate diffusion mobility. *Multiscale Modeling & Simulation*, 12 (4):1870–1889, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dai:2023:MAN

[DdGYZ23] Xiaoying Dai, Stefano de Gironcoli, Bin Yang, and Aihui Zhou. Mathematical analysis and numerical approximations of density functional theory models for metallic systems. *Multiscale*

Modeling & Simulation, 21(3): 777–803, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/22M1472103.

Degond:2010:APS

[DDN10] Pierre Degond, Fabrice Deluzet, and Claudia Negulescu. An asymptotic preserving scheme for strongly anisotropic elliptic problems. *Multiscale Modeling & Simulation*, 8(2):645–666, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

DeCecco:2017:ATK

[DDNP17] Alexandra De Cecco, Fabrice Deluzet, Claudia Negulescu, and Stefan Possanner. Asymptotic transition from kinetic to adiabatic electrons along magnetic field lines. *Multiscale Modeling & Simulation*, 15(1):309–338, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dubinkina:2010:SMT

[DFL10] Svetlana Dubinkina, Jason Frank, and Ben Leimkuhler. Simplified modelling of a thermal bath, with application to a fluid vortex system. *Multiscale Modeling & Simulation*, 8(5):1882–1901, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1882_s1.

Deng:2022:GEE

[DFL22] Youjun Deng, Xiaoping Fang, and Hongyu Liu. Gradient estimates for electric fields with MultiScale inclusions in the quasi-static regime. *Multiscale Modeling & Simulation*, 20(2): 641–656, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/21M145241X.

Degond:2020:NCT

[DFMAN20] Pierre Degond, Marina A. Ferreira, Sara Merino-Aceituno, and Mickaël Nahon. A new continuum theory for incompressible swelling materials. *Multiscale Modeling & Simulation*, 18 (1):163–197, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degond:2018:QCD

[DFMAT18] Pierre Degond, Amic Frouvelle, Sara Merino-Aceituno, and Ariane Trescases. Quaternions in collective dynamics. *Multiscale Modeling & Simulation*, 16(1): 28–77, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Das:2009:BRM

[DG09] Sonjoy Das and Roger Ghanem. A bounded random matrix approach for stochastic upscaling. *Multiscale Modeling & Simulation*, 8(1):296–325, ???? 2009.

CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degond:2007:NMS

[DGHK07] P. Degond, S. Göttlich, M. Herty, and A. Klar. A network model for supply chains with multiple policies. *Multiscale Modeling & Simulation*, 6(3):820–837, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degond:2007:IQH

[DGM07] P. Degond, S. Gallego, and F. Méhats. Isothermal quantum hydrodynamics: Derivation, asymptotic analysis, and simulation. *Multiscale Modeling & Simulation*, 6(1):246–272, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

DeVault:2008:BFC

[DGN+08] Kristen DeVault, Pierre A. Gremaud, Vera Novak, Mette S. Olufsen, Guillaume Vernières, and Peng Zhao. Blood flow in the circle of Willis: Modeling and calibration. *Multiscale Modeling & Simulation*, 7 (2):888–909, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dai:2011:FVD

[DGY+11] Xiaoying Dai, Xingao Gong, Zhang Yang, Dier Zhang, and Aihui Zhou. Finite volume discretizations for eigenvalue problems with applications to electronic structure calculations. *Multiscale Modeling & Simulation*, 9(1):208–240, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p208_s1`.

Dambrine:2020:SOC

[DH20] Marc Dambrine and Helmut Harbrecht. Shape optimization for composite materials and scaffold structures. *Multiscale Modeling & Simulation*, 18(2): 1136–1152, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dahm:2022:HSM

[DH22] Sina Dahm and Christiane Helzel. Hyperbolic systems of moment equations describing sedimentation in suspensions of rod-like particles. *Multiscale Modeling & Simulation*, 20(3): 1002–1039, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1464592`.

deHoop:2024:TDR

[dHGS24] Maarten V. de Hoop, Josselin Garnier, and Knut Sølna. Three-dimensional random wave coupling along a boundary and an associated inverse problem. *Multiscale Modeling & Simulation*, 22(1):39–65, January 2024.

CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degond:2014:FSN

[DHL14] Pierre Degond, Michael Herty, and Jian-Guo Liu. Flow on sweeping networks. *Multiscale Modeling & Simulation*, 12(2): 538–565, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

deHoop:2013:MDA

[dHUVW13] Maarten V. de Hoop, Gunther Uhlmann, András Vasy, and Herwig Wendt. Multiscale discrete approximations of Fourier integral operators associated with canonical transformations and caustics. *Multiscale Modeling & Simulation*, 11 (2):566–585, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

DiGiovacchino:2022:HNM

[DHZ22] Stefano Di Giovacchino, Desmond J. Higham, and Konstantinos C. Zygalakis. A hierarchy of network models giving bistability under triadic closure. *Multiscale Modeling & Simulation*, 20(4): 1394–1410, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1461290`.

Dana:2020:CBV

[DIW20] Saumik Dana, Joel Ita, and Mary F. Wheeler. The correspondence between Voigt and Reuss bounds and the decoupling constraint in a two-grid staggered algorithm for consolidation in heterogeneous porous media. *Multiscale Modeling & Simulation*, 18(1):221–239, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dong:2017:IRW

[DJS17] Bin Dong, Qingtang Jiang, and Zuowei Shen. Image restoration: Wavelet frame shrinkage, nonlinear evolution PDEs, and beyond. *Multiscale Modeling & Simulation*, 15(1):606–660, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deng:2014:CGM

[DK14] Mingge Deng and George Em Karniadakis. Coarse-grained modeling of protein unfolding dynamics. *Multiscale Modeling & Simulation*, 12(1):109–118, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

DeSimone:2003:RIN

[DKMO03] Antonio DeSimone, Robert V. Kohn, Stefan Müller, and Felix Otto. Repulsive interaction of Néel walls, and the internal length scale of the cross-tie wall. *Multiscale Mod-*

eling & Simulation, 1(1):57–104, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40273`.

Dziwnik:2014:SAU

[DKMW14] Marion Dziwnik, Maciek Korzec, Andreas Münch, and Barbara Wagner. Stability analysis of unsteady, nonuniform base states in thin film equations. *Multiscale Modeling & Simulation*, 12(2):755–780, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dietrich:2022:MMG

[DKSS22] Anne Dietrich, Niklas Kolbe, Nikolaos Sfakianakis, and Christina Surulescu. Multiscale modeling of glioma invasion: From receptor binding to flux-limited macroscopic PDEs. *Multiscale Modeling & Simulation*, 20(2): 685–713, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1412104`.

Day:2009:VHC

[DKW09] Sarah Day, William D. Kalies, and Thomas Wanner. Verified homology computations for nodal domains. *Multiscale Modeling & Simulation*, 7(4):1695–1726, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Damle:2018:DEU

[DL18] Anil Damle and Lin Lin. Disentanglement via entanglement: a unified method for Wannier localization. *Multiscale Modeling & Simulation*, 16(3):1392–1410, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Damle:2019:VFW

[DLL19] Anil Damle, Antoine Levitt, and Lin Lin. Variational formulation for Wannier functions with entangled band structure. *Multiscale Modeling & Simulation*, 17(1):167–191, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degond:2006:MFM

[DLM06] Pierre Degond, Jian-Guo Liu, and Luc Mieussens. Macroscopic fluid models with localized kinetic upscaling effects. *Multiscale Modeling & Simulation*, 5(3):940–979, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dai:2022:GEB

[DLM22] Shibin Dai, Toai Luong, and Xiang Ma. Geometric evolution of bilayers under the degenerate functionalized Cahn–Hilliard equation. *Multiscale Modeling & Simulation*, 20(3): 1127–1146, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

URL https://epubs.siam.org/doi/10.1137/21M1467791.

Dobson:2010:SSE

[DLO10] M. Dobson, M. Luskin, and C. Ortner. Sharp stability estimates for the force-based quasicontinuum approximation of homogeneous tensile deformation. *Multiscale Modeling & Simulation*, 8(3):782–802, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dupuis:2012:ISL

[DLPD12] Paul Dupuis, Yufei Liu, Nuria Plattner, and J. D. Doll. On the infinite swapping limit for parallel tempering. *Multiscale Modeling & Simulation*, 10(3):986–1022, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dohnal:2014:BWH

[DLS14] T. Dohnal, A. Lamacz, and B. Schweizer. Bloch-wave homogenization on large time scales and dispersive effective wave equations. *Multiscale Modeling & Simulation*, 12(2):488–513, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deng:2018:BPF

[DLTZ18] Weihua Deng, Buyang Li, Wenyi Tian, and Pingwen Zhang. Boundary problems for the fractional and tempered fractional operators. *Multiscale Modeling & Simulation*, 16(1):125–149, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Du:2005:FDM

[DLY05] Qiang Du, Chun Liu, and Peng Yu. FENE dumbbell model and its several linear and nonlinear closure approximations. *Multiscale Modeling & Simulation*, 4(3):709–731, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/61203.

Du:2010:CHM

[DM10] Rui Du and Pingbing Ming. Convergence of the heterogeneous multiscale finite element method for elliptic problems with nonsmooth microstructures. *Multiscale Modeling & Simulation*, 8(5):1770–1783, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1770_s1.

Druskin:2017:MFR

[DMZ17] Vladimir Druskin, Alexander V. Mamonov, and Mikhail Zaslavsky. Multiscale S-fraction reduced-order models for massive wavefield simulations. *Multiscale Modeling & Simulation*, 15(1):445–475, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Durand:2007:DFC

[DN07] Sylvain Durand and Mila Nikolova. Denoising of frame coefficients using ℓ^1 data-fidelity term and edge-preserving regularization. *Multiscale Modeling & Simulation*, 6(2):547–576, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deluzet:2019:TFI

[DN19] Fabrice Deluzet and Jacek Narski. A two field iterated asymptotic-preserving method for highly anisotropic elliptic equations. *Multiscale Modeling & Simulation*, 17(1):434–459, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dobson:2012:SFB

[DOS12] M. Dobson, C. Ortner, and A. V. Shapeev. The spectrum of the force-based quasicontinuum operator for a homogeneous periodic chain. *Multiscale Modeling & Simulation*, 10(3):744–765, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dimarco:2008:HMM

[DP08] Giacomo Dimarco and Lorenzo Pareschi. Hybrid multiscale methods II. kinetic equations. *Multiscale Modeling & Simulation*, 6(4):1169–1197, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deriaz:2009:DNS

[DP09] Erwan Deriaz and Valérie Perrier. Direct numerical simulation of turbulence using divergence-free wavelets. *Multiscale Modeling & Simulation*, 7 (3):1101–1129, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deriaz:2018:SDA

[DP18] Erwan Deriaz and Sébastien Peirani. Six-dimensional adaptive simulation of the Vlasov equations using a hierarchical basis. *Multiscale Modeling & Simulation*, 16(2):583–614, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dimarco:2020:MVR

[DP20] Giacomo Dimarco and Lorenzo Pareschi. Multiscale variance reduction methods based on multiple control variates for kinetic equations with uncertainties. *Multiscale Modeling & Simulation*, 18(1):351–382, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degond:2003:PEV

[DPV03] Pierre Degond, Céline Parzani, and Marie-Hélène Vignal. Plasma expansion in vacuum: Modeling the breakdown of quasi neutrality. *Multiscale Modeling & Simulation*, 2(1):158–178, 2003. CODEN MMSUBT. ISSN 1540-3459 (print),

1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60033`.

Degond:2006:BMT

[DPV06] Pierre Degond, Céline Parzani, and Marie-Hélène Vignal. A Boltzmann model for trapped particles in a surface potential. *Multiscale Modeling & Simulation*, 5(2):364–392, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dimarco:2024:MMS

[DPZ24] Giacomo Dimarco, Lorenzo Pareschi, and Mattia Zanella. Micro-macro stochastic Galerkin methods for nonlinear Fokker–Planck equations with random inputs. *Multiscale Modeling & Simulation*, 22(1):527–560, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ding:2023:ASA

[DQS23] Mingchang Ding, Jing-Mei Qiu, and Ruiwen Shu. Accuracy and stability analysis of the semi-Lagrangian method for stiff hyperbolic relaxation systems and kinetic BGK model. *Multiscale Modeling & Simulation*, 21(1): 143–167, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M141871X`.

Dronnier:2019:ABA

[DR19] Dylan Dronnier and Florent Renac. Adjoint-based adaptive model and discretization for hyperbolic systems with relaxation. *Multiscale Modeling & Simulation*, 17(2):750–772, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Donovan:2020:HRW

[DR20] Preston Donovan and Muruhan Rathinam. Homogenization of a random walk on a graph in $\mathbf{R}^d$: an approach to predict macroscale diffusivity in media with finescale obstructions and interactions. *Multiscale Modeling & Simulation*, 18(1):383–414, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dobramysl:2016:PBM

[DRE16] Ulrich Dobramysl, Sten Rüdiger, and Radek Erban. Particle-based multiscale modeling of calcium puff dynamics. *Multiscale Modeling & Simulation*, 14 (3):997–1016, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Degenhard:2005:CPO

[DRL05] Andreas Degenhard and Javier Rodríguez-Laguna. Construction of projection operators for nonlinear evolutionary dynamics. *Multiscale Modeling & Simulation*, 4(2):641–

663, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60315`.

Degenhard:2004:DMR

[DRLS04] Andreas Degenhard, Javier Rodríguez-Laguna, and Silvia N. Santalla. Density matrix renormalization group approach to nonequilibrium phenomena. *Multiscale Modeling & Simulation*, 3(1):89–105, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60322`.

Daubechies:2007:SSM

[DRZ07] Ingrid Daubechies, Olof Runborg, and Jing Zou. A sparse spectral method for homogenization multiscale problems. *Multiscale Modeling & Simulation*, 6(3):711–740, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Druskin:2018:CLS

[DRZZ18] Vladimir Druskin, Rob F. Remis, Mikhail Zaslavsky, and Jörn T. Zimmerling. Compressing large-scale wave propagation models via phase-preconditioned rational Krylov subspaces. *Multiscale Modeling & Simulation*, 16(4):1486–1518, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deng:2024:PCM

[DSC24] Quanling Deng, Samuel N. Stechmann, and Nan Chen. Particle-continuum multiscale modeling of sea ice floes. *Multiscale Modeling & Simulation*, 22 (1):230–255, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Duc:2016:OSP

[DSH16] K. Dao Duc, Z. Schuss, and D. Holcman. Oscillatory survival probability: Analytical and numerical study of a non-Poissonian exit time. *Multiscale Modeling & Simulation*, 14 (2):772–798, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Doering:2005:ETB

[DSS05] Charles R. Doering, Khachik V. Sargsyan, and Leonard M. Sander. Extinction times for birth-death processes: Exact results, continuum asymptotics, and the failure of the Fokker–Planck approximation. *Multiscale Modeling & Simulation*, 3(2):283–299, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60280`.

Djurdjevac:2012:EEE

[DSS12] Natasa Djurdjevac, Marco Sarich, and Christof Schütte.

Estimating the eigenvalue error of Markov state models. *Multiscale Modeling & Simulation*, 10(1):61–81, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dupuis:2012:ISM

[DSW12] Paul Dupuis, Konstantinos Spiliopoulos, and Hui Wang. Importance sampling for multiscale diffusions. *Multiscale Modeling & Simulation*, 10(1): 1–27, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v10/i1/p1_s1`.

Duncan:2015:HLD

[Dun15] Andrew B. Duncan. Homogenization of lateral diffusion on a random surface. *Multiscale Modeling & Simulation*, 13(4): 1478–1506, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Durand:2009:CDD

[Dur09] Sylvain Durand. On the construction of discrete directional wavelets: HDWT, space-frequency localization, and redundancy factor. *Multiscale Modeling & Simulation*, 7(3): 1325–1347, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Duchene:2011:SHI

[DW11] Vincent Duchêne and Michael I. Weinstein. Scattering, homogenization, and interface effects for oscillatory potentials with strong singularities. *Multiscale Modeling & Simulation*, 9(3):1017–1063, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1017_s1`.

Deng:2014:CFE

[DW14] Weibing Deng and Haijun Wu. A combined finite element and multiscale finite element method for the multiscale elliptic problems. *Multiscale Modeling & Simulation*, 12(4):1424–1457, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dupuis:2022:AOC

[DW22] Paul Dupuis and Guo-Jhen Wu. Analysis and optimization of certain parallel Monte Carlo methods in the low temperature limit. *Multiscale Modeling & Simulation*, 20(1):220–249, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1402029`.

Delgado:2015:CMF

[DWC15] M. I. Delgado, M. J. Ward, and D. Coombs. Conditional mean first passage times to small

traps in a 3-D domain with a sticky boundary: Applications to T cell searching behavior in lymph nodes. *Multiscale Modeling & Simulation*, 13(4):1224–1258, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

deWiljes:2013:AMC

[dWMH13] Jana de Wiljes, Andrew Majda, and Illia Horenko. An adaptive Markov chain Monte Carlo approach to time series clustering of processes with regime transition behavior. *Multiscale Modeling & Simulation*, 11(2):415–441, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dai:2020:GFB

[DWZ20a] Xiaoying Dai, Qiao Wang, and Aihui Zhou. Gradient flow based Kohn–Sham density functional theory model. *Multiscale Modeling & Simulation*, 18(4):1621–1663, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Deng:2020:AND

[DWZ20b] Weihua Deng, Xudong Wang, and Pingwen Zhang. Anisotropic nonlocal diffusion operators for normal and anomalous dynamics. *Multiscale Modeling & Simulation*, 18(1):415–443, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Du:2024:SCM

[DXZ24] Ziyu Du, Yantong Xie, and Zhennan Zhou. A synchronization-capturing multiscale solver to the noisy integrate-and-fire neuron networks. *Multiscale Modeling & Simulation*, 22(1):561–587, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Dong:2008:LSB

[DYOD08] Bin Dong, Jian Ye, Stanley Osher, and Ivo Dinov. Level set based nonlocal surface restoration. *Multiscale Modeling & Simulation*, 7(2):589–598, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

ElHajj:2008:HDL

[EA08] Raymond El Hajj and Naoufel Ben Abdallah. High density limit of the stationary one dimensional Schrödinger–Poisson system. *Multiscale Modeling & Simulation*, 7(1):124–146, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

El-Azab:2009:SSM

[EAC09] Anter El-Azab and Russel Caflisch. Special section on multiscale materials modeling. *Multiscale Modeling & Simulation*, 8(1):191–192, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Eberhard:2004:CGU

[EAW04] Jens Eberhard, Sabine Attinger, and Gabriel Wittum. Coarse graining for upscaling of flow in heterogeneous porous media. *Multiscale Modeling & Simulation*, 2(2):269–301, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60049`.

Eberhard:2005:UST

[Ebe05] Jens Eberhard. Upscaling for stationary transport in heterogeneous porous media. *Multiscale Modeling & Simulation*, 3(4):957–976, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60415`.

Eck:2004:ATS

[Eck04a] Christof Eck. Analysis of a two-scale phase field model for liquid-solid phase transitions with equiaxed dendritic microstructure. *Multiscale Modeling & Simulation*, 3(1):28–49, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42518`.

Eck:2004:HPF

[Eck04b] Christof Eck. Homogenization of a phase field model for binary mixtures. *Multiscale Modeling & Simulation*, 3 (1):1–27, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42517`.

Eck:2007:EEF

[Eck07] Christof Eck. Error estimates for a finite element discretization of a two-scale phase field model. *Multiscale Modeling & Simulation*, 6(1):1–26, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Echenim:2007:MMF

[ECS07] Nki Echenim, Frederique Clément, and Michel Sorine. Multiscale modeling of follicular ovulation as a reachability problem. *Multiscale Modeling & Simulation*, 6(3):895–912, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Efendiev:2003:GCD

[ED03] Y. Efendiev and L. J. Durlofsky. A generalized convection-diffusion model for subgrid transport in porous media. *Multiscale Modeling & Simulation*, 1(3):504–526, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41369`.

Elsey:2009:ATV

[EE09] Matthew Elsey and Selim Esedoğlu. Analogue of the to-

tal variation denoising model in the context of geometry processing. *Multiscale Modeling & Simulation*, 7(4):1549–1573, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Engquist:2014:NSM

[EF14] Björn Engquist and Christina Frederick. Nonuniform sampling and multiscale computation. *Multiscale Modeling & Simulation*, 12(4):1890–1901, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Eden:2024:EHT

[EF24] Michael Eden and Tom Freudenberg. Effective heat transfer between a porous medium and a fluid layer: Homogenization and simulation. *Multiscale Modeling & Simulation*, 22(2):752–783, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Evans:2012:STS

[EFM12] Jonathan D. Evans, Andrea Fernández, and Adrian Muntean. Single and two-scale sharp-interface models for concrete carbonation — asymptotics and numerical approximation. *Multiscale Modeling & Simulation*, 10(3):874–905, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ehler:2014:QLC

[EFS14] Martin Ehler, Massimo Fornasier, and Juliane Sigl. Quasilinear compressed sensing. *Multiscale Modeling & Simulation*, 12(2):725–754, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Elfverson:2013:ADG

[EGM13] Daniel Elfverson, Emmanuil H. Georgoulis, and Axel Målqvist. An adaptive discontinuous Galerkin multiscale method for elliptic problems. *Multiscale Modeling & Simulation*, 11(3): 747–765, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Etter:2015:FFF

[EGO15] S. Etter, P. Grohs, and A. Obermeier. FFRT: a fast finite ridgelet transform for radiative transport. *Multiscale Modeling & Simulation*, 13(1):1–42, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Efendiev:2012:SCS

[EGT12] Yalchin Efendiev, Juan Galvis, and Florian Thomines. A systematic coarse-scale model reduction technique for parameter-dependent flows in highly heterogeneous media and its applications. *Multiscale Modeling & Simulation*, 10(4):1317–1343, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Enciso:2021:AMR

[EK21] German Enciso and Jinsu Kim. Accuracy of multiscale reduction for stochastic reaction systems. *Multiscale Modeling & Simulation*, 19(4):1633–1658, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Espannol:2013:CAQ

[EKCO13] Malena I. Espanñol, Dennis M. Kochmann, Sergio Conti, and Michael Ortiz. A Γ-convergence analysis of the quasicontinuum method. *Multiscale Modeling & Simulation*, 11(3):766–794, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ellero:2006:MMV

[EKH06] Marco Ellero, Martin Kröger, and Siegfried Hess. Multiscale modeling of viscoelastic materials containing rigid nonrotating inclusions. *Multiscale Modeling & Simulation*, 5(3):759–785, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Efendiev:2015:MMC

[EKL15] Yalchin Efendiev, Cornelia Kronsbein, and Frédéric Legoll. Multilevel Monte Carlo approaches for numerical homogenization. *Multiscale Modeling & Simulation*, 13(4):1107–1135, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Evans:2018:SDR

[EKM18] P. L. Evans, J. R. King, and A. Münch. The structure of a dewetting rim with strong slip: The long-time evolution. *Multiscale Modeling & Simulation*, 16 (3):1365–1391, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ephrati:2022:CMH

[ELW+22] Sagy R. Ephrati, Erwin Luesink, Golo Wimmer, Paolo Cifani, and Bernard J. Geurts. Computational modeling for high-fidelity coarsening of shallow water equations based on subgrid data. *Multiscale Modeling & Simulation*, 20(4):1468–1489, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1452871`.

Etter:2020:MCK

[EMLO20] Simon Etter, Daniel Massatt, Mitchell Luskin, and Christoph Ortner. Modeling and computation of Kubo conductivity for two-dimensional incommensurate bilayers. *Multiscale Modeling & Simulation*, 18(4):1525–1564, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Engblom:2009:PTS

[Eng09] Stefan Engblom. Parallel in time simulation of multiscale stochastic chemical kinetics.

Multiscale Modeling & Simulation, 8(1):46–68, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Erban:2005:STS

[EO05] Radek Erban and Hans G. Othmer. From signal transduction to spatial pattern formation in *E. coli*: a paradigm for multiscale modeling in biology. *Multiscale Modeling & Simulation*, 3(2):362–394, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60356`.

Efendiev:2003:NHM

[EP03] Yalchin Efendiev and Alexander Pankov. Numerical homogenization of monotone elliptic operators. *Multiscale Modeling & Simulation*, 2(1): 62–79, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42161`.

Efendiev:2004:NHN

[EP04] Y. Efendiev and A. Pankov. Numerical homogenization of nonlinear random parabolic operators. *Multiscale Modeling & Simulation*, 2(2):237–268, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60026`.

ElOssmani:2010:EMH

[EP10] M. El Ossmani and P. Poncet. Efficiency of multiscale hybrid grid-particle vortex methods. *Multiscale Modeling & Simulation*, 8(5):1671–1690, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1671_s1`.

Eggenweiler:2021:ECC

[ER21] Elissa Eggenweiler and Iryna Rybak. Effective coupling conditions for arbitrary flows in Stokes–Darcy systems. *Multiscale Modeling & Simulation*, 19 (2):731–757, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Earle:2023:AMC

[EV23] Gabriel Earle and Brian Van Koten. Aggregation methods for computing steady states in statistical physics. *Multiscale Modeling & Simulation*, 21(3): 1170–1209, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1530628`.

Elsey:2014:FAD

[EW14] Matt Elsey and Benedikt Wirth. Fast automated detection of crystal distortion and crystal defects in polycrystal images. *Multiscale Modeling & Simulation*, 12(1):1–24, ???? 2014.

CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Engquist:2011:SPH

[EY11] Björn Engquist and Lexing Ying. Sweeping preconditioner for the Helmholtz equation: Moving perfectly matched layers. *Multiscale Modeling & Simulation*, 9(2):686–710, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p686_s1`.

Feppon:2022:HOT

[FA22] Florian Feppon and Habib Ammari. High order topological asymptotics: Reconciling layer potentials and compound asymptotic expansions. *Multiscale Modeling & Simulation*, 20(3):957–1001, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1461277`.

Facciolo:2009:IRS

[FAAC09] Gabriele Facciolo, Andrés Almansa, Jean-François Aujol, and Vicent Caselles. Irregular to regular sampling, denoising, and deconvolution. *Multiscale Modeling & Simulation*, 7(4):1574–1608, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fan:2009:MAA

[Fan09] Jinghong Fan. Multiscale analysis across atoms/continuum by a generalized particle dynamics method. *Multiscale Modeling & Simulation*, 8(1):228–253, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fannjiang:2019:RGP

[Fan19] Albert Fannjiang. Raster grid pathology and the cure. *Multiscale Modeling & Simulation*, 17(3):973–995, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Feng:2022:ENM

[FAO22] Qingqing Feng, Gregoire Allaire, and Pascal Omnes. Enriched nonconforming multiscale finite element method for Stokes flows in heterogeneous media based on high-order weighting functions. *Multiscale Modeling & Simulation*, 20(1):462–492, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M141926X`.

Fu:2022:GMF

[FCZ22] Shubin Fu, Eric Chung, and Lina Zhao. Generalized multiscale finite element method for highly heterogeneous compressible flow. *Multiscale Modeling & Simulation*, 20(4):1437–1467, ???? 2022. CODEN

MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/21M1438475.

Fu:2024:APT

[FCZ24] Shubin Fu, Eric Chung, and Lina Zhao. An adaptive preconditioner for three-dimensional single-phase compressible flow in highly heterogeneous porous media. *Multiscale Modeling & Simulation*, 22(1):155–177, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fiori:2011:USF

[FDJ11] A. Fiori, G. Dagan, and I. Jankovic. Upscaling of steady flow in three-dimensional highly heterogeneous formations. *Multiscale Modeling & Simulation*, 9(3):1162–1180, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1162_s1.

Firmani:2009:ECR

[FFJD09] G. Firmani, A. Fiori, I. Jankovic, and G. Dagan. Effective conductivity of random multiphase 2D media with polydisperse circular inclusions. *Multiscale Modeling & Simulation*, 7(4):1979–2001, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Focardi:2008:MPF

[FG08] Matteo Focardi and Adriana Garroni. A 1D macroscopic phase field model for dislocations and a second order Γ-limit. *Multiscale Modeling & Simulation*, 6(4):1098–1124, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Friesecke:2009:ABC

[FG09] Gero Friesecke and Benjamin D. Goddard. Asymptotics-based CI models for atoms: Properties, exact solution of a minimal model for Li to Ne, and application to atomic spectra. *Multiscale Modeling & Simulation*, 7 (4):1876–1897, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Frank:2018:NSC

[FG18] Jason Frank and Georg A. Gottwald. A note on statistical consistency of numerical integrators for multiscale dynamics. *Multiscale Modeling & Simulation*, 16(2):1017–1033, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ferre:2021:AOC

[FG21] Grégoire Ferré and Tobias Grafke. Approximate optimal controls via instanton expansion for low temperature free energy computation. *Multiscale Modeling & Simulation*, 19(3):1310–

1332, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fabricius:2023:HDR

[FG23] John Fabricius and Markus Gahn. Homogenization and dimension reduction of the Stokes problem with navier-slip condition in thin perforated layers. *Multiscale Modeling & Simulation*, 21(4):1502–1533, October 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Freeman:2024:QMC

[FGS24] David C. Freeman, Dimitrios Giannakis, and Joanna Slawinska. Quantum mechanics for closure of dynamical systems. *Multiscale Modeling & Simulation*, 22(1):283–333, February 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fouque:2020:MAA

[FH20] Jean-Pierre Fouque and Ruimeng Hu. Multiscale asymptotic analysis for portfolio optimization under stochastic environment. *Multiscale Modeling & Simulation*, 18(3):1318–1342, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fornasier:2011:PSK

[FHV11] M. Fornasier, J. Haskovec, and J. Vybíral. Particle systems and kinetic equations modeling interacting agents in high dimension. *Multiscale Modeling & Simulation*, 9(4):1727–1764, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1727_s1`.

Filliger:2004:DDR

[Fil04] Roger Filliger. Discrete derivation of Ruijgrok and Wu's nonlinear two-velocity Boltzmann model with an application to traffic-flow modelling. *Multiscale Modeling & Simulation*, 2(3):440–451, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60041`.

Filbet:2012:DAB

[Fil12] Francis Filbet. On deterministic approximation of the Boltzmann equation in a bounded domain. *Multiscale Modeling & Simulation*, 10(3):792–817, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Friesecke:2009:MFA

[FJK09] Gero Friesecke, Oliver Junge, and Péter Koltai. Mean field approximation in conformation dynamics. *Multiscale Modeling & Simulation*, 8(1):254–268, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fang:2018:ETS

[FJS18] Di Fang, Shi Jin, and Christof Sparber. An efficient time-splitting method for the Ehrenfest dynamics. *Multiscale Modeling & Simulation*, 16(2):900–921, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Friesecke:2019:NOC

[FK19] Gero Friesecke and Michael Kniely. New optimal control problems in density functional theory motivated by photovoltaics. *Multiscale Modeling & Simulation*, 17(3):926–947, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fazekas:2007:MMT

[FKH07] Csaba Fazekas, György Kozmann, and Katalin M. Hangos. Multiscale modeling and timescale analysis of a human limb. *Multiscale Modeling & Simulation*, 6(3):761–791, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fackeldey:2011:CMD

[FKKL11] Konstantin Fackeldey, Dorian Krause, Rolf Krause, and Christoph Lenzen. Coupling molecular dynamics and continua with weak constraints. *Multiscale Modeling & Simulation*, 9(4):1459–1494, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1459_s1`.

Fife:2005:MPI

[FKMW05] P. Fife, J. Klewicki, P. McMurtry, and T. Wei. Multiscaling in the presence of indeterminacy: Wall-induced turbulence. *Multiscale Modeling & Simulation*, 4(3):936–959, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61117`.

Fang:2018:DSH

[FL18] Di Fang and Jianfeng Lu. A diabatic surface hopping algorithm based on time dependent perturbation theory and semiclassical analysis. *Multiscale Modeling & Simulation*, 16(4):1603–1622, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fu:2021:WBE

[FLCG21] Shubin Fu, Guanglian Li, Richard Craster, and Sebastien Guenneau. Wavelet-based edge multiscale finite element method for Helmholtz problems in perforated domains. *Multiscale Modeling & Simulation*, 19 (4):1684–1709, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Feireisl:2018:APE

[FLMN+18] Eduard Feireisl, Mária Lukácová-

Medvidová, Sárka Necasová, Antonín Novotný, and Bangwei She. Asymptotic preserving error estimates for numerical solutions of compressible Navier–Stokes equations in the low Mach number regime. *Multiscale Modeling & Simulation*, 16(1):150–183, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Frick:2011:MPA

[FLR11] Klaus Frick, Dirk A. Lorenz, and Elena Resmerita. Morozov's Principle for the augmented Lagrangian method applied to linear inverse problems. *Multiscale Modeling & Simulation*, 9(4):1528–1548, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1528_s1`.

Fan:2019:MNN

[FLYZN19] Yuwei Fan, Lin Lin, Lexing Ying, and Leonardo Zepeda-Núñez. A multiscale neural network based on hierarchical matrices. *Multiscale Modeling & Simulation*, 17(4):1189–1213, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Filippas:2003:SWF

[FM03] Stathis Filippas and George N. Makrakis. Semiclassical Wigner function and geometrical optics. *Multiscale Modeling & Simulation*, 1(4):674–710, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40979`.

Fyta:2006:MCM

[FMKS06] Maria G. Fyta, Simone Melchionna, Efthimios Kaxiras, and Sauro Succi. Multiscale coupling of molecular dynamics and hydrodynamics: Application to DNA translocation through a nanopore. *Multiscale Modeling & Simulation*, 5(4):1156–1173, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fernandez:2005:AGM

[FMQ05] Miguel Ángel Fernández, Vuk Milisic, and Alfio Quarteroni. Analysis of a geometrical multiscale blood flow model based on the coupling of ODEs and hyperbolic PDEs. *Multiscale Modeling & Simulation*, 4(1): 215–236, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60201`.

Franca:2005:CAM

[FMTV05] Leopoldo P. Franca, Alexandre L. Madureira, Lutz Tobiska, and Frédéric Valentin. Convergence analysis of a multiscale finite element method for singularly perturbed problems. *Multiscale Modeling & Simulation*, 4(3):839–866,

2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60849`.

Fouque:2003:TRR

[FN03] Jean-Pierre Fouque and André Nachbin. Time-reversed refocusing of surface water waves. *Multiscale Modeling & Simulation*, 1(4):609–629, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41211`.

Fedele:2019:APS

[FNP19] Baptiste Fedele, Claudia Negulescu, and Stefan Possanner. Asymptotic-preserving scheme for the resolution of evolution equations with stiff transport terms. *Multiscale Modeling & Simulation*, 17(1):307–343, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fackeldey:2022:API

[FOSS22] Konstantin Fackeldey, Mathias Oster, Leon Sallandt, and Reinhold Schneider. Approximative policy iteration for exit time feedback control problems driven by stochastic differential equations using tensor train format. *Multiscale Modeling & Simulation*, 20(1):379–403, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1372500`.

Fouque:2003:MSV

[FPSS03] Jean-Pierre Fouque, George Papanicolaou, Ronnie Sircar, and Knut Solna. Multiscale stochastic volatility asymptotics. *Multiscale Modeling & Simulation*, 2 (1):22–42, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60029`.

Frei:2020:EAF

[FR20] S. Frei and T. Richter. Efficient approximation of flow problems with multiple scales in time. *Multiscale Modeling & Simulation*, 18(2):942–969, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Freese:2022:HMM

[Fre22] Philip Freese. The heterogeneous multiscale method for dispersive Maxwell systems. *Multiscale Modeling & Simulation*, 20(2):769–797, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1443960`.

Fu:2020:SMH

[FRK+20] Szu-Pei P. Fu, Rolf Ryham, Andreas Klöckner, Matt Wala, Shidong Jiang, and Yuan-Nan Young. Simulation of multiscale hydrophobic lipid dynam-

ics via efficient integral equation methods. *Multiscale Modeling & Simulation*, 18(1):79–103, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fouque:2003:TRA

[FS03] J.-P. Fouque and K. Solna. Time-reversal aperture enhancement. *Multiscale Modeling & Simulation*, 1(2):239–259, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41444`.

Fannjiang:2005:PTR

[FS05] Albert C. Fannjiang and Knut Solna. Propagation and time reversal of wave beams in atmospheric turbulence. *Multiscale Modeling & Simulation*, 3(3): 522–558, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60159`.

Fouque:2009:MMD

[FSS09] Jean-Pierre Fouque, Ronnie Sircar, and Knut Sølna. Multiname and multiscale default modeling. *Multiscale Modeling & Simulation*, 7(4):1956–1978, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Feng:2021:UEB

[FY21] Yue Feng and Wenfan Yi. Uniform error bounds of an exponential wave integrator for the long-time dynamics of the nonlinear Klein–Gordon equation. *Multiscale Modeling & Simulation*, 19(3):1212–1235, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Fitzpatrick:2011:RWS

[FYW11] Ben G. Fitzpatrick, G. Yin, and Le Yi Wang. Robustness, weak stability, and stability in distribution of adaptive filtering algorithms under model mismatch. *Multiscale Modeling & Simulation*, 9(1):183–207, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p183_s1`.

Forest:2005:KSS

[FZW05] M. Gregory Forest, Ruhai Zhou, and Qi Wang. Kinetic structure simulations of nematic polymers in plane Couette cells. II: In-plane structure transitions. *Multiscale Modeling & Simulation*, 4(4):1280–1304, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61818`.

Forest:2007:MMS

[FZW07] M. Gregory Forest, Ruhai Zhou, and Qi Wang. Microscopic-macroscopic simulations of rigid-rod polymer hydrodynamics: Heterogeneity and

rheochaos. *Multiscale Modeling & Simulation*, 6(3):858–878, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Guisset:2017:AMM

[GABD17] S. Guisset, D. Aregba, S. Brull, and B. Dubroca. The M_1 angular moments model in a velocity-adaptive frame for rarefied gas dynamics applications. *Multiscale Modeling & Simulation*, 15 (4):1719–1747, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ganguly:2015:JDA

[GAK15] Arnab Ganguly, Derya Altintan, and Heinz Koeppl. Jump-diffusion approximation of stochastic reaction dynamics: Error bounds and algorithms. *Multiscale Modeling & Simulation*, 13(4):1390–1419, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2005:IRL

[Gar05] Josselin Garnier. Imaging in randomly layered media by cross-correlating noisy signals. *Multiscale Modeling & Simulation*, 4(2):610–640, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61322`.

Garnier:2021:WPP

[Gar21] Josselin Garnier. Wave propagation in periodic and random time-dependent media. *Multiscale Modeling & Simulation*, 19 (3):1190–1211, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Granero-Belinchon:2017:MRT

[GBS17] Rafael Granero-Belinchón and Steve Shkoller. A model for Rayleigh–Taylor mixing and interface turnover. *Multiscale Modeling & Simulation*, 15(1): 274–308, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Grudzien:2018:SPP

[GDCB18] Colin Grudzien, Deepjyoti Deka, Michael Chertkov, and Scott N. Backhaus. Structure- and physics-preserving reductions of power grid models. *Multiscale Modeling & Simulation*, 16(4):1916–1947, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Galvis:2010:DDPa

[GE10a] Juan Galvis and Yalchin Efendiev. Domain decomposition preconditioners for multiscale flows in high-contrast media. *Multiscale Modeling & Simulation*, 8(4):1461–1483, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Galvis:2010:DDPb

[GE10b] Juan Galvis and Yalchin Efendiev. Domain decomposition preconditioners for multiscale flows in high contrast media: Reduced dimension coarse spaces. *Multiscale Modeling & Simulation*, 8(5):1621–1644, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1621_s1`.

Garttner:2022:EMM

[GFKR22] Stephan Gärttner, Peter Frolkovic, Peter Knabner, and Nadja Ray. Efficiency of micro-macro models for reactive two-mineral systems. *Multiscale Modeling & Simulation*, 20(1): 433–461, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1380648`.

Gammack:2005:UIR

[GGM+05] David Gammack, Suman Ganguli, Simeone Marino, Jose Segovia-Juarez, and Denise E. Kirschner. Understanding the immune response in tuberculosis using different mathematical models and biological scales. *Multiscale Modeling & Simulation*, 3(2):312–345, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60312`.

Garnier:2007:EBS

[GGN07] Josselin Garnier, Juan Carlos Muñoz Grajales, and André Nachbin. Effective behavior of solitary waves over random topography. *Multiscale Modeling & Simulation*, 6(3):995–1025, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Grasedyck:2012:ABS

[GGS12] L. Grasedyck, I. Greff, and S. Sauter. The AL basis for the solution of elliptic problems in heterogeneous media. *Multiscale Modeling & Simulation*, 10 (1):245–258, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2020:MAS

[GGS20] Josselin Garnier, Etienne Gay, and Eric Savin. Multiscale analysis of spectral broadening of acoustic waves by a turbulent shear layer. *Multiscale Modeling & Simulation*, 18(2):798–823, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Grafke:2014:APH

[GGSVE14] T. Grafke, R. Grauer, T. Schäfer, and E. Vanden-Eijnden. Arclength parametrized Hamilton's equations for the calculation of instantons. *Multiscale Modeling & Simulation*, 12(2): 566–580, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Glantz:2011:CDT

[GH11] Roland Glantz and Markus Hilpert. Capillary displacement in totally wetting and infinitely long right prisms. *Multiscale Modeling & Simulation*, 9(4):1765–1800, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1765_s1`.

Guerrier:2015:STS

[GH15] C. Guerrier and D. Holcman. Search time for a small ribbon and application to vesicular release at neuronal synapses. *Multiscale Modeling & Simulation*, 13(4):1173–1193, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gilles:2012:MTS

[Gil12] Jérôme Gilles. Multiscale texture separation. *Multiscale Modeling & Simulation*, 10(4): 1409–1427, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Givon:2007:SCR

[Giv07] Dror Givon. Strong convergence rate for two-time-scale jump-diffusion stochastic differential systems. *Multiscale Modeling & Simulation*, 6(2):577–594, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Glimm:2003:TPN

[GJL+03] James Glimm, Hyeonseong Jin, Marc Laforest, Folkert Tangerman, and Yongmin Zhang. A two pressure numerical model of two fluid mixing. *Multiscale Modeling & Simulation*, 1(3): 458–484, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40846`.

Givon:2008:MIS

[GK08] Dror Givon and Ioannis G. Kevrekidis. Multiscale integration schemes for jump-diffusion systems. *Multiscale Modeling & Simulation*, 7(2):495–516, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Griebel:2010:HNS

[GK10] M. Griebel and M. Klitz. Homogenization and numerical simulation of flow in geometries with textile microstructures. *Multiscale Modeling & Simulation*, 8(4):1439–1460, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ganis:2014:GJM

[GKP+14] Benjamin Ganis, Kundan Kumar, Gergina Pencheva, Mary F. Wheeler, and Ivan Yotov. A global Jacobian method for mortar discretizations of a fully implicit two-phase flow model. *Multiscale Modeling & Simulation*, 12(4):1401–1423, ????

2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Guyenne:2022:HDE

[GKS22] Philippe Guyenne, Adilbek Kairzhan, and Catherine Sulem. Hamiltonian dysthe equation for three-dimensional deep-water gravity waves. *Multiscale Modeling & Simulation*, 20(1): 349–378, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1432788`.

Gunzburger:2010:NVC

[GL10] Max Gunzburger and R. B. Lehoucq. A nonlocal vector calculus with application to nonlocal boundary value problems. *Multiscale Modeling & Simulation*, 8(5):1581–1598, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1581_s1`.

Gao:2023:LDP

[GL23] Yuan Gao and Jian-Guo Liu. Large deviation principle and thermodynamic limit of chemical master equation via nonlinear semigroup. *Multiscale Modeling & Simulation*, 21(4): 1534–1569, October 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Grafke:2024:MTP

[GL24] Tobias Grafke and Alessandro Laio. Metadynamics for transition paths in irreversible dynamics. *Multiscale Modeling & Simulation*, 22(1):125–141, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Godillon-Lafitte:2005:CMR

[GLG05] Pauline Godillon-Lafitte and Thierry Goudon. A coupled model for radiative transfer: Doppler effects, equilibrium, and nonequilibrium diffusion asymptotics. *Multiscale Modeling & Simulation*, 4(4):1245–1279, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62104`.

Gao:2023:TPT

[GLLL23] Yuan Gao, Tiejun Li, Xiaoguang Li, and Jian-Guo Liu. Transition path theory for Langevin dynamics on manifolds: Optimal control and data-driven solver. *Multiscale Modeling & Simulation*, 21(1): 1–33, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1437883`.

Gasser:2013:VTF

[GLM13] Ingenuin Gasser, Corrado Lattanzio, and Amelio Maurizi. Vehicular traffic flow dynamics on

a bus route. *Multiscale Modeling & Simulation*, 11(3):925–942, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Grooms:2015:NSS

[GLM15] Ian Grooms, Yoonsang Lee, and Andrew J. Majda. Numerical schemes for stochastic backscatter in the inverse cascade of quasigeostrophic turbulence. *Multiscale Modeling & Simulation*, 13(3):1001–1021, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gloria:2006:AFN

[Glo06] Antoine Gloria. An analytical framework for the numerical homogenization of monotone elliptic operators and quasiconvex energies. *Multiscale Modeling & Simulation*, 5(3):996–1043, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gloria:2008:AFN

[Glo08] Antoine Gloria. An analytical framework for numerical homogenization. Part II: Windowing and oversampling. *Multiscale Modeling & Simulation*, 7 (1):274–293, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gu:2016:SLF

[GM16] Yu Gu and Jean-Christophe Mourrat. Scaling limit of fluctuations in stochastic homogenization. *Multiscale Modeling & Simulation*, 14(1):452–481, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gottwald:2021:SNL

[GM21] Georg A. Gottwald and Ian Melbourne. Simulation of non-Lipschitz stochastic differential equations driven by α-stable noise: a method based on deterministic homogenization. *Multiscale Modeling & Simulation*, 19(2):665–687, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gottwald:2017:OBA

[GMO17] Georg A. Gottwald, Haidar Mohamad, and Marcel Oliver. Optimal balance via adiabatic invariance of approximate slow manifolds. *Multiscale Modeling & Simulation*, 15(4):1404–1422, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ginting:2010:NMS

[GMP10] Victor Ginting, Axel Målqvist, and Michael Presho. A novel method for solving multiscale elliptic problems with randomly perturbed data. *Multiscale Modeling & Simulation*, 8(3): 977–996, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gaison:2014:APF

[GMWZ14] Jeremy Gaison, Shari Moskow, J. Douglas Wright, and Qimin Zhang. Approximation of polyatomic FPU lattices by KdV equations. *Multiscale Modeling & Simulation*, 12(3):953–995, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Grajales:2005:SMF

[GN05] Juan Carlos Muñoz Grajales and André Nachbin. Stiff microscale forcing and solitary wave refocusing. *Multiscale Modeling & Simulation*, 3(3):680–705, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60269`.

Goussis:2006:MRP

[GN06] Dimitris A. Goussis and Habib N. Najm. Model reduction and physical understanding of slowly oscillating processes: The circadian cycle. *Multiscale Modeling & Simulation*, 5(4):1297–1332, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gorb:2012:BSL

[GN12] Yuliya Gorb and Alexei Novikov. Blow-up of solutions to a p-Laplace equation. *Multiscale Modeling & Simulation*, 10(3):727–743, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gahn:2021:SLR

[GNR21] Markus Gahn and Maria Neuss-Radu. Singular limit for reactive diffusive transport through an array of thin channels in case of critical diffusivity. *Multiscale Modeling & Simulation*, 19(4):1573–1600, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gilboa:2007:NLI

[GO07] Guy Gilboa and Stanley Osher. Nonlocal linear image regularization and supervised segmentation. *Multiscale Modeling & Simulation*, 6(2):595–630, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gilboa:2009:NOA

[GO09] Guy Gilboa and Stanley Osher. Nonlocal operators with applications to image processing. *Multiscale Modeling & Simulation*, 7(3):1005–1028, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gomez:2009:TRS

[Gom09] Christophe Gomez. Time-reversal superresolution in random waveguides. *Multiscale Modeling & Simulation*, 7(3):1348–1386, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gomez:2023:EFP

[Gom23] Christophe Gomez. An effective fractional paraxial wave equation for wave-fronts in randomly layered media with long-range correlations. *Multiscale Modeling & Simulation*, 21(4):1410–1456, October 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gorb:2015:SBE

[Gor15] Yuliya Gorb. Singular behavior of electric field of high-contrast concentrated composites. *Multiscale Modeling & Simulation*, 13 (4):1312–1326, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gosse:2014:RPN

[Gos14] Laurent Gosse. Redheffer products and numerical approximation of currents in one-dimensional semiconductor kinetic models. *Multiscale Modeling & Simulation*, 12(4):1533–1560, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gosse:2021:DLT

[Gos21] Laurent Gosse. Diffusive limit of a two-dimensional well-balanced scheme for the free Klein–Kramers equation. *Multiscale Modeling & Simulation*, 19(1): 568–587, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Goudon:2011:SHR

[GP11] Thierry Goudon and Martin Parisot. On the Spitzer–Härm regime and nonlocal approximations: Modeling, analysis, and numerical simulations. *Multiscale Modeling & Simulation*, 9(2):568–600, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p568_s1`.

Gallistl:2017:CQL

[GP17] D. Gallistl and D. Peterseim. Computation of quasi-local effective diffusion tensors and connections to the mathematical theory of homogenization. *Multiscale Modeling & Simulation*, 15(4):1530–1552, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Goddard:2012:OLD

[GPK12] B. D. Goddard, G. A. Pavliotis, and S. Kalliadasis. The overdamped limit of dynamic density functional theory: Rigorous results. *Multiscale Modeling & Simulation*, 10(2):633–663, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gonzalez:2017:AVR

[GPP+17] O. Gonzalez, M. Pasi, D. Petkeviciute, J. Glowacki, and J. H. Maddocks. Absolute versus relative entropy parameter esti-

mation in a coarse-grain model of DNA. *Multiscale Modeling & Simulation*, 15(3):1073–1107, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gomez:2017:RTL

[GPR17] Christophe Gomez, Olivier Pinaud, and Lenya Ryzhik. Radiative transfer with long-range interactions: Regularity and asymptotics. *Multiscale Modeling & Simulation*, 15(2):1048–1072, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gomes:2020:MFL

[GPV20] S. N. Gomes, G. A. Pavliotis, and U. Vaes. Mean field limits for interacting diffusions with colored noise: Phase transitions and spectral numerical methods. *Multiscale Modeling & Simulation*, 18(3):1343–1370, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ganis:2012:FJM

[GPW+12] Benjamin Ganis, Gergina Pencheva, Mary F. Wheeler, Tim Wildey, and Ivan Yotov. A frozen Jacobian multiscale mortar preconditioner for nonlinear interface operators. *Multiscale Modeling & Simulation*, 10(3):853–873, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2013:ASD

[GPY13] Josselin Garnier, George Papanicolaou, and Tzu-Wei Yang. Anomalous shock displacement probabilities for a perturbed scalar conservation law. *Multiscale Modeling & Simulation*, 11 (4):1000–1032, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gousseau:2007:MOS

[GR07] Yann Gousseau and François Roueff. Modeling occlusion and scaling in natural images. *Multiscale Modeling & Simulation*, 6(1):105–134, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gu:2016:RSE

[GR16] Yu Gu and Lenya Ryzhik. The random Schrödinger equation: Homogenization in time-dependent potentials. *Multiscale Modeling & Simulation*, 14 (1):323–363, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gardner:2017:FIM

[GR17] David J. Gardner and Daniel R. Reynolds. Filters for improvement of multiscale data from atomistic simulations. *Multiscale Modeling & Simulation*, 15 (1):1–28, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gurevich:2018:PFN

[GR18] Pavel Gurevich and Sina Reichelt. Pulses in FitzHugh–Nagumo systems with rapidly oscillating coefficients. *Multiscale Modeling & Simulation*, 16 (2):833–856, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2009:PCE

[GS09a] Josselin Garnier and Knut Sølna. Paraxial coupling of electromagnetic waves in random media. *Multiscale Modeling & Simulation*, 7(4):1928–1955, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2009:PPR

[GS09b] Josselin Garnier and Knut Sølna. Pulse propagation in random media with long-range correlation. *Multiscale Modeling & Simulation*, 7(3):1302–1324, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2010:WTT

[GS10] Josselin Garnier and Knut Sølna. Wave transmission through random layering with pressure release boundary conditions. *Multiscale Modeling & Simulation*, 8(3):912–943, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2012:CWW

[GS12] Josselin Garnier and Knut Sølna. Coupled wideangle wave approximations. *Multiscale Modeling & Simulation*, 10(1): 217–244, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Guilleminot:2013:SMG

[GS13] J. Guilleminot and C. Soize. Stochastic model and generator for random fields with symmetry properties: Application to the mesoscopic modeling of elastic random media. *Multiscale Modeling & Simulation*, 11 (3):840–870, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2014:WBP

[GS14] Josselin Garnier and Knut Sølna. Wave backscattering by point scatterers in the random paraxial regime. *Multiscale Modeling & Simulation*, 12(3): 1309–1334, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2015:WNP

[GS15] Josselin Garnier and Knut Sølna. White-noise paraxial approximation for a general random hyperbolic system. *Multiscale Modeling & Simulation*, 13 (3):1022–1060, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gudino:2017:MBC

[GS17] Elías Gudiño and Adélia Sequeira. Multiscale boundary conditions for drug dissolution applied to coronary stents. *Multiscale Modeling & Simulation*, 15(4):1748–1767, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gailus:2018:DTS

[GS18] Siragan Gailus and Konstantinos Spiliopoulos. Discrete-time statistical inference for multiscale diffusions. *Multiscale Modeling & Simulation*, 16(4):1824–1858, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Garnier:2023:SME

[GS23] Josselin Garnier and Knut Sølna. Speckle memory effect in the frequency domain and stability in time-reversal experiments. *Multiscale Modeling & Simulation*, 21(1):80–118, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1470414`.

Goel:2006:HCC

[GSF06] Pranay Goel, James Sneyd, and Avner Friedman. Homogenization of the cell cytoplasm: The calcium bidomain equations. *Multiscale Modeling & Simulation*, 5(4):1045–1062, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Goel:2009:MME

[GSF09] Pranay Goel, Arthur Sherman, and Avner Friedman. Multiscale modeling of electrical and intracellular activity in the pancreas: The islet tridomain equations. *Multiscale Modeling & Simulation*, 7(4):1609–1642, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gallistl:2021:MFE

[GSS21] Dietmar Gallistl, Timo Sprekeler, and Endre Süli. Mixed finite element approximation of periodic Hamilton–Jacobi–Bellman problems with application to numerical homogenization. *Multiscale Modeling & Simulation*, 19(2):1041–1065, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gong:2014:IRM

[GST14] Zheng Gong, Zuowei Shen, and Kim-Chuan Toh. Image restoration with mixed or unknown noises. *Multiscale Modeling & Simulation*, 12(2):458–487, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gurevich:2017:RSD

[GT17] Pavel Gurevich and Sergey Tikhomirov. Rattling in spatially discrete diffusion equations with hysteresis. *Multiscale*

Modeling & Simulation, 15(3): 1176–1197, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ganesh:2018:SAA

[GT18] M. Ganesh and T. Thompson. A spectrally accurate algorithm and analysis for a Ginzburg–Landau model on superconducting surfaces. *Multiscale Modeling & Simulation*, 16(1):78–105, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gaone:2021:HFH

[GTY21] Joseph M. Gaone, Burt S. Tilley, and Vadim V. Yakovlev. High-frequency homogenization for electromagnetic heating of periodic media. *Multiscale Modeling & Simulation*, 19(3):1285–1309, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Guillet:2024:SIP

[Gui24] C. Guillet. Semi-implicit particle-in-cell methods embedding sparse grid reconstructions. *Multiscale Modeling & Simulation*, 22(2):891–924, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1579340`.

Goudon:2019:SST

[GV19] Thierry Goudon and Alexis F. Vasseur. Statistical stability for transport in random media. *Multiscale Modeling & Simulation*, 17(1):507–530, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Golowich:2005:SRM

[GW05] S. E. Golowich and M. I. Weinstein. Scattering resonances of microstructures and homogenization theory. *Multiscale Modeling & Simulation*, 3(3): 477–521, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60085`.

Gu:2006:CMM

[GZ06] Y. T. Gu and L. C. Zhang. A concurrent multiscale method based on the meshfree method and molecular dynamics analysis. *Multiscale Modeling & Simulation*, 5(4):1128–1155, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Gunzburger:2010:QRT

[GZ10] Max Gunzburger and Yanzhi Zhang. A quadrature-rule type approximation to the quasi-continuum method. *Multiscale Modeling & Simulation*, 8(2): 571–590, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Haddad:2007:TSM

[Had07] A. Haddad. Texture separation $BV - G$ and $BV - L^1$ models. *Multiscale Modeling & Simulation*, 6(1):273–286, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hassen:2005:AFV

[HB05] M. F. Ben Hassen and E. Bonnetier. Asymptotic formulas for the voltage potential in a composite medium containing close or touching disks of small diameter. *Multiscale Modeling & Simulation*, 4(1): 250–277, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60208`.

Huang:2014:GRM

[HC14] Jizu Huang and Liqun Cao. Global regularity and multiscale approach for thermal radiation heat transfer. *Multiscale Modeling & Simulation*, 12(2):694–724, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Huang:2023:MLM

[HCC+23] Juntao Huang, Yingda Cheng, Andrew J. Christlieb, Luke F. Roberts, and Wen-An Yong. Machine learning moment closure models for the radiative transfer equation II: Enforcing global hyperbolicity in gradient-based closures. *Multiscale Modeling & Simulation*, 21(2):489–512, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1423956`.

Huang:2012:MDC

[HCY12] Jizu Huang, Liqun Cao, and Sam Yang. A molecular dynamics-continuum coupled model for heat transfer in composite materials. *Multiscale Modeling & Simulation*, 10(4): 1292–1316, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Horenko:2006:AMR

[HDFS06] Illia Horenko, Evelyn Dittmer, Alexander Fischer, and Christof Schütte. Automated model reduction for complex systems exhibiting metastability. *Multiscale Modeling & Simulation*, 5 (3):802–827, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hyon:2008:EMC

[HDL08] YunKyong Hyon, Qiang Du, and Chun Liu. An enhanced macroscopic closure approximation to the micro-macro FENE model for polymeric materials. *Multiscale Modeling & Simulation*, 7(2):978–1002, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Heitzinger:2021:HBL

[HE21] Clemens Heitzinger and José A. Morales E. Homogenization of boundary layers in the Boltzmann–Poisson system. *Multiscale Modeling & Simulation*, 19(1):506–532, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hayes:2005:PDN

[HFOC05] Robin L. Hayes, Matt Fago, Michael Ortiz, and Emily A. Carter. Prediction of dislocation nucleation during nanoindentation by the orbital-free density functional theory local quasi-continuum method. *Multiscale Modeling & Simulation*, 4(2): 359–389, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61586`. See erratum [HFOC08].

Hayes:2008:EPD

[HFOC08] Robin L. Hayes, Matthew Fago, Michael Ortiz, and Emily A. Carter. Erratum: Prediction of dislocation nucleation during nanoindentation by the orbital-free density functional theory local quasi-continuum method. *Multiscale Modeling & Simulation*, 7(2):1003, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See [HFOC05].

Helmers:2013:IDD

[HH13] Michael Helmers and Michael Herrmann. Interface dynamics in discrete forward-backward diffusion equations. *Multiscale Modeling & Simulation*, 11(4): 1261–1297, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Heningburg:2021:HFV

[HH21] Vincent Heningburg and Cory D. Hauck. A hybrid finite-volume, discontinuous Galerkin discretization for the radiative transport equation. *Multiscale Modeling & Simulation*, 19(1): 1–24, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2023:PSF

[HH23] Thomas Y. Hou and De Huang. Potential singularity formation of incompressible axisymmetric Euler equations with degenerate viscosity coefficients. *Multiscale Modeling & Simulation*, 21(1): 218–268, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1470906`.

Hellander:2012:CMM

[HHL12] Andreas Hellander, Stefan Hellander, and Per Lötstedt. Coupled mesoscopic and microscopic simulation of stochastic reaction–diffusion processes in mixed dimensions. *Multiscale*

Modeling & Simulation, 10(2): 585–611, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2018:AFS

[HHLZ18] Thomas Y. Hou, De Huang, Ka Chun Lam, and PengChuan Zhang. An adaptive fast solver for a general class of positive definite matrices via energy decomposition. *Multiscale Modeling & Simulation*, 16(2):615–678, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2019:FHP

[HHLZ19] Thomas Y. Hou, De Huang, Ka Chun Lam, and Ziyun Zhang. A fast hierarchically preconditioned eigensolver based on multiresolution matrix decomposition. *Multiscale Modeling & Simulation*, 17(1):260–306, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hyman:2018:IBT

[HHO+18] Jeffrey D. Hyman, Aric Hagberg, Dave Osthus, Shriram Srinivasan, Hari Viswanathan, and Gowri Srinivasan. Identifying backbones in three-dimensional discrete fracture networks: a bipartite graph-based approach. *Multiscale Modeling & Simulation*, 16(4): 1948–1968, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hoefer:2012:DSD

[HI12] M. A. Hoefer and B. Ilan. Dark solitons, dispersive shock waves, and transverse instabilities. *Multiscale Modeling & Simulation*, 10(2):306–341, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Huang:2008:NSN

[HJMS08] Zhongyi Huang, Shi Jin, Peter A. Markowich, and Christof Sparber. Numerical simulation of the nonlinear Schrödinger equation with multidimensional periodic potentials. *Multiscale Modeling & Simulation*, 7(2): 539–564, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Haberland:2024:RVE

[HJN+24] Sabine Haberland, Patrick Jaap, Stefan Neukamm, Oliver Sander, and Mario Varga. Representative volume element approximations in elastoplastic spring networks. *Multiscale Modeling & Simulation*, 22(1): 588–638, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hausser:2007:SFM

[HJV07] Frank Haußer, Michel E. Jabbour, and Axel Voigt. A step-flow model for the heteroepitaxial growth of strained, substitu-

tional, binary alloy films with phase segregation: I. Theory. *Multiscale Modeling & Simulation*, 6(1):158–189, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hu:2024:QAM

[HJZ24] Junpeng Hu, Shi Jin, and Lei Zhang. Quantum algorithms for multiscale partial differential equations. *Multiscale Modeling & Simulation*, 22(3):1030–1067, September 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1566340`.

Hou:2005:SSM

[HK05] Thomas Hou and Petros Koumoutsakos. Special section on multiscale modeling in materials and life sciences. *Multiscale Modeling & Simulation*, 4(1):213–214, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/97418`.

Horenko:2008:AGR

[HKDS08] Illia Horenko, Rupert Klein, Stamen Dolaptchiev, and Christof Schütte. Automated generation of reduced stochastic weather models I: Simultaneous dimension and model reduction for time series analysis. *Multiscale Modeling & Simulation*, 6(4):1125–1145, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hamzi:2005:CCD

[HKK05] Boumediene Hamzi, Wei Kang, and Arthur J. Krener. The controlled center dynamics. *Multiscale Modeling & Simulation*, 3(4):838–852, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60313`.

Hong:2020:PRC

[HKLW20] Qingguo Hong, Johannes Kraus, Maria Lymbery, and Mary F. Wheeler. Parameter-robust convergence analysis of fixed-stress split iterative method for multiple-permeability poroelasticity systems. *Multiscale Modeling & Simulation*, 18(2):916–941, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hargreaves:2018:CNC

[HKP+18] Jessica K. Hargreaves, Marina I. Knight, Jon W. Pitchford, Rachael J. Oakenfull, and Seth J. Davis. Clustering nonstationary circadian rhythms using locally stationary wavelet representations. *Multiscale Modeling & Simulation*, 16(1):184–214, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Heida:2020:FHM

[HKP20] Martin Heida, Ralf Kornhuber, and Joscha Podlesny. Fractal homogenization of multiscale interface problems. *Multiscale Modeling & Simulation*, 18(1): 294–314, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Henshaw:2003:NEI

[HKY03] William D. Henshaw, Heinz-Otto Kreiss, and Jacob Yström. Numerical experiments on the interaction between the large- and small-scale motions of the Navier–Stokes equations. *Multiscale Modeling & Simulation*, 1(1):119–149, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40624`.

Hauck:2009:TRE

[HL09] Cory D. Hauck and Robert B. Lowrie. Temporal regularization of the P_N equations. *Multiscale Modeling & Simulation*, 7 (4):1497–1524, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hellander:2010:IAT

[HL10a] Andreas Hellander and Per Lötstedt. Incorporating active transport of cellular cargo in stochastic mesoscopic models of living cells. *Multiscale Modeling & Simulation*, 8(5):1691–1714, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1691_s1`.

Huang:2010:TSM

[HL10b] Kai Huang and Peijun Li. A two-scale multiple scattering problem. *Multiscale Modeling & Simulation*, 8(4):1511–1534, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hu:2017:EMP

[HL17] Qiya Hu and Xuan Li. Efficient multilevel preconditioners for three-dimensional plane wave Helmholtz systems with large wave numbers. *Multiscale Modeling & Simulation*, 15(3): 1242–1266, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hudson:2020:CGO

[HL20] Thomas Hudson and Xingjie H. Li. Coarse-graining of overdamped Langevin dynamics via the Mori–Zwanzig formalism. *Multiscale Modeling & Simulation*, 18(2):1113–1135, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Han:2023:NNA

[HL23] Jihun Han and Yoonsang Lee. A neural network approach for

homogenization of multiscale problems. *Multiscale Modeling & Simulation*, 21(2):716–734, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1500903`.

Hudson:2024:DPC

[HL24] Thomas Hudson and Xingjie Helen Li. Dynamical properties of coarse-grained linear SDEs. *Multiscale Modeling & Simulation*, 22(1):406–435, February 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Heida:2024:HPI

[HLL24] Martin Heida, Manuel Landstorfer, and Matthias Liero. Homogenization of a porous intercalation electrode with phase separation. *Multiscale Modeling & Simulation*, 22(3):1068–1096, September 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1466189`.

Hou:2017:ELL

[HLZ17a] Thomas Y. Hou, Qin Li, and Pengchuan Zhang. Exploring the locally low dimensional structure in solving random elliptic PDEs. *Multiscale Modeling & Simulation*, 15(2):661–695, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2017:SDL

[HLZ17b] Thomas Y. Hou, Qin Li, and Pengchuan Zhang. A sparse decomposition of low rank symmetric positive semidefinite matrices. *Multiscale Modeling & Simulation*, 15(1):410–444, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Harlim:2013:TMF

[HM13a] John Harlim and Andrew J. Majda. Test models for filtering with superparameterization. *Multiscale Modeling & Simulation*, 11(1):282–308, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hauck:2013:CBH

[HM13b] Cory D. Hauck and Ryan G. McClarren. A collision-based hybrid method for time-dependent, linear, kinetic transport equations. *Multiscale Modeling & Simulation*, 11(4):1197–1227, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hellman:2017:CIL

[HM17] Fredrik Hellman and Axel Målqvist. Contrast independent localization of multiscale problems. *Multiscale Modeling & Simulation*, 15(4):1325–1355, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hellman:2019:NHE

[HM19] Fredrik Hellman and Axel Målqvist. Numerical homogenization of elliptic PDEs with similar coefficients. *Multiscale Modeling & Simulation*, 17(2): 650–674, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hirn:2017:WSR

[HMP17] Matthew Hirn, Stéphane Mallat, and Nicolas Poilvert. Wavelet scattering regression of quantum chemical energies. *Multiscale Modeling & Simulation*, 15(2):827–863, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hu:2014:DIA

[HMS14] Guanghui Hu, Andrea Mantile, and Mourad Sini. Direct and inverse acoustic scattering by a collection of extended and point-like scatterers. *Multiscale Modeling & Simulation*, 12(3): 996–1027, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hochbruck:2019:HMM

[HMS19] Marlis Hochbruck, Bernhard Maier, and Christian Stohrer. Heterogeneous multiscale method for Maxwell's equations. *Multiscale Modeling & Simulation*, 17 (4):1147–1171, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hesse:2008:CMF

[HMT08] Marc A. Hesse, Bradley T. Mallison, and Hamdi A. Tchelepi. Compact multiscale finite volume method for heterogeneous anisotropic elliptic equations. *Multiscale Modeling & Simulation*, 7(2):934–962, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2019:MRM

[HMZ19] Thomas Y. Hou, Dingjiong Ma, and Zhiwen Zhang. A model reduction method for multiscale elliptic pdes with random coefficients using an optimization approach. *Multiscale Modeling & Simulation*, 17(2):826–853, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Herrmann:2012:KNK

[HNV12] Michael Herrmann, Barbara Niethammer, and Juan J. L. Velázquez. Kramers and non-Kramers phase transitions in many-particle systems with dynamical constraint. *Multiscale Modeling & Simulation*, 10(3): 818–852, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Huang:2008:FTV

[HNW08] Yumei Huang, Michael K. Ng, and You-Wei Wen. A fast total

variation minimization method for image restoration. *Multiscale Modeling & Simulation*, 7 (2):774–795, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hoang:2009:SFE

[Hoa09] Viet Ha Hoang. Sparse finite element method for periodic multiscale nonlinear monotone problems. *Multiscale Modeling & Simulation*, 7(3):1042–1072, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hodapp:2021:AST

[Hod21] Max Hodapp. Analysis of a Sinclair-type domain decomposition solver for atomistic/continuum coupling. *Multiscale Modeling & Simulation*, 19(4): 1499–1537, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Horenko:2011:ANC

[Hor11] Illia Horenko. On analysis of nonstationary categorical data time series: Dynamical dimension reduction, model selection, and applications to computational sociology. *Multiscale Modeling & Simulation*, 9(4):1700–1726, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1700_s1`.

Henning:2014:AMF

[HOS14] Patrick Henning, Mario Ohlberger, and Ben Schweizer. An adaptive multiscale finite element method. *Multiscale Modeling & Simulation*, 12(3):1078–1107, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Henning:2013:OMF

[HP13] Patrick Henning and Daniel Peterseim. Oversampling for the multiscale finite element method. *Multiscale Modeling & Simulation*, 11(4):1149–1175, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Harouna:2015:DFW

[HP15] Souleymane Kadri Harouna and Valérie Perrier. Divergence-free wavelet projection method for incompressible viscous flow on the square. *Multiscale Modeling & Simulation*, 13(1):399–422, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hauck:2022:MRL

[HP22] Moritz Hauck and Daniel Peterseim. Multi-resolution localized orthogonal decomposition for Helmholtz problems. *Multiscale Modeling & Simulation*, 20(2): 657–684, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

URL https://epubs.siam.org/doi/10.1137/21M1414607.

Henning:2023:OCR

[HP23] Patrick Henning and Anna Persson. On optimal convergence rates for discrete minimizers of the Gross–Pitaevskii energy in localized orthogonal decomposition spaces. *Multiscale Modeling & Simulation*, 21(3):993–1011, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/22M1516300.

Hao:2009:FCI

[HPČ+09] Jian Hao, Tsorng-Whay Pan, Sunčica Čanić, Roland Glowinski, and Doreen Rosenstrauch. A fluid-cell interaction and adhesion algorithm for tissue coating of cardiovascular implants. *Multiscale Modeling & Simulation*, 7(4):1669–1694, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Harder:2015:MHM

[HPV15] Christopher Harder, Diego Paredes, and Frédéric Valentin. On a multiscale hybrid-mixed method for advective-reactive dominated problems with heterogeneous coefficients. *Multiscale Modeling & Simulation*, 13 (2):491–518, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hoang:2005:HDF

[HS05] Viet Ha Hoang and Christoph Schwab. High-dimensional finite elements for elliptic problems with multiple scales. *Multiscale Modeling & Simulation*, 3(1): 168–194, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/60107.

Horenko:2008:LBE

[HS08] Illia Horenko and Christof Schütte. Likelihood-based estimation of multidimensional Langevin models and its application to biomolecular dynamics. *Multiscale Modeling & Simulation*, 7(2):731–773, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Horenko:2010:MCA

[HS10] Illia Horenko and Christof Schütte. On metastable conformational analysis of nonequilibrium biomolecular time series. *Multiscale Modeling & Simulation*, 8(2):701–716, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Holcman:2012:BMD

[HS12] D. Holcman and Z. Schuss. Brownian motion in dire straits. *Multiscale Modeling & Simulation*, 10(4):1204–1231, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Holcman:2014:OSP

[HS14] D. Holcman and Z. Schuss. Oscillatory survival probability and eigenvalues of the non-self-adjoint Fokker–Planck operator. *Multiscale Modeling & Simulation*, 12(3):1294–1308, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hu:2019:SOA

[HS19] Jingwei Hu and Ruiwen Shu. A second-order asymptotic-preserving and positivity-preserving exponential Runge–Kutta method for a class of stiff kinetic equations. *Multiscale Modeling & Simulation*, 17(4):1123–1146, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hameedi:2023:RDE

[HSW23] Sameh N. Hameedi, Amir Sagiv, and Michael I. Weinstein. Radiative decay of edge states in Floquet media. *Multiscale Modeling & Simulation*, 21(3): 925–963, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1474552`.

Helzel:2017:KMS

[HT17] Christiane Helzel and Athanasios E. Tzavaras. A kinetic model for the sedimentation of rod-like particles. *Multiscale Modeling & Simulation*, 15(1): 500–536, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Heroy:2018:RGC

[HTS+18] Samuel Heroy, Dane Taylor, F. Bill Shi, M. Gregory Forest, and Peter J. Mucha. Rigid graph compression: Motif-based rigidity analysis for disordered fiber networks. *Multiscale Modeling & Simulation*, 16(3):1283–1304, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Heroy:2022:RPD

[HTS+22] Samuel Heroy, Dane Taylor, Feng Shi, M. Gregory Forest, and Peter J. Mucha. Rigidity percolation in disordered 3D rod systems. *Multiscale Modeling & Simulation*, 20(1):250–281, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1401206`.

Hutter:2003:SCS

[Hüt03] Markus Hütter. Solidification in closed systems: Cluster size distribution and its driving force. *Multiscale Modeling & Simulation*, 1(3):371–390, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41610`.

Hartmann:2010:BTL

[HVS10] Carsten Hartmann, Valentina-Mira Vulcanov, and Christof Schütte. Balanced truncation of linear second-order systems: a Hamiltonian approach. *Multiscale Modeling & Simulation*, 8 (4):1348–1367, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Henn:2005:IRB

[HW05] Stefan Henn and Kristian Witsch. Image registration based on multiscale energy information. *Multiscale Modeling & Simulation*, 4(2):584–609, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60419`.

Hu:2013:CPA

[HWW+13] Xiaozhe Hu, Shuhong Wu, Xiao-Hui Wu, Jinchao Xu, Chen-Song Zhang, Shiquan Zhang, and Ludmil Zikatanov. Combined preconditioning with applications in reservoir simulation. *Multiscale Modeling & Simulation*, 11(2):507–521, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2006:FMS

[HWY06] Thomas Y. Hou, Andrew Westhead, and Danping Yang. A framework for modeling subgrid effects for two-phase flows in porous media. *Multiscale Modeling & Simulation*, 5(4):1087–1127, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Han:2021:MAT

[HWZ21] Huan Han, Zhengping Wang, and Yimin Zhang. MultiScale approach for two-dimensional diffeomorphic image registration. *Multiscale Modeling & Simulation*, 19(4):1538–1572, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hou:2008:MAC

[HYR08] Thomas Y. Hou, Danping Yang, and Hongyu Ran. Multiscale analysis and computation for the three-dimensional incompressible Navier–Stokes equations. *Multiscale Modeling & Simulation*, 6(4):1317–1346, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hesthaven:2014:HOM

[HZZ14] Jan S. Hesthaven, Shun Zhang, and Xueyu Zhu. High-order multiscale finite element method for elliptic problems. *Multiscale Modeling & Simulation*, 12(2):650–666, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Hesthaven:2015:RBM

[HZZ15] Jan S. Hesthaven, Shun Zhang, and Xueyu Zhu. Reduced basis

multiscale finite element methods for elliptic problems. *Multiscale Modeling & Simulation*, 13(1):316–337, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Intep:2009:SDM

[IHM09] Somkid Intep, Desmond J. Higham, and Xuerong Mao. Switching and diffusion models for gene regulation networks. *Multiscale Modeling & Simulation*, 8(1):30–45, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Iliev:2011:VMF

[ILW11] O. Iliev, R. Lazarov, and J. Willems. Variational multiscale finite element method for flows in highly porous media. *Multiscale Modeling & Simulation*, 9(4):1350–1372, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1350_s1`.

Iliev:2008:UCF

[IMP08] Oleg Iliev, Andro Mikelić, and Peter Popov. On upscaling certain flows in deformable porous media. *Multiscale Modeling & Simulation*, 7(1):93–123, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ilan:2010:BES

[IW10] B. Ilan and M. I. Weinstein. Band-edge solitons, nonlinear Schrödinger/Gross–Pitaevskii equations, and effective media. *Multiscale Modeling & Simulation*, 8(4):1055–1101, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Iyaniwura:2021:SOM

[IWWM21] Sarafa Iyaniwura, Tony Wong, Michael J. Ward, and Colin B. Macdonald. Simulation and optimization of mean first passage time problems in 2-D using numerical embedded methods and perturbation theory. *Multiscale Modeling & Simulation*, 19(3): 1367–1393, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Iyer:2012:NSH

[IZ12] Gautam Iyer and Konstantinos C. Zygalakis. Numerical studies of homogenization under a fast cellular flow. *Multiscale Modeling & Simulation*, 10 (3):1046–1058, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jahnke:2011:RMC

[Jah11] Tobias Jahnke. On reduced models for the chemical master equation. *Multiscale Modeling & Simulation*, 9(4):1646–1676, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print),

1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1646_s1`.

Joseph:2013:ARB

[JC13] L. M. Joseph and R. V. Craster. Asymptotics for Rayleigh–Bloch waves along lattice line defects. *Multiscale Modeling & Simulation*, 11(3):871–889, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jiang:2012:EMM

[JCM12] L. Jiang, D. Copeland, and J. D. Moulton. Expanded mixed multiscale finite element methods and their applications for flows in porous media. *Multiscale Modeling & Simulation*, 10(2): 418–450, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jankovic:2003:ECI

[JFD03] Igor Jankovic, Aldo Fiori, and Gedeon Dagan. Effective conductivity of an isotropic heterogeneous medium of lognormal conductivity distribution. *Multiscale Modeling & Simulation*, 1 (1):40–56, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40963`.

Jefferis:2015:GBM

[JJ15] Leland Jefferis and Shi Jin. A Gaussian beam method for high frequency solution of symmetric hyperbolic systems with polarized waves. *Multiscale Modeling & Simulation*, 13(3):733–765, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jahnke:2012:EBP

[JK12] Tobias Jahnke and Michael Kreim. Error bound for piecewise deterministic processes modeling stochastic reaction systems. *Multiscale Modeling & Simulation*, 10(4):1119–1147, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jia:2005:PTD

[JL05a] Zhidong Jia and Benedict J. Leimkuhler. A projective thermostatting dynamics technique. *Multiscale Modeling & Simulation*, 4(2):563–583, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60386`.

Jonsson:2005:ESM

[JL05b] Henrik Jönsson and Andre Levchenko. An explicit spatial model of yeast microcolony growth. *Multiscale Modeling & Simulation*, 3(2):346–361, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60325`.

Jin:2017:APS

[JL17] Shi Jin and Liu Liu. An asymptotic-preserving stochastic Galerkin method for the semiconductor Boltzmann equation with random inputs and diffusive scalings. *Multiscale Modeling & Simulation*, 15(1): 157–183, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jin:2022:HON

[JL22] Zeyu Jin and Ruo Li. High-order numerical homogenization for dissipative ordinary differential equations. *Multiscale Modeling & Simulation*, 20(2): 583–617, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1397003`.

Jin:2018:HOS

[JLP18] Shi Jin, Hanqing Lu, and Lorenzo Pareschi. A high order stochastic asymptotic preserving scheme for chemotaxis kinetic models with random inputs. *Multiscale Modeling & Simulation*, 16(4):1884–1915, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jin:2022:RBM

[JLS22] Shi Jin, Lei Li, and Yiqun Sun. On the random batch method for second order interacting particle systems. *Multiscale Modeling & Simulation*, 20(2):741–768, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1383069`.

Jenny:2004:AMF

[JLT04] P. Jenny, S. H. Lee, and H. A. Tchelepi. Adaptive multiscale finite-volume method for multiphase flow and transport in porous media. *Multiscale Modeling & Simulation*, 3(1):50–64, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60079`.

Jiang:2016:SOT

[JLW16] Yuchen Jiang, Ruo Li, and Shuonan Wu. A second order time homogenized model for sediment transport. *Multiscale Modeling & Simulation*, 14(3): 965–996, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jiang:2022:OMM

[JLZ22] Lijian Jiang, Mengnan Li, and Meng Zhao. Online multiscale model reduction for nonlinear stochastic PDEs with multiplicative noise. *Multiscale Modeling & Simulation*, 20(3):1063–1092, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1439808`.

Jiang:2014:HHM

[JMW14] Lijian Jiang, J. David Moulton, and Jia Wei. A hybrid HDMR for mixed multiscale finite element methods with application to flows in random porous media. *Multiscale Modeling & Simulation*, 12(1):119–151, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jin:2006:STM

[JN06] Shi Jin and Kyle A. Novak. A semiclassical transport model for thin quantum barriers. *Multiscale Modeling & Simulation*, 5(4):1063–1086, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jiang:2018:BIU

[JO18] Lijian Jiang and Na Ou. Bayesian inference using intermediate distribution based on coarse multiscale model for time fractional diffusion equations. *Multiscale Modeling & Simulation*, 16(1):327–355, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jiang:2012:RST

[JP12] L. Jiang and M. Presho. A resourceful splitting technique with applications to deterministic and stochastic multiscale finite element methods. *Multiscale Modeling & Simulation*, 10 (3):954–985, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jin:2011:ESH

[JQZ11] Shi Jin, Peng Qi, and Zhiwen Zhang. An Eulerian surface hopping method for the Schrödinger equation with conical crossings. *Multiscale Modeling & Simulation*, 9(1):258–281, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p258_s1`.

Jarman:2003:EME

[JR03] Kenneth D. Jarman and Thomas F. Russell. Eulerian moment equations for 2-D stochastic immiscible flow. *Multiscale Modeling & Simulation*, 1(4):598–608, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41317`.

Jiang:2017:EHO

[JRX17] Shidong Jiang, Manas Rachh, and Yang Xiang. An efficient high order method for dislocation climb in two dimensions. *Multiscale Modeling & Simulation*, 15(1):235–253, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jabin:2010:CBN

[JS10] Pierre-Emmanuel Jabin and Juan Soler. A coupled Boltz-

mann and Navier–Stokes fragmentation model induced by a fluid-particle-spring interaction. *Multiscale Modeling & Simulation*, 8(4):1244–1268, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Joubaud:2012:NSV

[JS12] Rémi Joubaud and Gabriel Stoltz. Nonequilibrium shear viscosity computations with Langevin dynamics. *Multiscale Modeling & Simulation*, 10(1): 191–216, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [JS13].

Joubaud:2013:ENS

[JS13] Rémi Joubaud and Gabriel Stoltz. Erratum: Nonequilibrium shear viscosity computations with Langevin dynamics. *Multiscale Modeling & Simulation*, 11(1):411–414, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See [JS12].

Ji:2018:DGF

[JSZ18] Hui Ji, Zuowei Shen, and Yufei Zhao. Digital Gabor filters with MRA structure. *Multiscale Modeling & Simulation*, 16 (1):452–476, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ji:2020:MDF

[JSZ20] Hui Ji, Zuowei Shen, and Yufei Zhao. Multiscale discrete framelet transform for graph-structured signals. *Multiscale Modeling & Simulation*, 18(3): 1210–1241, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Joly:2006:MAE

[JT06] Patrick Joly and Sébastien Tordeux. Matching of asymptotic expansions for wave propagation in media with thin slots I: The asymptotic expansion. *Multiscale Modeling & Simulation*, 5(1):304–336, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jaramillo:2021:MSB

[JV21] Gabriela Jaramillo and Shankar C. Venkataramani. A modified split Bregman algorithm for computing microstructures through Young measures. *Multiscale Modeling & Simulation*, 19(2):886–920, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jiang:2014:HQS

[JZ14] Xue Jiang and Weiying Zheng. Homogenization of quasi-static Maxwell's equations. *Multiscale Modeling & Simulation*, 12(1): 152–180, ???? 2014. CODEN MMSUBT. ISSN 1540-

3459 (print), 1540-3467 (electronic).

Jing:2023:PHE

[JZ23] Wenjia Jing and Yiping Zhang. On the periodic homogenization of elliptic equations in nondivergence form with large drifts. *Multiscale Modeling & Simulation*, 21(4):1486–1501, October 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Jia:2011:RMI

[JZZ11] Rong-Qing Jia, Hanqing Zhao, and Wei Zhao. Relaxation methods for image denoising based on difference schemes. *Multiscale Modeling & Simulation*, 9(1):355–372, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p355_s1`.

Kachanovska:2024:NCU

[Kac24] Maryna Kachanovska. A new class of uniformly stable time-domain Foldy–Lax models for scattering by small particles. Acoustic sound-soft scattering by circles. *Multiscale Modeling & Simulation*, 22(1):1–38, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Karagiannis:2005:NSS

[KAO05] D. Karagiannis, A. Astolfi, and R. Ortega. Nonlinear stabilization via system immersion and manifold invariance: Survey and new results. *Multiscale Modeling & Simulation*, 3(4): 801–817, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60318`.

Katsevich:2022:LES

[Kat22] Anya Katsevich. The local equilibrium state of a crystal surface jump process in the rough scaling regime. *Multiscale Modeling & Simulation*, 20(4):1315–1360, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1425499`.

Katsevich:2023:MCS

[Kat23] Anya Katsevich. Metropolis crystal surface dynamics in the rough scaling limit: From local equilibrium to semi-empirical PDE. *Multiscale Modeling & Simulation*, 21(1):309–348, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1500472`.

Koutsourelakis:2011:SBR

[KB11] Phaedon-Stelios Koutsourelakis and Elias Bilionis. Scalable Bayesian reduced-order models for simulating high-dimensional multiscale dynamical systems. *Multiscale Modeling & Simulation*, 9(1):449–485, ???? 2011. CODEN MM-

SUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p449_s1.

Korneev:2016:SHR

[KB16] Svyatoslav Korneev and Ilenia Battiato. Sequential homogenization of reactive transport in polydisperse porous media. *Multiscale Modeling & Simulation*, 14(4):1301–1318, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kervrann:2011:MNW

[KBP+11] Charles Kervrann, Jérôme Boulanger, Thierry Pécot, Patrick Pérez, and Jean Salamero. Multiscale neighborhood-wise decision fusion for redundancy detection in image pairs. *Multiscale Modeling & Simulation*, 9(4):1829–1865, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1829_s1.

Kim:2015:BAE

[KC15] Hyea Hyun Kim and Eric T. Chung. A BDDC algorithm with enriched coarse spaces for two-dimensional elliptic problems with oscillatory and high contrast coefficients. *Multiscale Modeling & Simulation*, 13(2): 571–593, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Koren:2003:DHG

[KCH03] Yehuda Koren, Liran Carmel, and David Harel. Drawing huge graphs by algebraic multigrid optimization. *Multiscale Modeling & Simulation*, 1(4): 645–673, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/41370.

Khristenko:2020:SFG

[KCL+20] Ustim Khristenko, Andrei Constantinescu, Patrick Le Tallec, J. Tinsley Oden, and Barbara Wohlmuth. A statistical framework for generating microstructures of two-phase random materials: Application to fatigue analysis. *Multiscale Modeling & Simulation*, 18(1):21–43, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kazantzis:2005:SCI

[KD05] Nikolaos Kazantzis and Michael A. Demetriou. Singular control-invariance PDEs for nonlinear systems. *Multiscale Modeling & Simulation*, 3(4):731–748, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/60321.

Ketcheson:2015:DSW

[KdL15] David I. Ketcheson and Manuel Quezada de Luna. Diffractons: Solitary waves created by diffraction in periodic media. *Multiscale Modeling & Simulation*, 13(1):440–458, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kazimer:2024:RET

[KDMT24] Jeremy Kazimer, Manlio De Domenico, Peter J. Mucha, and Dane Taylor. Ranking edges by their impact on the spectral complexity of information diffusion over networks. *Multiscale Modeling & Simulation*, 22(3):925–955, September 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M153135X`.

Kalmoun:2013:TRV

[KG13] El Mostafa Kalmoun and Luis Garrido. Trust region versus line search for computing the optical flow. *Multiscale Modeling & Simulation*, 11(3):890–906, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kaiser:2015:SRA

[KIH15] Olga Kaiser, Dimitri Igdalov, and Illia Horenko. Statistical regression analysis of threshold excesses with systematically missing covariates. *Multiscale Modeling & Simulation*, 13(2):594–613, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Karvounis:2016:AHF

[KJ16] D. C. Karvounis and P. Jenny. Adaptive hierarchical fracture model for enhanced geothermal systems. *Multiscale Modeling & Simulation*, 14(1):207–231, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Klosek:2005:MAS

[KK05] M. M. Klosek and R. Kuske. Multiscale analysis of stochastic delay differential equations. *Multiscale Modeling & Simulation*, 3(3):706–729, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60137`.

Kim:2014:TCF

[KK14] Changho Kim and George Em Karniadakis. Time correlation functions of Brownian motion and evaluation of friction coefficient in the near-Brownian-limit regime. *Multiscale Modeling & Simulation*, 12(1):225–248, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kao:2022:SLC

[KLX22] Chou Kao, Yu-Yu Liu, and Jack Xin. A semi-Lagrangian computation of front speeds of

G-equation in ABC and Kolmogorov flows with estimation via ballistic orbits. *Multiscale Modeling & Simulation*, 20(1): 107–117, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/20M1387699.

Khoo:2021:ECT

[KLY21] Yuehaw Khoo, Jianfeng Lu, and Lexing Ying. Efficient construction of tensor ring representations from sampling. *Multiscale Modeling & Simulation*, 19(3): 1261–1284, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kim:2011:DPL

[KM11] Arnold D. Kim and Miguel Moscoso. Diffusion of polarized light. *Multiscale Modeling & Simulation*, 9(4):1624–1645, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1624_s1.

Keller:2018:SBD

[KMOW18] R. T. Keller, J. L. Marzuola, B. Osting, and M. I. Weinstein. Spectral band degeneracies of $\frac{\pi}{2}$-rotationally invariant periodic Schrödinger operators. *Multiscale Modeling & Simulation*, 16(4):1684–1731, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [KMOW20].

Keller:2020:ESB

[KMOW20] Rachael T. Keller, Jeremy L. Marzuola, Braxton Osting, and Michael I. Weinstein. Erratum: Spectral Band Degeneracies of $\frac{\pi}{2}$-Rotationally Invariant Periodic Schrödinger Operators. *Multiscale Modeling & Simulation*, 18(3):1371–1373, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See [KMOW18].

Krpfl:2023:NNA

[KMP23] Fabian Kröpfl, Roland Maier, and Daniel Peterseim. Neural network approximation of coarse-scale surrogates in numerical homogenization. *Multiscale Modeling & Simulation*, 21(4):1457–1485, October 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Knight:2006:IPH

[KN06] Marina I. Knight and Guy P. Nason. Improving prediction of hydrophobic segments along a transmembrane protein sequence using adaptive multiscale lifting. *Multiscale Modeling & Simulation*, 5(1):116–129, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Komorowski:2014:HDF

[KNR14] Tomasz Komorowski, Alexei Novikov, and Lenya Ryzhik. Homogenization driven by a fractional Brownian motion: The shear layer case. *Multiscale Modeling & Simulation*, 12 (2):440–457, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Klika:2024:CSD

[KÖ24] Václav Klika and Hans Christian Öttinger. On the compatibility of sharp and diffuse interfaces out of equilibrium. *Multiscale Modeling & Simulation*, 22(1):369–405, February 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kindermann:2005:DDI

[KOJ05] Stefan Kindermann, Stanley Osher, and Peter W. Jones. Deblurring and denoising of images by nonlocal functionals. *Multiscale Modeling & Simulation*, 4(4):1091–1115, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62224`.

Kazeev:2022:QTF

[KORS22] Vladimir Kazeev, Ivan Oseledets, Maxim V. Rakhuba, and Christoph Schwab. Quantized tensor FEM for multiscale problems: Diffusion problems in two and three dimensions. *Multiscale Modeling & Simulation*, 20(3):893–935, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1341659`.

Krumscheid:2013:SDD

[KPK13] S. Krumscheid, G. A. Pavliotis, and S. Kalliadasis. Semiparametric drift and diffusion estimation for multiscale diffusions. *Multiscale Modeling & Simulation*, 11(2):442–473, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kissling:2015:CNS

[KR15] Frederike Kissling and Christian Rohde. The computation of nonclassical shock waves in porous media with a heterogeneous multiscale method: The multidimensional case. *Multiscale Modeling & Simulation*, 13 (4):1507–1541, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kim:2017:RSB

[KRK17] Jae Kyoung Kim, Grzegorz A. Rempala, and Hye-Won Kang. Reduction for stochastic biochemical reaction networks with multiscale conservations. *Multiscale Modeling & Simulation*, 15 (4):1376–1403, ???? 2017. CODEN MMSUBT. ISSN 1540-

3459 (print), 1540-3467 (electronic).

Kohn:2008:MHM

[KS08a] Robert V. Kohn and Stephen P. Shipman. Magnetism and homogenization of microresonators. *Multiscale Modeling & Simulation*, 7(1):62–92, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kupferman:2008:OCC

[KS08b] Raz Kupferman and Yossi Shamai. Optimal choices of correlation operators in Brownian simulation methods. *Multiscale Modeling & Simulation*, 7(1):321–348, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Koltai:2018:MPE

[KS18] Péter Koltai and Christof Schütte. A multiscale perturbation expansion approach for Markov state modeling of nonstationary molecular dynamics. *Multiscale Modeling & Simulation*, 16(4):1455–1485, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kroger:2003:TMM

[KSH03] Martin Kröger, Igor Stankovic, and Siegfried Hess. Towards multiscale modeling of metals via embedded particle computer simulation. *Multiscale Modeling & Simulation*, 1(1): 25–39, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40847`.

Kostre:2021:CPB

[KSNdR21] Margarita Kostré, Christof Schütte, Frank Noé, and Mauricio J. del Razo. Coupling particle-based reaction–diffusion simulations with reservoirs mediated by reaction–diffusion PDEs. *Multiscale Modeling & Simulation*, 19(4):1659–1683, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Klar:2014:MMM

[KT14] A. Klar and S. Tiwari. A multiscale meshfree method for macroscopic approximations of interacting particle systems. *Multiscale Modeling & Simulation*, 12(3):1167–1192, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Koellermeier:2018:TDS

[KT18] Julian Koellermeier and Manuel Torrilhon. Two-dimensional simulation of rarefied gas flows using quadrature-based moment equations. *Multiscale Modeling & Simulation*, 16(2):1059–1084, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Klar:2019:MPM

[KT19] Axel Klar and Sudarshan Tiwari. A multiscale particle method for mean field equations: The general case. *Multiscale Modeling & Simulation*, 17(1):233–259, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Krishnamurthy:2009:CFT

[KTY09] Vikram Krishnamurthy, Kevin Topley, and George Yin. Consensus formation in a two-timescale Markovian system. *Multiscale Modeling & Simulation*, 7 (4):1898–1927, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kumar:2011:EDE

[KvNP11] K. Kumar, T. L. van Noorden, and I. S. Pop. Effective dispersion equations for reactive flows involving free boundaries at the microscale. *Multiscale Modeling & Simulation*, 9(1):29–58, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p29_s1`.

Kim:2005:TDN

[KX05] Yongsam Kim and Jack Xin. A two-dimensional nonlinear nonlocal feed-forward cochlear model and time domain computation of multitone interactions. *Multiscale Modeling & Simulation*, 4(2):664–690, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61246`.

Kornhuber:2016:NHE

[KY16] Ralf Kornhuber and Harry Yserentant. Numerical homogenization of elliptic multiscale problems by subspace decomposition. *Multiscale Modeling & Simulation*, 14(3):1017–1036, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Kim:2016:MCH

[KZ16] Seong Jun Kim and Haomin Zhou. A multiscale computation for highly oscillatory dynamical systems using Empirical Mode Decomposition (EMD)-type methods. *Multiscale Modeling & Simulation*, 14(1):534–557, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liang:2007:MWT

[LA07] X. San Liang and Donald G. M. Anderson. Multiscale window transform. *Multiscale Modeling & Simulation*, 6(2):437–467, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Luo:2009:LSM

[LAG09] Bin Luo, Jean-François Aujol, and Yann Gousseau. Local scale measure from the topographic

map and application to remote sensing images. *Multiscale Modeling & Simulation*, 8(1):1–29, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Levien:2016:SHF

[LB16] Ethan Levien and Paul C. Bressloff. A stochastic hybrid framework for obtaining statistics of many random walkers in a switching environment. *Multiscale Modeling & Simulation*, 14 (4):1417–1433, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Levien:2018:RSC

[LB18] Ethan Levien and Paul C. Bressloff. Robustness of stochastic chemical reaction networks to extrinsic noise: The role of deficiency. *Multiscale Modeling & Simulation*, 16(4): 1519–1541, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Leiva:2011:PAD

[LBB11] Jorge S. Leiva, Pablo J. Blanco, and Gustavo C. Buscaglia. Partitioned analysis for dimensionally-heterogeneous hydraulic networks. *Multiscale Modeling & Simulation*, 9(2):872–903, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p872_s1`.

Lien:2005:CAM

[LBM05] Martha Lien, Inga Berre, and Trond Mannseth. Combined adaptive multiscale and level-set parameter estimation. *Multiscale Modeling & Simulation*, 4 (4):1349–1372, ???? 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lindsay:2017:FPS

[LBW17] Alan E. Lindsay, Andrew J. Bernoff, and Michael J. Ward. First passage statistics for the capture of a Brownian particle by a structured spherical target with multiple surface traps. *Multiscale Modeling & Simulation*, 15(1):74–109, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2022:APM

[LCD+22] Beilei Liu, Huajie Chen, Geneviève Dusson, Jun Fang, and Xingyu Gao. An adaptive planewave method for electronic structure calculations. *Multiscale Modeling & Simulation*, 20(1):524–550, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1396241`.

Li:2019:CEM

[LCJ19] Mengnan Li, Eric Chung, and

Lijian Jiang. A constraint energy minimizing generalized multiscale finite element method for parabolic equations. *Multiscale Modeling & Simulation*, 17(3):996–1018, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2018:MAM

[LCZ18] Zhilin Li, Xiaohong Chen, and Zhengru Zhang. On multiscale ADI methods for parabolic PDEs with a discontinuous coefficient. *Multiscale Modeling & Simulation*, 16(4):1623–1647, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2021:INH

[LCZ21] Xinliang Liu, Eric Chung, and Lei Zhang. Iterated numerical homogenization for MultiScale elliptic equations with monotone nonlinearity. *Multiscale Modeling & Simulation*, 19(4): 1601–1632, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2022:DDP

[LCZ+22] Xi Liu, Zhenhua Chai, Chengjie Zhan, Baochang Shi, and Wenhuan Zhang. A diffuse-domain phase-field lattice Boltzmann method for two-phase flows in complex geometries. *Multiscale Modeling & Simulation*, 20(4): 1411–1436, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1475120`.

Li:2022:WBB

[LDZN22] Matthew Li, Laurent Demanet, and Leonardo Zepeda-Núñez. Wide-band butterfly network: Stable and efficient inversion via multi-frequency neural networks. *Multiscale Modeling & Simulation*, 20(4):1191–1227, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1383276`.

Li:2005:MIF

[LE05a] Maozhi Li and J. W. Evans. Modeling of island formation during submonolayer deposition: a stochastic geometry-based simulation approach. *Multiscale Modeling & Simulation*, 3(3):629–657, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60656`.

Liu:2005:ASO

[LE05b] Da-Jiang Liu and J. W. Evans. From atomic scale ordering to mesoscale spatial patterns in surface reactions: a heterogeneous coupled lattice-gas simulation approach. *Multiscale Modeling & Simulation*, 4(2): 424–446, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL

http://epubs.siam.org/sam-bin/dbq/article/60640.

Lotstedt:2006:DRF

[LF06] Per Lötstedt and Lars Ferm. Dimensional reduction of the Fokker–Planck equation for stochastic chemical reactions. *Multiscale Modeling & Simulation*, 5(2):593–614, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2021:MFT

[LFY21] Zhihan Li, Yuwei Fan, and Lexing Ying. Multilevel fine-tuning: Closing generalization gaps in approximation of solution maps under a limited budget for training data. *Multiscale Modeling & Simulation*, 19(1):344–373, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Locker:2006:MVG

[LH06] C. Rebecca Locker and Stephen C. Harvey. A model for viral genome packing. *Multiscale Modeling & Simulation*, 5(4):1264–1279, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lorenz:2011:HMS

[LH11] Eric Lorenz and Alfons G. Hoekstra. Heterogeneous multiscale simulations of suspension flow. *Multiscale Modeling & Simulation*, 9(4):1301–1326, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1301_s1.

Luo:2014:TFT

[LH14] Guo Luo and Thomas Y. Hou. Toward the finite-time blowup of the 3D axisymmetric Euler equations: a numerical investigation. *Multiscale Modeling & Simulation*, 12(4):1722–1776, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2021:PRT

[LHKT21] Yunjiao Lu, Pierre Hodara, Charles Kervrann, and Alain Trubuil. Probabilistic reconstruction of truncated particle trajectories on a closed surface. *Multiscale Modeling & Simulation*, 19(1):87–112, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2007:AET

[Li07] Tiejun Li. Analysis of explicit tau-leaping schemes for simulating chemically reacting systems. *Multiscale Modeling & Simulation*, 6(2):417–436, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2018:LRA

[Li18] Guanglian Li. Low-rank approximation to heterogeneous elliptic problems. *Multiscale Mod-*

eling & Simulation, 16(1):477–502, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2019:CRG

[Li19] Guanglian Li. On the convergence rates of GMsFEMs for heterogeneous elliptic problems without oversampling techniques. *Multiscale Modeling & Simulation*, 17(2):593–619, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2021:PTA

[Li21] Xingyu Li. Phase transition and asymptotic behavior of flocking Cucker–Smale model. *Multiscale Modeling & Simulation*, 19 (4):1760–1783, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2010:AMM

[Liu10] Di Liu. Analysis of multiscale methods for stochastic dynamical systems with multiple time scales. *Multiscale Modeling & Simulation*, 8(3):944–964, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lunati:2007:THA

[LJ07] Ivan Lunati and Patrick Jenny. Treating highly anisotropic subsurface flow with the multiscale finite-volume method. *Multiscale Modeling & Simulation*, 6 (1):308–318, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lipton:2017:CBG

[LJ17] Robert Lipton and Robert Viator Jr. Creating band gaps in periodic media. *Multiscale Modeling & Simulation*, 15(4):1612–1650, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2018:HBS

[LJ18] Liu Liu and Shi Jin. Hypocoercivity based sensitivity analysis and spectral convergence of the stochastic Galerkin approximation to collisional kinetic equations with multiple scales and random inputs. *Multiscale Modeling & Simulation*, 16(3):1085–1114, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2003:DNC

[LKGK03] Ju Li, Panayotis G. Kevrekidis, C. William Gear, and Ioannis G. Kevrekidis. Deciding the nature of the coarse equation through microscopic simulations: The baby-bathwater scheme. *Multiscale Modeling & Simulation*, 1(3):391–407, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41916`.

Lunati:2009:OFM

[LL09] Ivan Lunati and Seong H. Lee. An operator formulation of the multiscale finite-volume method with correction function. *Multiscale Modeling & Simulation*, 8(1):96–109, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2017:APM

[LL17] Qin Li and Jianfeng Lu. An asymptotic preserving method for transport equations with oscillatory scattering coefficients. *Multiscale Modeling & Simulation*, 15(4):1694–1718, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lai:2018:PCD

[LL18] Rongjie Lai and Jianfeng Lu. Point cloud discretization of Fokker–Planck operators for committor functions. *Multiscale Modeling & Simulation*, 16 (2):710–726, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2019:GCA

[LL19] Yingzhou Li and Lin Lin. Globally constructed adaptive local basis set for spectral projectors of second order differential operators. *Multiscale Modeling & Simulation*, 17(1):92–116, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2023:RME

[LL23] Jialei Li and Xiaodong Liu. Reconstruction of multiscale electromagnetic sources from multifrequency electric far field patterns at sparse observation directions. *Multiscale Modeling & Simulation*, 21(2):753–775, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1459927`.

Lytova:2018:NNO

[LLB18] Marianna Lytova, Emmanuel Lorin, and André D. Bandrauk. Nonlinear nonperturbative optics model enriched by evolution equation for polarization. *Multiscale Modeling & Simulation*, 16 (3):1175–1205, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

LeBris:2014:MTA

[LLL14] Claude Le Bris, Frédéric Legoll, and Alexei Lozinski. An MsFEM type approach for perforated domains. *Multiscale Modeling & Simulation*, 12(3):1046–1077, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

LeBris:2019:MFE

[LLM19] Claude Le Bris, Frédéric Legoll, and François Madiot. Multiscale finite element methods for advection-dominated problems in perforated domains. *Multiscale Modeling & Simulation*, 17

(2):773–825, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lang:2024:LOD

[LLM24] Annika Lang, Per Ljung, and Axel Målqvist. Localized orthogonal decomposition for a multiscale parabolic stochastic partial differential equation. *Multiscale Modeling & Simulation*, 22(1):204–229, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2012:PDB

[LLO12] Xingjie Helen Li, Mitchell Luskin, and Christoph Ortner. Positive definiteness of the blended force-based quasicontinuum method. *Multiscale Modeling & Simulation*, 10(3): 1023–1045, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2023:IRP

[LLW23] Jianliang Li, Peijun Li, and Xu Wang. Inverse random potential scattering for elastic waves. *Multiscale Modeling & Simulation*, 21(1):426–447, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1497183`.

Li:2019:AGS

[LLY19] HaiGang Li, YanYan Li, and ZhuoLun Yang. Asymptotics of the gradient of solutions to the perfect conductivity problem. *Multiscale Modeling & Simulation*, 17(3):899–925, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2014:LMM

[LLZ14] Jingzhi Li, Hongyu Liu, and Jun Zou. Locating multiple multiscale acoustic scatterers. *Multiscale Modeling & Simulation*, 12(3):927–952, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2016:FTP

[LLZ16] Tiejun Li, Xiaoguang Li, and Xiang Zhou. Finding transition pathways on manifolds. *Multiscale Modeling & Simulation*, 14 (1):173–206, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lin:2023:MTE

[LLZ23] Junshan Lin, Wangtao Lu, and Hai Zhang. Mathematical theory for electromagnetic scattering resonances and field enhancement in a subwavelength annular gap. *Multiscale Modeling & Simulation*, 21(3):1012–1052, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

URL https://epubs.siam.org/doi/10.1137/22M1508881.

Lenczner:2004:HPE

[LM04] Michel Lenczner and Denis Mercier. Homogenization of periodic electrical networks including voltage to current amplifiers. *Multiscale Modeling & Simulation*, 2(3):359–397, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/42391.

LePennec:2005:BIA

[LM05] E. Le Pennec and S. Mallat. Bandelet image approximation and compression. *Multiscale Modeling & Simulation*, 4(3): 992–1039, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/61945.

Li:2014:SQC

[LM14] Xiantao Li and Pingbing Ming. A study on the quasicontinuum approximations of a one-dimensional fracture model. *Multiscale Modeling & Simulation*, 12(3):1379–1400, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lee:2015:MMD

[LM15a] Yoonsang Lee and Andrew J. Majda. Multiscale methods for data assimilation in turbulent systems. *Multiscale Modeling & Simulation*, 13(2):691–713, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Legoll:2015:CVA

[LM15b] Frédéric Legoll and William Minvielle. A control variate approach based on a defect-type theory for variance reduction in stochastic homogenization. *Multiscale Modeling & Simulation*, 13(2):519–550, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lennon:2008:NSC

[LMC+08] Erin M. Lennon, George O. Mohler, Hector D. Ceniceros, Carlos J. García-Cervera, and Glenn H. Fredrickson. Numerical solutions of the complex Langevin equations in polymer field theory. *Multiscale Modeling & Simulation*, 6(4):1347–1370, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ljung:2022:STM

[LMM22] Per Ljung, Roland Maier, and Axel Målqvist. A space-time multiscale method for parabolic problems. *Multiscale Modeling & Simulation*, 20(2):714–740, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/21M1446605.

Lisani:2003:TPS

[LMMM03] J. L. Lisani, L. Moisan, P. Monasse, and J. M. Morel. On the theory of planar shape. *Multiscale Modeling & Simulation*, 1(1):1–24, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41084`.

Lee:2017:SSM

[LMQ17] Yoonsang Lee, Andrew J. Majda, and Di Qi. Stochastic superparameterization and multiscale filtering of turbulent tracers. *Multiscale Modeling & Simulation*, 15(1):215–234, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lipnikov:2011:ASM

[LMS11] K. Lipnikov, J. D. Moulton, and D. Svyatskiy. Adaptive strategies in the Multilevel Multiscale Mimetic (M^3) method for two-phase flows in porous media. *Multiscale Modeling & Simulation*, 9(3):991–1016, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p991_s1`.

Lejon:2017:VRS

[LMS17] Annelies Lejon, Bert Mortier, and Giovanni Samaey. Variance-reduced simulation of multiscale tumor growth modeling. *Multiscale Modeling & Simulation*, 15 (1):388–409, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2012:EHO

[LMT12] Ruo Li, Pingbing Ming, and Fengyang Tang. An efficient high order heterogeneous multiscale method for elliptic problems. *Multiscale Modeling & Simulation*, 10(1):259–283, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lee:2018:PFM

[LMWW18] Sanghyun Lee, Andro Mikelić, Mary F. Wheeler, and Thomas Wick. Phase-field modeling of two phase fluid filled fractures in a poroelastic medium. *Multiscale Modeling & Simulation*, 16 (4):1542–1580, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lam:2017:MRD

[LNL17] Ka Chun Lam, Tsz Ching Ng, and Lok Ming Lui. Multiscale representation of deformation via Beltrami coefficients. *Multiscale Modeling & Simulation*, 15(2):864–891, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Langwallner:2013:ACC

[LOS13] B. Langwallner, C. Ortner, and E. Süli. Atomistic-to-continuum coupling approximation of a one-dimensional toy model for density functional theory. *Multiscale Modeling & Simulation*, 11(1):59–91, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Luna-Ortiz:2005:IOM

[LOT05] Eduardo Luna-Ortiz and Constantinos Theodoropoulos. An input/output model reduction-based optimization scheme for large-scale systems. *Multiscale Modeling & Simulation*, 4(2): 691–708, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60471`.

Lanteri:2018:MHM

[LPSV18] Stéphane Lanteri, Diego Paredes, Claire Scheid, and Frédéric Valentin. The multiscale hybrid-mixed method for the Maxwell equations in heterogeneous media. *Multiscale Modeling & Simulation*, 16(4):1648–1683, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2016:BLA

[LQB16] Wangtao Lu, Jianliang Qian, and Robert Burridge. Babich-like ansatz for three-dimensional point-source Maxwell's equations in an inhomogeneous medium at high frequencies. *Multiscale Modeling & Simulation*, 14(3):1089–1122, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2018:EBA

[LQB18] Wangtao Lu, Jianliang Qian, and Robert Burridge. Extending Babich's ansatz for point-source Maxwell's equations using Hadamard's method. *Multiscale Modeling & Simulation*, 16(2):727–751, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lucas:2008:NDC

[LR08] C. Lucas and A. Rousseau. New developments and cosine effect in the viscous shallow water and quasi-geostrophic equations. *Multiscale Modeling & Simulation*, 7(2):796–813, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2010:RHFa

[LR10a] Hailiang Liu and James Ralston. Recovery of high frequency wave fields for the acoustic wave equation. *Multiscale Modeling & Simulation*, 8(2): 428–444, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2010:RHFb

[LR10b] Hailiang Liu and James Ralston. Recovery of high frequency wave fields from phase space–based measurements. *Multiscale Modeling & Simulation*, 8(2):622–644, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Leitenmaier:2022:UEH

[LR22] Lena Leitenmaier and Olof Runborg. Upscaling errors in heterogeneous multiscale methods for the Landau–Lifshitz equation. *Multiscale Modeling & Simulation*, 20(1):1–35, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1409408`.

Legoll:2022:MAE

[LRLH22] Frédéric Legoll, Pierre-Loïk Rothé, Claude Le Bris, and Ulrich Hetmaniuk. An MsFEM approach enriched using Legendre polynomials. *Multiscale Modeling & Simulation*, 20(2):798–834, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1444151`.

Lee:2010:RFL

[LRZ10] C. Y. Lee, B. L. Rozovskii, and H. M. Zhou. Randomization of forcing in large systems of PDEs for improvement of energy estimates. *Multiscale Modeling & Simulation*, 8(4):1419–1438, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2016:CPI

[LS16a] Zhen Li and Zuoqiang Shi. A convergent point integral method for isotropic elliptic equations on a point cloud. *Multiscale Modeling & Simulation*, 14(2):874–905, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lopez:2016:NMP

[LS16b] José Luis López and Juan Soler. A non-Markovian phase space approach to Schrödinger dynamics: The space-time Wigner transform. *Multiscale Modeling & Simulation*, 14(1):430–451, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2018:AMI

[LS18] Jianfeng Lu and Konstantinos Spiliopoulos. Analysis of multiscale integrators for multiple attractors and irreversible Langevin samplers. *Multiscale Modeling & Simulation*, 16(4):1859–1883, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lawley:2020:ANA

[LS20] Sean D. Lawley and Varun Shankar. Asymptotic and nu-

merical analysis of a stochastic PDE model of volume transmission. *Multiscale Modeling & Simulation*, 18(2):887–915, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2023:FBC

[LSBQ23] Yang Liu, Jian Song, Robert Burridge, and Jianliang Qian. A fast butterfly-compressed Hadamard-babich integrator for high-frequency Helmholtz equations in inhomogeneous media with arbitrary sources. *Multiscale Modeling & Simulation*, 21 (1):269–308, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1450422`.

Link:2020:MMP

[LSD+20] Kathryn G. Link, Matthew G. Sorrells, Nicholas A. Danes, Keith B. Neeves, Karin Leiderman, and Aaron L. Fogelson. A mathematical model of platelet aggregation in an extravascular injury under flow. *Multiscale Modeling & Simulation*, 18(4): 1489–1524, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2015:UST

[LSH15] Chunguang Liu, Zuoqiang Shi, and Thomas Y. Hou. On the uniqueness of sparse time-frequency representation of multiscale data. *Multiscale Modeling & Simulation*, 13(3):790–811, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2021:NMM

[LSZ21] Ruo Li, Peng Song, and Lingchao Zheng. A nonlinear moment model for radiative transfer equation. *Multiscale Modeling & Simulation*, 19 (3):1425–1452, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lindsay:2017:OFP

[LTK17] A. E. Lindsay, J. C. Tzou, and T. Kolokolnikov. Optimization of first passage times by multiple cooperating mobile traps. *Multiscale Modeling & Simulation*, 15(2):920–947, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lunz:2021:CAD

[Lun21] Davin Lunz. On continuum approximations of discrete-state Markov processes of large system size. *Multiscale Modeling & Simulation*, 19(1):294–319, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Le:2005:IDU

[LV05] Triet M. Le and Luminita A. Vese. Image decomposition using total variation and div(BMO). *Multiscale Modeling & Simulation*, 4(2):390–

423, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61005`.

Lubich:2014:NIM

[LW14] Christian Lubich and Daniel Weiss. Numerical integrators for motion under a strong constraining force. *Multiscale Modeling & Simulation*, 12(4):1592–1606, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2021:IRS

[LW21] Peijun Li and Xu Wang. An inverse random source problem for Maxwell's equations. *Multiscale Modeling & Simulation*, 19(1):25–45, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2023:ASO

[LWZ23] Yiqun Li, Hong Wang, and Xiangcheng Zheng. Analysis and simulation of optimal control for a two-time-scale fractional advection–diffusion–reaction equation with space–time-dependent order and coefficients. *Multiscale Modeling & Simulation*, 21(4):1690–1716, December 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2009:SCD

[LXQ09] Jie Liu, Jack Xin, and Yingyong Qi. A soft-constrained dynamic iterative method of blind source separation. *Multiscale Modeling & Simulation*, 7(4):1795–1810, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Luo:2016:ESA

[LXY16] Tao Luo, Yang Xiang, and Nung Kwan Yip. Energy scaling and asymptotic properties of step bunching in epitaxial growth with elasticity effects. *Multiscale Modeling & Simulation*, 14(2):737–771, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lin:2017:ACP

[LXY17] Lin Lin, Ze Xu, and Lexing Ying. Adaptively compressed polarizability operator for accelerating large scale *Ab Initio* phonon calculations. *Multiscale Modeling & Simulation*, 15(1):29–55, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Luo:2021:FTC

[LXY21] Tao Luo, Yang Xiang, and Jerry Zhijian Yang. Finite temperature Cauchy–Born rule and stability of crystalline solids with point defects. *Multiscale Modeling & Simulation*, 19(4):1710–1735, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2012:FGA

[LY12] Jianfeng Lu and Xu Yang. Frozen Gaussian approximation for general linear strictly hyperbolic systems: Formulation and Eulerian methods. *Multiscale Modeling & Simulation*, 10 (2):451–472, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Liu:2016:ASP

[LY16] Fei Liu and Lexing Ying. Additive sweeping preconditioner for the Helmholtz equation. *Multiscale Modeling & Simulation*, 14 (2):799–822, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2017:POM

[LY17] Jianfeng Lu and Haizhao Yang. Preconditioning orbital minimization method for planewave discretization. *Multiscale Modeling & Simulation*, 15(1):254–273, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2015:BF

[LYM+15] Yingzhou Li, Haizhao Yang, Eileen R. Martin, Kenneth L. Ho, and Lexing Ying. Butterfly factorization. *Multiscale Modeling & Simulation*, 13(2):714–732, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lee:2013:LPI

[LYTP13] Nam H. Lee, Jordan Yoder, Minh Tang, and Carey E. Priebe. On latent position inference from doubly stochastic messaging activities. *Multiscale Modeling & Simulation*, 11(3): 683–718, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2015:MBA

[LYY15] Yingzhou Li, Haizhao Yang, and Lexing Ying. A multiscale butterfly algorithm for multidimensional Fourier integral operators. *Multiscale Modeling & Simulation*, 13(2):614–631, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Luo:2011:NAE

[LYZ11] Songting Luo, Yifeng Yu, and Hongkai Zhao. A new approximation for effective Hamiltonians for homogenization of a class of Hamilton–Jacobi equations. *Multiscale Modeling & Simulation*, 9(2):711–734, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p711_s1`.

Lei:2015:CSM

[LYZ+15] H. Lei, X. Yang, B. Zheng, G. Lin, and N. A. Baker. Constructing surrogate models of complex systems with enhanced

sparsity: Quantifying the influence of conformational uncertainty in biomolecular solvation. *Multiscale Modeling & Simulation*, 13(4):1327–1353, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2006:CAB

[LZ06] Tiejun Li and Pingwen Zhang. Convergence analysis of BCF method for Hookean dumbbell model with finite difference scheme. *Multiscale Modeling & Simulation*, 5(1):205–234, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lu:2007:SSF

[LZ07] Zhiming Lu and Dongxiao Zhang. Stochastic simulations for flow in nonstationary randomly heterogeneous porous media using a KL-based moment-equation approach. *Multiscale Modeling & Simulation*, 6(1):228–245, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lin:2018:SPAa

[LZ18a] Junshan Lin and Hai Zhang. Scattering by a periodic array of subwavelength slits I: Field enhancement in the diffraction regime. *Multiscale Modeling & Simulation*, 16(2):922–953, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lin:2018:SPAb

[LZ18b] Junshan Lin and Hai Zhang. Scattering by a periodic array of subwavelength slits II: Surface bound states, total transmission, and field enhancement in homogenization regimes. *Multiscale Modeling & Simulation*, 16(2):954–990, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Lelievre:2019:PEE

[LZ19] Tony Lelièvre and Wei Zhang. Pathwise estimates for effective dynamics: The case of nonlinear vectorial reaction coordinates. *Multiscale Modeling & Simulation*, 17(3):1019–1051, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2023:IBT

[LZ23] Haigang Li and Yan Zhao. The interaction between two close-to-touching convex acoustic subwavelength resonators. *Multiscale Modeling & Simulation*, 21(3):804–826, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1495974`.

Lin:2019:PBE

[LZN19] Lin Lin and Leonardo Zepeda-Nunez. Projection-based embedding theory for solving Kohn–Sham density functional theory. *Multiscale Modeling*

& Simulation, 17(4):1274–1300, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2013:NRC

[LZZ13] Tiejun Li, Pingwen Zhang, and Wei Zhang. Nucleation rate calculation for the phase transition of diblock copolymers under stochastic Cahn–Hilliard dynamics. *Multiscale Modeling & Simulation*, 11(1):385–409, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Li:2020:DDA

[LZZ20] Sijing Li, Zhiwen Zhang, and Hongkai Zhao. A data-driven approach for multiscale elliptic PDEs with random coefficients based on intrinsic dimension reduction. *Multiscale Modeling & Simulation*, 18(3):1242–1271, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Merritt:2021:MGS

[MAG21] Michael Merritt, Alen Alexanderian, and Pierre A. Gremaud. Multiscale global sensitivity analysis for stochastic chemical systems. *Multiscale Modeling & Simulation*, 19(1): 440–459, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mailybaev:2016:SSV

[Mai16] Alexei A. Mailybaev. Spontaneous stochasticity of velocity in turbulence models. *Multiscale Modeling & Simulation*, 14 (1):96–112, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Maalqvist:2011:MME

[Mål11] Axel Målqvist. Multiscale methods for elliptic problems. *Multiscale Modeling & Simulation*, 9(3):1064–1086, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1064_s1`.

Mannseth:2006:PIP

[Man06] Trond Mannseth. Permeability identification from pressure observations: Some foundations for multiscale regularization. *Multiscale Modeling & Simulation*, 5(1):21–44, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Margetis:2012:BEC

[Mar12] Dionisios Margetis. Bose–Einstein condensation beyond mean field: Many-body bound state of periodic microstructure. *Multiscale Modeling & Simulation*, 10(2):383–417, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [Mar13].

Margetis:2013:EBE

[Mar13] Dionisios Margetis. Erratum: Bose–Einstein condensation beyond mean field: Many-body bound state of periodic microstructure. *Multiscale Modeling & Simulation*, 11(1):410, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See [Mar12].

MacNamara:2010:SMN

[MB10] Shev MacNamara and Kevin Burrage. Stochastic modeling of naïve T cell homeostasis for competing clonotypes via the master equation. *Multiscale Modeling & Simulation*, 8(4): 1325–1347, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mehmani:2014:BPC

[MB14] Yashar Mehmani and Matthew T. Balhoff. Bridging from pore to continuum: a hybrid mortar domain decomposition framework for subsurface flow and transport. *Multiscale Modeling & Simulation*, 12(2):667–693, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Messenger:2021:WSG

[MB21] Daniel A. Messenger and David M. Bortz. Weak SINDy: Galerkin-based data-driven model selection. *Multiscale Modeling & Simulation*, 19 (3):1474–1497, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Malossi:2013:ICO

[MBC+13] A. Cristiano I. Malossi, Pablo J. Blanco, Paolo Crosetto, Simone Deparis, and Alfio Quarteroni. Implicit coupling of one-dimensional and three-dimensional blood flow models with compliant vessels. *Multiscale Modeling & Simulation*, 11 (2):474–506, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Murphy:2020:IBS

[MBL20] Patrick Murphy, Paul C. Bressloff, and Sean D. Lawley. Interaction between switching diffusivities and cellular microstructure. *Multiscale Modeling & Simulation*, 18(2):572–588, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

MacNamara:2008:MMC

[MBS08] Shev MacNamara, Kevin Burrage, and Roger B. Sidje. Multiscale modeling of chemical kinetics via the master equation. *Multiscale Modeling & Simulation*, 6(4):1146–1168, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Margetis:2008:ASS

[MC08] Dionisios Margetis and Russel E. Caflisch. Anisotropic step

stiffness from a kinetic model of epitaxial growth. *Multiscale Modeling & Simulation*, 7(1): 242–273, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

McCormick:2005:PMM

[McC05] Stephen F. McCormick. Projection multilevel methods for quasi-linear PDEs: V-cycle theory. *Multiscale Modeling & Simulation*, 4(4):1339–1348, ???? 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Messaoudi:2023:BER

[MCG23] Adel Messaoudi, Regis Cottereau, and Christophe Gomez. Boundary effects in radiative transfer of acoustic waves in a randomly fluctuating half-space. *Multiscale Modeling & Simulation*, 21(3):1299–1321, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1537795`.

Massatt:2023:EOR

[MCL23] Daniel Massatt, Stephen Carr, and Mitchell Luskin. Electronic observables for relaxed bilayer two-dimensional heterostructures in momentum space. *Multiscale Modeling & Simulation*, 21(4):1344–1378, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1451208`.

Massatt:2018:IHM

[MCLO18] Daniel Massatt, Stephen Carr, Mitchell Luskin, and Christoph Ortner. Incommensurate heterostructures in momentum space. *Multiscale Modeling & Simulation*, 16(1):429–451, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Marciniak-Czochra:2012:EPI

[MCM12] Anna Marciniak-Czochra and Andro Mikelić. Effective pressure interface law for transport phenomena between an unconfined fluid and a porous medium using homogenization. *Multiscale Modeling & Simulation*, 10 (2):285–305, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mityushev:2019:EPF

[MD19] Vladimir Mityushev and Piotr Drygaś. Effective properties of fibrous composites and cluster convergence. *Multiscale Modeling & Simulation*, 17(2):696–715, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Minden:2016:TUH

[MDHY16] Victor Minden, Anil Damle, Kenneth L. Ho, and Lexing Ying. A technique for updating hierarchical skeletonization-based factorizations of integral

operators. *Multiscale Modeling & Simulation*, 14(1):42–64, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Minden:2017:FSG

[MDHY17] Victor Minden, Anil Damle, Kenneth L. Ho, and Lexing Ying. Fast spatial Gaussian process maximum likelihood estimation via skeletonization factorizations. *Multiscale Modeling & Simulation*, 15(4):1584–1611, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mao:2010:NPB

[MDO10] Yu Mao, Bin Dong, and Stanley Osher. A nonlinear PDE-based method for sparse deconvolution. *Multiscale Modeling & Simulation*, 8(3):965–976, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Medjo:2005:BBT

[Med05] T. Tachim Medjo. Barotropic-baroclinic time splitting for the primitive equations of the ocean. *Multiscale Modeling & Simulation*, 4(1):194–212, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60928`.

Minden:2017:RSF

[MHDY17] Victor Minden, Kenneth L. Ho, Anil Damle, and Lexing Ying. A recursive skeletonization factorization based on strong admissibility. *Multiscale Modeling & Simulation*, 15(2):768–796, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Michelotti:2013:BES

[MHW13] M. D. Michelotti, M. T. Heath, and M. West. Binning for efficient stochastic multiscale particle simulations. *Multiscale Modeling & Simulation*, 11(4):1071–1096, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ma:2003:TMI

[MI03] Qun Ma and Jesús A. Izaguirre. Targeted mollified impulse: a multiscale stochastic integrator for long molecular dynamics simulations. *Multiscale Modeling & Simulation*, 2 (1):1–21, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42356`.

Michel:2011:MMF

[Mic11] Philippe Michel. Multiscale modeling of follicular ovulation as a mass and maturity dynamical system. *Multiscale Modeling & Simulation*, 9(1):282–313, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p282_s1`.

Milton:2005:OPH

[Mil05] G. W. Milton. On optimizing the properties of hierarchical laminates using Pontryagin's maximum principle. *Multiscale Modeling & Simulation*, 3(3): 658–679, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60236`.

Mityushev:2023:HOC

[Mit23] Vladimir Mityushev. High-order contrast bounds for piezoelectric constants of two-phase fibrous composites. *Multiscale Modeling & Simulation*, 21 (4):1644–1666, November 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Margetis:2006:CRI

[MK06] Dionisios Margetis and Robert V. Kohn. Continuum relaxation of interacting steps on crystal surfaces in $2+1$ dimensions. *Multiscale Modeling & Simulation*, 5 (3):729–758, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Metzger:2021:HTP

[MK21] Stefan Metzger and Peter Knabner. Homogenization of two-phase flow in porous media from pore to Darcy scale: a phase-field approach. *Multiscale Modeling & Simulation*, 19(1):320–343, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Manohar:2019:OSM

[MKBK19] Krithika Manohar, Eurika Kaiser, Steven L. Brunton, and J. Nathan Kutz. Optimized sampling for multiscale dynamics. *Multiscale Modeling & Simulation*, 17(1):117–136, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Massatt:2017:EDS

[MLO17] Daniel Massatt, Mitchell Luskin, and Christoph Ortner. Electronic density of states for incommensurate layers. *Multiscale Modeling & Simulation*, 15 (1):476–499, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Meerbach:2012:SCP

[MLS12] Eike Meerbach, Juan C. Latorre, and Christof Schütte. Sequential change point detection in molecular dynamics trajectories. *Multiscale Modeling & Simulation*, 10(4):1263–1291, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Menz:2012:HSD

[MLSH12] Stephan Menz, Juan C. Latorre, Christof Schütte, and Wilhelm Huisinga. Hybrid Stochastic–Deterministic solution of the chemical master equation. *Multiscale Modeling & Simulation*,

10(4):1232–1262, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ma:2024:ECG

[MM24] Chupeng Ma and J. M. Melenk. Exponential convergence of a generalized FEM for heterogeneous reaction–diffusion equations. *Multiscale Modeling & Simulation*, 22(1):256–282, February 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mishuris:2012:DFS

[MMB12] G. S. Mishuris, A. B. Movchan, and D. Bigoni. Dynamics of a fault steadily propagating within a structural interface. *Multiscale Modeling & Simulation*, 10(3):936–953, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mazya:2011:MAA

[MMN11] V. Maz'ya, A. Movchan, and M. Nieves. Mesoscale asymptotic approximations to solutions of mixed boundary value problems in perforated domains. *Multiscale Modeling & Simulation*, 9(1):424–448, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p424_s1`.

Mazya:2016:MMA

[MMN16] V. G. Maz'ya, A. B. Movchan, and M. J. Nieves. Mesoscale models and approximate solutions for solids containing clouds of voids. *Multiscale Modeling & Simulation*, 14(1):138–172, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mazya:2017:EPS

[MMN17] V. G. Maz'ya, A. B. Movchan, and M. J. Nieves. Eigenvalue problem in a solid with many inclusions: Asymptotic analysis. *Multiscale Modeling & Simulation*, 15(2):1003–1047, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Masur:2023:QCI

[MMO23] Gökce Tuba Masur, Haidar Mohamad, and Marcel Oliver. Quasi-convergence of an implementation of optimal balance by backward-forward nudging. *Multiscale Modeling & Simulation*, 21(2):624–640, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1506018`.

Mainini:2017:CNG

[MMPS17] E. Mainini, H. Murakawa, P. Piovano, and U. Stefanelli. Carbon-nanotube geometries as optimal configurations. *Multiscale Modeling & Simulation*, 15

(4):1448–1471, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Motsch:2011:NSN

[MN11] Sebastien Motsch and Laurent Navoret. Numerical simulations of a nonconservative hyperbolic system with geometric constraints describing swarming behavior. *Multiscale Modeling & Simulation*, 9(3):1253–1275, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1253_s1`.

Muljadi:2015:NMF

[MNLD15] B. P. Muljadi, J. Narski, A. Lozinski, and P. Degond. Nonconforming multiscale finite element method for Stokes flows in heterogeneous media. Part I: Methodologies and numerical experiments. *Multiscale Modeling & Simulation*, 13(4):1146–1172, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Matsumoto:2006:PEL

[MO06] Atsushi Matsumoto and Wilma K. Olson. Predicted effects of local conformational coupling and external restraints on the torsional properties of single DNA molecules. *Multiscale Modeling & Simulation*, 5(4):1227–1247, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mommer:2013:NUS

[Mom13] Mario S. Mommer. Numerical upscaling of subdiffusive transport through disordered media with finite correlation length. *Multiscale Modeling & Simulation*, 11(3):795–812, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Murray:2005:HIV

[MP05] John M. Murray and Alan S. Perelson. Human immunodeficiency virus: Quasi-species and drug resistance. *Multiscale Modeling & Simulation*, 3(2):300–311, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60302`.

Manikas:2019:DPE

[MP19] Theodoros Manikas and Anastasia Papavasiliou. Diffusion parameter estimation for the homogenized equation. *Multiscale Modeling & Simulation*, 17(2):675–695, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mielke:2003:RIM

[MR03] Alexander Mielke and Tomás Roubícek. A rate-independent model for inelastic behavior of shape-memory alloys. *Multiscale Modeling & Simulation*, 1(4):571–597, 2003. CODEN MMSUBT. ISSN

1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42286`.

Mityushev:2012:ODN

[MR12] Vladimir Mityushev and Natalia Rylko. Optimal distribution of the nonoverlapping conducting disks. *Multiscale Modeling & Simulation*, 10(1):180–190, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Maier:2018:DBO

[MR18a] Matthias Maier and Rolf Rannacher. A duality-based optimization approach for model adaptivity in heterogeneous multiscale problems. *Multiscale Modeling & Simulation*, 16(1):412–428, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Muntean:2018:CET

[MR18b] Adrian Muntean and Sina Reichelt. Corrector estimates for a thermodiffusion model with weak thermal coupling. *Multiscale Modeling & Simulation*, 16(2):807–832, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Moraes:2014:MMW

[MRTV14] Alvaro Moraes, Fabrizio Ruggeri, Raúl Tempone, and Pedro Vilanova. Multiscale modeling of wear degradation in cylinder liners. *Multiscale Modeling & Simulation*, 12(1):396–409, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Magan:2004:MLA

[MS04] Rahul V. Magan and Radhakrishna Sureshkumar. A multiscale-linking algorithm for the simulation of irreversible deposition. *Multiscale Modeling & Simulation*, 2(3):475–500, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60073`.

Muratov:2008:BHP

[MS08] Cyrill B. Muratov and Stanislav Y. Shvartsman. Boundary homogenization for periodic arrays of absorbers. *Multiscale Modeling & Simulation*, 7(1):44–61, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Muthukumar:2022:HSS

[MS22] T. Muthukumar and K. Sankar. Homogenization of the Stokes system in a domain with an oscillating boundary. *Multiscale Modeling & Simulation*, 20(4):1361–1393, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1474345`.

Mukherjee:2023:HGU

[MS23] Arpan Mukherjee and Mourad Sini. Heat generation using

Lorentzian nanoparticles: Estimation via time-domain techniques. *Multiscale Modeling & Simulation*, 21(2):542–597, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1505207`.

Ming:2024:EEM

[MS24] Pingbing Ming and Siqi Song. Error estimate of multiscale finite element method for periodic media revisited. *Multiscale Modeling & Simulation*, 22(1):106–124, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Muha:2010:CGA

[MSAW10] Ivo Muha, Sabine Stichel, Sabine Attinger, and Gabriel Wittum. Coarse graining on arbitrary grids. *Multiscale Modeling & Simulation*, 8(4):1368–1382, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mairal:2008:LMS

[MSE08] Julien Mairal, Guillermo Sapiro, and Michael Elad. Learning multiscale sparse representations for image and video restoration. *Multiscale Modeling & Simulation*, 7(1):214–241, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mackey:2014:CSM

[MSO14] Alan Mackey, Hayden Schaeffer, and Stanley Osher. On the compressive spectral method. *Multiscale Modeling & Simulation*, 12(4):1800–1827, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Metzner:2009:TPT

[MSVE09] Philipp Metzner, Christof Schütte, and Eric Vanden-Eijnden. Transition path theory for Markov jump processes. *Multiscale Modeling & Simulation*, 7(3):1192–1219, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Margetis:2009:KHM

[MT09] Dionisios Margetis and Athanasios E. Tzavaras. Kinetic hierarchies and macroscopic limits for crystalline steps in $1 + 1$ dimensions. *Multiscale Modeling & Simulation*, 7(3):1428–1454, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mikelic:2016:DPF

[MT16] Andro Mikelić and Josip Tambaca. Derivation of a poroelastic flexural shell model. *Multiscale Modeling & Simulation*, 14(1):364–397, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Martin:2019:EMD

[MT19a] Lindsay Martin and Yen-Hsi R. Tsai. Erratum: A Multiscale Domain Decomposition Algorithm for Boundary Value Problems for Eikonal Equations. *Multiscale Modeling & Simulation*, 17(4):1301–1302, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See [MT19b].

Martin:2019:MDD

[MT19b] Lindsay Martin and Yen-Hsi R. Tsai. A multiscale domain decomposition algorithm for boundary value problems for eikonal equations. *Multiscale Modeling & Simulation*, 17(2): 620–649, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [MT19a].

Moraes:2014:HCT

[MTV14] Alvaro Moraes, Raul Tempone, and Pedro Vilanova. Hybrid Chernoff Tau-leap. *Multiscale Modeling & Simulation*, 12(2): 581–615, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Markowich:2016:PFB

[MTW16] Peter Markowich, Josef Teichmann, and Marie-Therese Wolfram. Parabolic free boundary price formation models under market size fluctuations. *Multiscale Modeling & Simulation*, 14 (4):1211–1237, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Maier:2022:NUW

[MV22] Bernhard Maier and Barbara Verfürth. Numerical upscaling for wave equations with time-dependent multiscale coefficients. *Multiscale Modeling & Simulation*, 20(4):1169–1190, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1438244`.

Mikelic:2015:PFM

[MWW15] Andro Mikelić, Mary F. Wheeler, and Thomas Wick. A phase-field method for propagating fluid-filled fractures coupled to a surrounding porous medium. *Multiscale Modeling & Simulation*, 13(1):367–398, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ming:2016:MFE

[MX16] Pingbing Ming and Xianmin Xu. A multiscale finite element method for oscillating Neumann problem on rough domain. *Multiscale Modeling & Simulation*, 14(4):1276–1300, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ming:2009:AOD

[MY09] Pingbing Ming and Jerry Zhijian Yang. Analysis of a

one-dimensional nonlocal quasicontinuum method. *Multiscale Modeling & Simulation*, 7(4): 1838–1875, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mei:2015:MBQ

[MZ15] Song Mei and Pingwen Zhang. On a molecular based q-tensor model for liquid crystals with density variations. *Multiscale Modeling & Simulation*, 13(3): 977–1000, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Morale:2016:SMS

[MZCJ16] D. Morale, M. Zanella, V. Capasso, and W. Jäger. Stochastic modeling and simulation of ion transport through channels. *Multiscale Modeling & Simulation*, 14(1):113–137, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Mauser:2020:RNK

[MZZ20] Norbert J. Mauser, Yong Zhang, and Xiaofei Zhao. On the rotating nonlinear Klein–Gordon equation: NonRelativistic limit and numerical methods. *Multiscale Modeling & Simulation*, 18 (2):999–1024, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nathan:2011:SBE

[NDEG11] Lyubima B. Simeonova Nathan, David C. Dobson, Olakunle Eso, and Kenneth M. Golden. Spatial bounds on the effective complex permittivity for time-harmonic waves in random media. *Multiscale Modeling & Simulation*, 9(3):1113–1143, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1113_s1`.

Negulescu:2018:KMS

[Neg18] Claudia Negulescu. Kinetic modelling of strongly magnetized tokamak plasmas with mass disparate particles. The electron Boltzmann relation. *Multiscale Modeling & Simulation*, 16(4):1732–1755, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Negulescu:2021:MSL

[Neg21] Claudia Negulescu. Mathematical study of a Lagrange-multiplier technique for stiff transport problems. *Multiscale Modeling & Simulation*, 19(2): 802–829, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nikolova:2005:ARE

[Nik05] Mila Nikolova. Analysis of the recovery of edges in images and signals by minimiz-

ing nonconvex regularized least-squares. *Multiscale Modeling & Simulation*, 4(3):960–991, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61958`.

Newby:2011:AAS

[NK11] Jay M. Newby and James P. Keener. An asymptotic analysis of the spatially inhomogeneous velocity-jump process. *Multiscale Modeling & Simulation*, 9(2):735–765, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p735_s1`.

Newton:2020:DOT

[NLS20] Kit Newton, Qin Li, and Andrew M. Stuart. Diffusive optical tomography in the Bayesian framework. *Multiscale Modeling & Simulation*, 18(2):589–611, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Norgard:2009:CCF

[NM09] Greg Norgard and Kamran Mohseni. On the convergence of the convectively filtered Burgers equation to the entropy solution of the inviscid Burgers equation. *Multiscale Modeling & Simulation*, 7(4):1811–1837, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Norgard:2010:NPR

[NM10] Greg Norgard and Kamran Mohseni. A new potential regularization of the one-dimensional Euler and homentropic Euler equations. *Multiscale Modeling & Simulation*, 8 (4):1212–1243, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nakamura:2013:DCR

[NM13] Kanna Nakamura and Dionisios Margetis. Discrete and continuum relaxation dynamics of faceted crystal surface in evaporation models. *Multiscale Modeling & Simulation*, 11(1):244–281, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nieves:2011:AAW

[NMJ11] M. J. Nieves, A. B. Movchan, and I. S. Jones. Asymptotic approximation for the weight function in a solid with a surface-breaking crack and small voids. *Multiscale Modeling & Simulation*, 9(4):1444–1458, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1444_s1`.

Noe:2013:VAM

[NN13] Frank Noé and Feliks Nüske. A variational approach to modeling slow processes in stochastic dynamical systems. *Multi-*

scale Modeling & Simulation, 11 (2):635–655, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Noetinger:2013:EFC

[Nøe13] B. Nøetinger. An explicit formula for computing the sensitivity of the effective conductivity of heterogeneous composite materials to local inclusion transport properties and geometry. *Multiscale Modeling & Simulation*, 11(3):907–924, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Noe:2006:CBT

[NOR+06] Frank Noé, Marcus Oswald, Gerhard Reinelt, Stefan Fischer, and Jeremy C. Smith. Computing best transition pathways in high-dimensional dynamical systems: Application to the alpha L $\leftrightarrow$ beta $\leftrightarrow$ alpha R transitions in octaalanine. *Multiscale Modeling & Simulation*, 5(2):393–419, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nordbotten:2009:AVM

[Nor09] Jan M. Nordbotten. Adaptive variational multiscale methods for multiphase flow in porous media. *Multiscale Modeling & Simulation*, 7(3):1455–1473, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Negulescu:2016:CSM

[NP16] Claudia Negulescu and Stefan Possanner. Closure of the strongly magnetized electron fluid equations in the adiabatic regime. *Multiscale Modeling & Simulation*, 14(2):839–873, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nolen:2008:FAM

[NPP08] James Nolen, George Papanicolaou, and Olivier Pironneau. A framework for adaptive multiscale methods for elliptic problems. *Multiscale Modeling & Simulation*, 7(1):171–196, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Niyonzima:2018:MFE

[NSD+18] I. Niyonzima, R. V. Sabariego, P. Dular, K. Jacques, and C. Geuzaine. Multiscale finite element modeling of nonlinear magnetoquasistatic problems using magnetic induction conforming formulations. *Multiscale Modeling & Simulation*, 16(1):300–326, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nimsaila:2010:MCS

[NT10] K. Nimsaila and I. Timofeyev. Markov chain stochastic parametrizations of essential variables. *Multiscale Modeling & Simulation*, 8(5):2079–

2096, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p2079_s1.

Neukamm:2018:SUH

[NV18] Stefan Neukamm and Mario Varga. Stochastic unfolding and homogenization of spring network models. *Multiscale Modeling & Simulation*, 16(2):857–899, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Nolen:2003:RDF

[NX03] Jim Nolen and Jack Xin. Reaction–diffusion front speeds in spatially-temporally periodic shear flows. *Multiscale Modeling & Simulation*, 1(4):554–570, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/42023.

Nava-Yazdani:2011:DLE

[NYY11] Esfandiar Nava-Yazdani and Thomas P. Y. Yu. On Donoho's log-exp subdivision scheme: Choice of retraction and time-symmetry. *Multiscale Modeling & Simulation*, 9(4):1801–1828, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1801_s1.

Osher:2005:IRM

[OBG+05] Stanley Osher, Martin Burger, Donald Goldfarb, Jinjun Xu, and Wotao Yin. An iterative regularization method for total variation-based image restoration. *Multiscale Modeling & Simulation*, 4(2):460–489, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/60541.

Ohlberger:2005:PEE

[Ohl05] Mario Ohlberger. A posteriori error estimates for the heterogeneous multiscale finite element method for elliptic homogenization problems. *Multiscale Modeling & Simulation*, 4 (1):88–114, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/60522.

Ou:2020:LRA

[OLJ20] Na Ou, Guang Lin, and Lijian Jiang. A low-rank approximated multiscale method for pdes with random coefficients. *Multiscale Modeling & Simulation*, 18(4): 1595–1620, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Olson:2023:EFF

[OOWZ23] Derek Olson, Christoph Ortner, Yangshuai Wang, and Lei Zhang. Elastic far-field de-

cay from dislocations in multilattices. *Multiscale Modeling & Simulation*, 21(4):1379–1409, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1502021`.

Orlik:2016:OTL

[OPS16] Julia Orlik, Grigory Panasenko, and Vladimir Shiryaev. Optimization of textile-like materials via homogenization and beam approximations. *Multiscale Modeling & Simulation*, 14 (2):637–667, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ottinger:2007:MPC

[ÖS07] Hans Christian Öttinger and Henning Struchtrup. The mathematical procedure of coarse graining: From Grad's ten-moment equations to hydrodynamics. *Multiscale Modeling & Simulation*, 6(1):53–69, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ollila:2013:HRP

[OSAND13] Santtu T. T. Ollila, Christopher J. Smith, Tapio Ala-Nissila, and Colin Denniston. The hydrodynamic radius of particles in the hybrid lattice Boltzmann–Molecular dynamics method. *Multiscale Modeling & Simulation*, 11(1): 213–243, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Olhede:2010:FDE

[OSP10] S. C. Olhede, A. M. Sykulski, and G. A. Pavliotis. Frequency domain estimation of integrated volatility for Itô processes in the presence of market-microstructure noise. *Multiscale Modeling & Simulation*, 8 (2):393–427, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Osher:2003:IDR

[OSV03] Stanley Osher, Andrés Solé, and Luminita Vese. Image decomposition and restoration using total variation minimization and the H^1. *Multiscale Modeling & Simulation*, 1(3): 349–370, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/41624`.

Ortner:2014:SSQ

[OSZ14] Christoph Ortner, Alexander V. Shapeev, and Lei Zhang. (In-)stability and stabilization of QNL-type atomistic-to-continuum coupling methods. *Multiscale Modeling & Simulation*, 12(3):1258–1293, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Oberman:2009:HMH

[OTV09] Adam M. Oberman, Ryo Takei, and Alexander Vladimirsky. Homogenization of metric Hamilton–Jacobi equations. *Multiscale Modeling & Simulation*, 8(1): 269–295, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ohlberger:2018:NHM

[OV18] Mario Ohlberger and Barbara Verfurth. A new heterogeneous multiscale method for the Helmholtz equation with high contrast. *Multiscale Modeling & Simulation*, 16(1):385–411, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Osting:2011:EPS

[OW11] Braxton Osting and Michael I. Weinstein. Emergence of periodic structure from maximizing the lifetime of a bound state coupled to radiation. *Multiscale Modeling & Simulation*, 9(2):654–685, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p654_s1`.

Ortner:2023:FGA

[OW23] Christoph Ortner and Yangshuai Wang. A framework for a generalization analysis of machine-learned interatomic potentials. *Multiscale Modeling & Simulation*, 21(3):1053–1080, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M152267X`.

Owhadi:2015:BNH

[Owh15] Houman Owhadi. Bayesian numerical homogenization. *Multiscale Modeling & Simulation*, 13 (3):812–828, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Okamoto:2011:CVS

[OYS+11] Naoya Okamoto, Katsunori Yoshimatsu, Kai Schneider, Marie Farge, and Yukio Kaneda. Coherent vorticity simulation of three-dimensional forced homogeneous isotropic turbulence. *Multiscale Modeling & Simulation*, 9(3):1144–1161, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1144_s1`.

Orive:2005:FDA

[OZ05] Rafael Orive and Enrique Zuazua. Finite difference approximation of homogenization problems for elliptic equations. *Multiscale Modeling & Simulation*, 4(1):36–87, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60631`.

Owhadi:2011:LBF

[OZ11] Houman Owhadi and Lei Zhang. Localized bases for finite-dimensional homogenization approximations with nonseparated scales and high contrast. *Multiscale Modeling & Simulation*, 9(4):1373–1398, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1373_s1`.

Plyasunov:2006:AMS

[PA06] Sergey Plyasunov and Adam P. Arkin. Averaging methods for stochastic dynamics of complex reaction networks: Description of multiscale couplings. *Multiscale Modeling & Simulation*, 5 (2):497–513, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Papanicolaou:2012:NFH

[Pap12] Andrew Papanicolaou. Nonlinear filters for hidden Markov models of regime change with fast mean-reverting states. *Multiscale Modeling & Simulation*, 10(3):906–935, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Peter:2009:MMC

[PB09] Malte A. Peter and M. Böhm. Multiscale modelling of chemical degradation mechanisms in porous media with evolving microstructure. *Multiscale Modeling & Simulation*, 7(4):1643–1668, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Parks:2008:CAC

[PBL08] Michael L. Parks, Pavel B. Bochev, and Richard B. Lehoucq. Connecting atomistic-to-continuum coupling and domain decomposition. *Multiscale Modeling & Simulation*, 7(1):362–380, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Park:2015:UIN

[PC15] Moongyu Park and John H. Cushman. Upscaling interpretation of nonlocal fields, gradients, and divergences. *Multiscale Modeling & Simulation*, 13 (4):1136–1145, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Pun:2023:OAA

[PC23] Sai-Mang Pun and Siu Wun Cheung. Online adaptive algorithm for constraint energy minimizing generalized multiscale discontinuous Galerkin method. *Multiscale Modeling & Simulation*, 21(1):168–193, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1402625`.

Peng:2024:MMD

[PCCL24] Zhichao Peng, Yanlai Chen, Yingda Cheng, and Fengyan Li. A micro-macro decomposed reduced basis method for the time-dependent radiative transfer equation. *Multiscale Modeling & Simulation*, 22(1):639–666, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Parramore:2016:MFV

[PEPL16] Elliot Parramore, Michael G. Edwards, Mayur Pal, and Sadok Lamine. Multiscale finite-volume CVD–MPFA formulations on structured and unstructured grids. *Multiscale Modeling & Simulation*, 14(2):559–594, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Peurichard:2016:MMC

[Peu16] D. Peurichard. Macroscopic model for cross-linked fibers with alignment interactions: Existence theory and numerical simulations. *Multiscale Modeling & Simulation*, 14(4):1175–1210, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Perotto:2010:HLM

[PEV10] Simona Perotto, Alexandre Ern, and Alessandro Veneziani. Hierarchical local model reduction for elliptic problems: a domain decomposition approach. *Multiscale Modeling & Simulation*, 8 (4):1102–1127, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Peyre:2008:IPN

[Pey08] Gabriel Peyré. Image processing with nonlocal spectral bases. *Multiscale Modeling & Simulation*, 7(2):703–730, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Perrier:2021:DCB

[PG21] Vincent Perrier and Enrique Gutiérrez. Derivation and closure of Baer and Nunziato type multiphase models by averaging a simple stochastic model. *Multiscale Modeling & Simulation*, 19(1):401–439, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Prinz:2011:ECS

[PHSN11] Jan-Hendrik Prinz, Martin Held, Jeremy C. Smith, and Frank Noé. Efficient computation, sensitivity, and error analysis of committor probabilities for complex dynamical processes. *Multiscale Modeling & Simulation*, 9(2):545–567, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p545_s1`.

Papavasiliou:2007:VRE

[PK07] Anastasia Papavasiliou and Ioannis G. Kevrekidis. Variance reduction for the equation-free simulation of multiscale stochastic systems. *Multiscale Modeling & Simulation*, 6(1): 70–89, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Park:2005:SLF

[PKC05] Moongyu Park, Natalie Kleinfelter, and John H. Cushman. Scaling laws and Fokker–Planck equations for 3-dimensional porous media with fractal mesoscale. *Multiscale Modeling & Simulation*, 4(4):1233–1244, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62173`.

Plunkett:2021:BBR

[PL21] Claire E. Plunkett and Sean D. Lawley. Bimolecular binding rates for pairs of spherical molecules with small binding sites. *Multiscale Modeling & Simulation*, 19(1):148–183, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Plunkett:2024:BHP

[PL24] Claire E. Plunkett and Sean D. Lawley. Boundary homogenization for partially reactive patches. *Multiscale Modeling & Simulation*, 22(2):784–810, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1573422`.

Plonka:2009:EPW

[Plo09] Gerlind Plonka. The easy path wavelet transform: a new adaptive wavelet transform for sparse representation of two-dimensional data. *Multiscale Modeling & Simulation*, 7(3): 1474–1496, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Patrone:2014:CKM

[PM14] Paul N. Patrone and Dionisios Margetis. Connection of kinetic Monte Carlo model for surfaces to one-step flow theory in 1 + 1 dimensions. *Multiscale Modeling & Simulation*, 12(1):364–395, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Pesce:2021:HDD

[PM21] Catalina Pesce and Andreas Muench. How do degenerate mobilities determine singularity formation in Cahn–Hilliard equations? *Multiscale Modeling & Simulation*, 19(3):1143–1166, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Piatnitski:2017:HBM

[PP17] Andrey Piatnitski and Mariya Ptashnyk. Homogenization of biomechanical models for plant

tissues. *Multiscale Modeling & Simulation*, 15(1):339–387, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Plechac:2010:IMM

[PR10] Petr Plecháč and Mathias Rousset. Implicit mass-matrix penalization of Hamiltonian dynamics with application to exact sampling of stiff systems. *Multiscale Modeling & Simulation*, 8(2):498–539, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Papanicolaou:2007:SAL

[PRS07] George Papanicolaou, Lenya Ryzhik, and Knut Sølna. Self-averaging from lateral diversity in the Itô–Schrödinger equation. *Multiscale Modeling & Simulation*, 6(2):468–492, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Pavliotis:2003:WNL

[PS03] G. A. Pavliotis and A. M. Stuart. White noise limits for inertial particles in a random field. *Multiscale Modeling & Simulation*, 1(4):527–553, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/42107`.

Pavliotis:2005:AWN

[PS05] G. A. Pavliotis and A. M. Stuart. Analysis of white noise limits for stochastic systems with two fast relaxation times. *Multiscale Modeling & Simulation*, 4(1):1–35, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61050`.

Peterseim:2012:FEE

[PS12] D. Peterseim and S. Sauter. Finite elements for elliptic problems with highly varying, nonperiodic diffusion matrix. *Multiscale Modeling & Simulation*, 10(3):665–695, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Papanicolaou:2014:FML

[PS14] Andrew Papanicolaou and Konstantinos Spiliopoulos. Filtering the maximum likelihood for multiscale problems. *Multiscale Modeling & Simulation*, 12(3): 1193–1229, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Price:2019:RRO

[PS19] Jacob Price and Panos Stinis. Renormalized reduced order models with memory for long time prediction. *Multiscale Modeling & Simulation*, 17 (1):68–91, ???? 2019. CODEN MMSUBT. ISSN 1540-

3459 (print), 1540-3467 (electronic).

Pavliotis:2023:MEL

[PSV23] Grigorios A. Pavliotis, Gabriel Stoltz, and Urbain Vaes. Mobility estimation for Langevin dynamics using control variates. *Multiscale Modeling & Simulation*, 21(2):680–715, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1504378`.

Pokern:2009:RDE

[PSVE09] Yvo Pokern, Andrew M. Stuart, and Eric Vanden-Eijnden. Remarks on drift estimation for diffusion processes. *Multiscale Modeling & Simulation*, 8(1): 69–95, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ptashnyk:2013:TSC

[Pta13] Mariya Ptashnyk. Two-scale convergence for locally periodic microstructures and homogenization of plywood structures. *Multiscale Modeling & Simulation*, 11(1):92–117, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ptashnyk:2015:LPU

[Pta15] Mariya Ptashnyk. Locally periodic unfolding method and two-scale convergence on surfaces of locally periodic microstructures. *Multiscale Modeling & Simulation*, 13(3):1061–1105, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ptashnyk:2020:MAS

[PV20] Mariya Ptashnyk and Chandrasekhar Venkataraman. Multiscale analysis and simulation of a signaling process with surface diffusion. *Multiscale Modeling & Simulation*, 18(2):851–886, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Peszynska:2024:UEH

[PVB24] Malgorzata Peszynska, Naren Vohra, and Lisa Bigler. Upscaling an extended heterogeneous Stefan problem from the pore-scale to the Darcy scale in permafrost. *Multiscale Modeling & Simulation*, 22(1):436–475, March 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Pillay:2010:AAM

[PWPK10] S. Pillay, M. J. Ward, A. Peirce, and T. Kolokolnikov. An asymptotic analysis of the mean first passage time for narrow escape problems: Part I: Two-dimensional domains. *Multiscale Modeling & Simulation*, 8 (3):803–835, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Pereira:2022:ASI

[PYSF22] Rodrigo M. Pereira, Natacha Nguyen Van Yen, Kai Schneider, and Marie Farge. Adaptive solution of initial value problems by a dynamical Galerkin scheme. *Multiscale Modeling & Simulation*, 20(3):1147–1166, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1459782`.

Qin:2022:CMN

[QGZX22] Xiaoxue Qin, Yejun Gu, Luchan Zhang, and Yang Xiang. Continuum model and numerical method for dislocation structure and energy of grain boundaries. *Multiscale Modeling & Simulation*, 20(1):323–348, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/20M1366782`.

Quang:2013:MHE

[QHL13] H. Le Quang, Q.-C. He, and H.-T. Le. Multiscale homogenization of elastic layered composites with unidirectionally periodic rough interfaces. *Multiscale Modeling & Simulation*, 11(4):1127–1148, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Qian:2016:EGO

[QLY+16] Jianliang Qian, Wangtao Lu, Lijun Yuan, Songting Luo, and Robert Burridge. Eulerian geometrical optics and fast Huygens sweeping methods for three-dimensional time-harmonic high-frequency Maxwell's equations in inhomogeneous media. *Multiscale Modeling & Simulation*, 14(2):595–636, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Quah:2010:EMR

[QM10] John Quah and Dionisios Margetis. Electromigration in macroscopic relaxation of stepped surfaces. *Multiscale Modeling & Simulation*, 8(2):667–700, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Qian:2021:HBA

[QSLB21] Jianliang Qian, Jian Song, Wangtao Lu, and Robert Burridge. Hadamard–Babich ansatz for point-source elastic wave equations in variable media at high frequencies. *Multiscale Modeling & Simulation*, 19(1):46–86, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Quarteroni:2003:AGM

[QV03] Alfio Quarteroni and Alessandro Veneziani. Analysis of a geometrical multiscale model based on the coupling of ODE and PDE for blood flow simulations. *Multiscale Modeling & Simulation*, 1(2):173–195, 2003. CODEN MM-

SUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/40848.

Qian:2005:DCF

[QW05] Tiezheng Qian and Xiao-Ping Wang. Driven cavity flow: From molecular dynamics to continuum hydrodynamics. *Multiscale Modeling & Simulation*, 3(4): 749–763, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/60486.

Qian:2010:FMG

[QY10] Jianliang Qian and Lexing Ying. Fast multiscale Gaussian wavepacket transforms and multiscale Gaussian beams for the wave equation. *Multiscale Modeling & Simulation*, 8(5):1803–1837, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1803_s1.

Ryan:2013:KMS

[RBHK13] S. D. Ryan, L. Berlyand, B. M. Haines, and D. A. Karpeev. A kinetic model for semidilute bacterial suspensions. *Multiscale Modeling & Simulation*, 11 (4):1176–1196, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Roth:2021:KMC

[RBSS+21] Jacob Roth, David A. Barajas-Solano, Panos Stinis, Jonathan Weare, and Mihai Anitescu. A kinetic Monte Carlo approach for simulating cascading transmission line failure. *Multiscale Modeling & Simulation*, 19(1): 208–241, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rahmoun:2009:MMA

[RCMD09] Jamila Rahmoun, Fahmi Chaari, Eric Markiewicz, and Pascal Drazetic. Micromechanical modeling of the anisotropy of elastic biological composites. *Multiscale Modeling & Simulation*, 8(1):326–336, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rahman:2005:MRM

[RDS+05] Inam Ur Rahman, Iddo Drori, Victoria C. Stodden, David L. Donoho, and Peter Schröder. Multiscale representations for manifold-valued data. *Multiscale Modeling & Simulation*, 4(4):1201–1232, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/62272.

Reyes:2014:FKM

[Rey14] Kristofer Reyes. Fast kinetic Monte Carlo simulations using

hash table based caching with applications to nanowire growth and sintering. *Multiscale Modeling & Simulation*, 12(1):200–224, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Reingruber:2011:NEP

[RH11] Jürgen Reingruber and David Holcman. The narrow escape problem in a flat cylindrical microdomain with application to diffusion in the synaptic cleft. *Multiscale Modeling & Simulation*, 9(2):793–816, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i2/p793_s1`.

Rubinstein:2005:MTD

[RJM05] B. Rubinstein, K. Jacobson, and A. Mogilner. Multiscale two-dimensional modeling of a motile simple-shaped cell. *Multiscale Modeling & Simulation*, 3(2):413–439, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60370`.

Rohde:2017:BCP

[RK17] Shelley B. Rohde and Arnold D. Kim. Backscattering of continuous and pulsed beams. *Multiscale Modeling & Simulation*, 15 (4):1356–1375, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rylko:2013:CFC

[RKM13] Natalia Rylko, Beata Krzaczek, and Vladimir Mityushev. Conductivity of fibre composites with fractures on the boundary of inclusions. *Multiscale Modeling & Simulation*, 11(1):152–161, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rizzi:2012:UQMa

[RND+12a] F. Rizzi, H. N. Najm, B. J. Debusschere, K. Sargsyan, M. Salloum, H. Adalsteinsson, and O. M. Knio. Uncertainty quantification in MD simulations. Part I: Forward propagation. *Multiscale Modeling & Simulation*, 10(4):1428–1459, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rizzi:2012:UQMb

[RND+12b] F. Rizzi, H. N. Najm, B. J. Debusschere, K. Sargsyan, M. Salloum, H. Adalsteinsson, and O. M. Knio. Uncertainty quantification in MD simulations. Part II: Bayesian inference of force-field parameters. *Multiscale Modeling & Simulation*, 10 (4):1460–1492, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Roberts:2009:MDA

[Rob09] A. J. Roberts. Model dynamics across multiple length and time scales on a spatial multigrid. *Multiscale Modeling & Simulation*, 7(4):1525–1548, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rathinam:2005:CST

[RPCG05] Muruhan Rathinam, Linda R. Petzold, Yang Cao, and Daniel T. Gillespie. Consistency and stability of tau-leaping schemes for chemical reaction systems. *Multiscale Modeling & Simulation*, 4(3):867–895, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60320`.

Russo:2006:MFM

[RS06] Giovanni Russo and Peter Smereka. A multigrid-Fourier method for the computation of elastic fields with application to heteroepitaxy. *Multiscale Modeling & Simulation*, 5(1):130–148, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Roussel:2019:PAC

[RS19] Julien Roussel and Gabriel Stoltz. A perturbative approach to control variates in molecular dynamics. *Multiscale Modeling & Simulation*, 17(1):552–591, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ron:2010:FMA

[RSB10] Dorit Ron, Ilya Safro, and Achi Brandt. A fast multigrid algorithm for energy minimization under planar density constraints. *Multiscale Modeling & Simulation*, 8(5):1599–1620, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1599_s1`.

Ron:2011:RBC

[RSB11] Dorit Ron, Ilya Safro, and Achi Brandt. Relaxation-based coarsening and multiscale graph organization. *Multiscale Modeling & Simulation*, 9(1):407–423, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p407_s1`.

Rizzi:2011:BIA

[RSM+11] F. Rizzi, M. Salloum, Y. M. Marzouk, R.-G. Xu, M. L. Falk, T. P. Weihs, G. Fritz, and O. M. Knio. Bayesian inference of atomic diffusivity in a binary Ni/Al system based on molecular dynamics. *Multiscale Modeling & Simulation*, 9(1):486–512, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/`

resource/1/mmsubt/v9/i1/p486_s1.

Rolls:2017:VRR

[RTE17] Edward Rolls, Yuichi Togashi, and Radek Erban. Varying the resolution of the Rouse model on temporal and spatial scales: Application to multiscale modeling of DNA dynamics. *Multiscale Modeling & Simulation*, 15 (4):1672–1693, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ramirez:2006:GTA

[RTW+06] Jorge M. Ramirez, Enrique A. Thomann, Edward C. Waymire, Roy Haggerty, and Brian Wood. A generalized Taylor–Aris formula and skew diffusion. *Multiscale Modeling & Simulation*, 5 (3):786–801, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Reuther:2015:ICV

[RV15] S. Reuther and A. Voigt. The interplay of curvature and vortices in flow on curved surfaces. *Multiscale Modeling & Simulation*, 13(2):632–643, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Reuther:2018:EIC

[RV18] Sebastian Reuther and Axel Voigt. Erratum: The interplay of curvature and vortices in flow on curved surfaces. *Multiscale Modeling & Simulation*, 16(3): 1448–1453, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Rohl:2021:CMR

[RWF21] Susanne Röhl, Marcus Weber, and Konstantin Fackeldey. Computing the minimal rebinding effect for NonReversible processes. *Multiscale Modeling & Simulation*, 19(1):460–477, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Strong:2006:SRR

[SAC06] David M. Strong, Jean-François Aujol, and Tony F. Chan. Scale recognition, regularization parameter selection, and Meyer's G norm in total variation regularization. *Multiscale Modeling & Simulation*, 5(1):273–303, ???? 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sangalli:2003:CSS

[San03] Giancarlo Sangalli. Capturing small scales in elliptic problems using a residual-free bubbles finite element method. *Multiscale Modeling & Simulation*, 1(3): 485–503, 2003. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/41140.

Simon:2020:MFE

[SB20] Konrad Simon and Jörn Behrens. Multiscale finite elements for transient advection–diffusion equations through advection-induced coordinates. *Multiscale Modeling & Simulation*, 18(2): 543–571, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stepanova:2022:MCG

[SBMA22] Daria Stepanova, Helen M. Byrne, Philip K. Maini, and Tomás Alarcón. A method to coarse-grain MultiAgent stochastic systems with regions of multistability. *Multiscale Modeling & Simulation*, 20(1): 404–432, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1418575`.

Sun:2011:MME

[SCE11] Yi Sun, Russel Caflisch, and Bjorn Engquist. A multiscale method for epitaxial growth. *Multiscale Modeling & Simulation*, 9(1):335–354, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p335_s1`.

Schmidt:2006:DCN

[Sch06] Bernd Schmidt. A derivation of continuum nonlinear plate theory from atomistic models. *Multiscale Modeling & Simulation*, 5 (2):664–694, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schmidt:2014:IPL

[Sch14] Bernd Schmidt. On the infinite particle limit in Lagrangian dynamics and convergence of optimal transportation meshfree methods. *Multiscale Modeling & Simulation*, 12(1):265–289, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shaydulin:2019:RBC

[SCS19] Ruslan Shaydulin, Jie Chen, and Ilya Safro. Relaxation-based coarsening for multilevel hypergraph partitioning. *Multiscale Modeling & Simulation*, 17(1):482–506, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schlick:2006:SSM

[SD06] Tamar Schlick and Ken Dill. Special section on multiscale modeling in biology. *Multiscale Modeling & Simulation*, 5 (4):1174, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sun:2006:HMM

[SE06] Yi Sun and Bjorn Engquist. Heterogeneous multiscale methods for interface tracking of combustion fronts. *Multiscale Modeling & Simulation*, 5(2):

532–563, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stasevich:2007:AFO

[SE07] T. J. Stasevich and T. L. Einstein. Analytic formulas for the orientation dependence of step stiffness and line tension: Key ingredients for numerical modeling. *Multiscale Modeling & Simulation*, 6(1):90–104, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sjoberg:2005:FBD

[SEK+05] Daniel Sjöberg, Christian Engström, Gerhard Kristensson, David J. N. Wall, and Niklas Wellander. A Floquet–Bloch decomposition of Maxwell's equations applied to homogenization. *Multiscale Modeling & Simulation*, 4(1):149–171, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60703`.

Steffen:2018:NMF

[SEZ+18] Kyle R. Steffen, Yekaterina Epshteyn, Jingyi Zhu, Megan J. Bowler, Jody W. Deming, and Kenneth M. Golden. Network modeling of fluid transport through sea ice with entrained exopolymeric substances. *Multiscale Modeling & Simulation*, 16(1):106–124, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schafer:2011:DCA

[SFL11] Matthias Schäfer, Martin Frank, and C. David Levermore. Diffusive corrections to P_N approximations. *Multiscale Modeling & Simulation*, 9(1):1–28, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p1_s1`.

Schmidt:2009:EEA

[SFO09] Bernd Schmidt, Fernando Fraternali, and Michael Ortiz. Eigenfracture: an eigendeformation approach to variational fracture. *Multiscale Modeling & Simulation*, 7(3):1237–1266, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stern:2009:IEV

[SG09] Ari Stern and Eitan Grinspun. Implicit-explicit variational integration of highly oscillatory problems. *Multiscale Modeling & Simulation*, 7(4):1779–1794, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sushnikova:2023:FLF

[SGNR23] Daria Sushnikova, Leslie Greengard, Michael O. Neil, and Manas Rachh. FMM-LU: a fast direct solver for multiscale boundary integral equa-

tions in three dimensions. *Multiscale Modeling & Simulation*, 21 (4):1570–1601, November 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Setayeshgar:2005:ACI

[SGOK05] S. Setayeshgar, C. W. Gear, H. G. Othmer, and I. G. Kevrekidis. Application of coarse integration to bacterial chemotaxis. *Multiscale Modeling & Simulation*, 4(1):307–327, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sambin/dbq/article/60087`.

Szpruch:2010:CHT

[SH10] Lukasz Szpruch and Desmond J. Higham. Comparing hitting time behavior of Markov jump processes and their diffusion approximations. *Multiscale Modeling & Simulation*, 8(2):605–621, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shardlow:2004:NWE

[Sha04] Tony Shardlow. Nucleation of waves in excitable media by noise. *Multiscale Modeling & Simulation*, 3(1):151–167, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sambin/dbq/article/60214`.

Shapeev:2011:CEB

[Sha11] Alexander V. Shapeev. Consistent energy-based atomistic/continuum coupling for two-body potentials in one and two dimensions. *Multiscale Modeling & Simulation*, 9(3):905–932, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p905_s1`.

Shapeev:2016:MTP

[Sha16] Alexander V. Shapeev. Moment tensor potentials: a class of systematically improvable interatomic potentials. *Multiscale Modeling & Simulation*, 14(3):1153–1173, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stenzel:2014:GFC

[SHB+14] Ole Stenzel, Christian Hirsch, Tim Brereton, Bjoern Baumeier, Denis Andrienko, Dirk Kroese, and Volker Schmidt. A general framework for consistent estimation of charge transport properties via random walks in random environments. *Multiscale Modeling & Simulation*, 12 (3):1108–1134, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schmidt:2023:BTT

[SíZ23] Bernd Schmidt and Ji í Zeman. A bending-torsion theory

for thin and ultrathin rods as a **Γ**-limit of atomistic models. *Multiscale Modeling & Simulation*, 21(4):1717–1745, December 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Suribhatla:2011:ECA

[SJF+11] R. Suribhatla, I. Jankovic, A. Fiori, A. Zarlenga, and G. Dagan. Effective conductivity of an anisotropic heterogeneous medium of random conductivity distribution. *Multiscale Modeling & Simulation*, 9(3):933–954, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p933_s1`.

Sjoberg:2005:HDM

[Sjö05] Daniel Sjöberg. Homogenization of dispersive material parameters for Maxwell's equations using a singular value decomposition. *Multiscale Modeling & Simulation*, 4(3):760–789, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61415`.

Shapeev:2017:ACD

[SL17] Alexander V. Shapeev and Mitchell Luskin. Approximation of crystalline defects at finite temperature. *Multiscale Modeling & Simulation*, 15(4):1830–1864, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Scott:2020:AAC

[SM20a] James M. Scott and Tadele Mengesha. Asymptotic analysis of a coupled system of nonlocal equations with oscillatory coefficients. *Multiscale Modeling & Simulation*, 18(4):1462–1488, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Spiliopoulos:2020:ISS

[SM20b] Konstantinos Spiliopoulos and Matthew R. Morse. Importance sampling for slow-fast diffusions based on moderate deviations. *Multiscale Modeling & Simulation*, 18(1):315–350, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sfakianakis:2020:HMM

[SMC20] Nikolaos Sfakianakis, Anotida Madzvamuse, and Mark A. J. Chaplain. A hybrid multiscale model for cancer invasion of the extracellular matrix. *Multiscale Modeling & Simulation*, 18(2):824–850, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sarich:2010:AQM

[SNS10] Marco Sarich, Frank Noé, and Christof Schütte. On the approximation quality of Markov

state models. *Multiscale Modeling & Simulation*, 8(4):1154–1177, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Soussi:2005:SHG

[Sou05] Sofiane Soussi. Second-harmonic generation in the undepleted-pump approximation. *Multiscale Modeling & Simulation*, 4(1):115–148, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60879`.

Scianna:2012:MDC

[SP12] M. Scianna and L. Preziosi. Multiscale developments of the cellular Potts model. *Multiscale Modeling & Simulation*, 10 (2):342–382, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schmeller:2024:SIL

[SP24] Leonie Schmeller and Dirk Peschka. Sharp-interface limits of Cahn–Hilliard models and mechanics with moving contact lines. *Multiscale Modeling & Simulation*, 22(2):869–890, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1546592`.

Seleson:2009:PUM

[SPGL09] Pablo Seleson, Michael L. Parks, Max Gunzburger, and Richard B. Lehoucq. Peridynamics as an upscaling of molecular dynamics. *Multiscale Modeling & Simulation*, 8(1):204–227, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Spiliopoulos:2015:RES

[Spi15] Konstantinos Spiliopoulos. Rare event simulation for multiscale diffusions in random environments. *Multiscale Modeling & Simulation*, 13(4):1290–1311, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schneider:2018:SHC

[SPM18] Joshua P. Schneider, Paul N. Patrone, and Dionisios Margetis. Steric hindrance of crystal growth: Nonlinear step flow in 1 + 1 dimensions. *Multiscale Modeling & Simulation*, 16 (1):266–299, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Samaey:2005:GTS

[SRK05] Giovanni Samaey, Dirk Roose, and Ioannis G. Kevrekidis. The gap-tooth scheme for homogenization problems. *Multiscale Modeling & Simulation*, 4(1): 278–306, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL

http://epubs.siam.org/sam-bin/dbq/article/60204.

Schaffner:2015:CAQ

[SS15] Mathias Schäffner and Anja Schlömerkemper. On a Γ-convergence analysis of a quasicontinuum method. *Multiscale Modeling & Simulation*, 13 (1):132–172, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schleuss:2022:OLA

[SS22] Julia Schleuß and Kathrin Smetana. Optimal local approximation spaces for parabolic problems. *Multiscale Modeling & Simulation*, 20(1):551–582, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL https://epubs.siam.org/doi/10.1137/20M1384294.

Spacek:2023:ERL

[SS23] Renato Spacek and Gabriel Stoltz. Extending the regime of linear response with synthetic forcings. *Multiscale Modeling & Simulation*, 21(4):1602–1643, November 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Salloum:2012:SMC

[SSJ+12] Maher Salloum, Khachik Sargsyan, Reese Jones, Bert Debusschere, Habib N. Najm, and Helgi Adalsteinsson. A stochastic multiscale coupling scheme to account for sampling noise in atomistic-to-continuum simulations. *Multiscale Modeling & Simulation*, 10(2):550–584, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Salloum:2015:QSN

[SSJ+15] Maher Salloum, Khachik Sargsyan, Reese Jones, Habib N. Najm, and Bert Debusschere. Quantifying sampling noise and parametric uncertainty in atomistic-to-continuum simulations using surrogate models. *Multiscale Modeling & Simulation*, 13(3): 953–976, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schafer:2021:CIA

[SSO21] Florian Schäfer, T. J. Sullivan, and Houman Owhadi. Compression, inversion, and approximate PCA of dense kernel matrices at near-linear computational complexity. *Multiscale Modeling & Simulation*, 19(2): 688–730, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shi:2018:HEP

[SST18] Zuoqiang Shi, Jian Sun, and Minghao Tian. Harmonic extension on the point cloud. *Multiscale Modeling & Simulation*, 16 (1):215–247, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shen:2023:PAD

[SST23] Xinhua Shen, Hongpeng Sun, and Xuecheng Tai. Preconditioned algorithm for difference of convex functions with applications to graph Ginzburg–Landau model. *Multiscale Modeling & Simulation*, 21(4):1667–1689, December 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sarich:2010:OFA

[SSVE10] Marco Sarich, Christof Schütte, and Eric Vanden-Eijnden. Optimal fuzzy aggregation of networks. *Multiscale Modeling & Simulation*, 8(4):1535–1561, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sechi:2021:EKG

[SSW21] Renata Sechi, Alexander Sikorski, and Marcus Weber. Estimation of the Koopman generator by Newton's extrapolation. *Multiscale Modeling & Simulation*, 19(2):758–774, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sun:2017:MLP

[ST17] Weiran Sun and Min Tang. Macroscopic limits of pathway-based kinetic models for *E. coli* chemotaxis in large gradient environments. *Multiscale Modeling & Simulation*, 15(2):797–826, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stoltz:2018:LDG

[ST18] Gabriel Stoltz and Zofia Trstanova. Langevin dynamics with general kinetic energies. *Multiscale Modeling & Simulation*, 16 (2):777–806, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shvydkoy:2021:MED

[ST21a] Roman Shvydkoy and Eitan Tadmor. Multiflocks: Emergent dynamics in systems with multiscale collective behavior. *Multiscale Modeling & Simulation*, 19 (2):1115–1141, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Sprekeler:2021:OCR

[ST21b] Timo Sprekeler and Hung V. Tran. Optimal convergence rates for elliptic homogenization problems in nondivergence-form: Analysis and numerical illustrations. *Multiscale Modeling & Simulation*, 19(3):1453–1473, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stoter:2018:RBV

[STHS18] Stein K. F. Stoter, Sergio R. Turteltaub, Steven J. Hulshoff, and Dominik Schillinger. Residual-based variational multiscale modeling in a discontinuous Galerkin framework. *Multi-*

scale Modeling & Simulation, 16 (3):1333–1364, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stinis:2004:SOP

[Sti04] Panagiotis Stinis. Stochastic optimal prediction for the Kuramoto–Sivashinsky equation. *Multiscale Modeling & Simulation*, 2(4):580–612, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60042`.

Stinis:2007:HOM

[Sti07] Panagiotis Stinis. Higher order Mori–Zwanzig models for the Euler equations. *Multiscale Modeling & Simulation*, 6 (3):741–760, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stinis:2012:NCS

[Sti12] Panos Stinis. Numerical computation of solutions of the critical nonlinear Schrödinger equation after the singularity. *Multiscale Modeling & Simulation*, 10(1):48–60, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Stoilov:2008:MMF

[Sto08] Vesselin Stoilov. A multiscale model of first and second order phase transformations with application to SMA single crystals. *Multiscale Modeling & Simulation*, 7(1):197–213, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Struchtrup:2005:DME

[Str05] Henning Struchtrup. Derivation of 13 moment equations for rarefied gas flow to second order accuracy for arbitrary interaction potentials. *Multiscale Modeling & Simulation*, 3(1): 221–243, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60311`.

Schaeffer:2020:ESD

[STWZ20] Hayden Schaeffer, Giang Tran, Rachel Ward, and Linan Zhang. Extracting structured dynamical systems using sparse optimization with very few samples. *Multiscale Modeling & Simulation*, 18(4):1435–1461, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Si:2014:PBM

[STY14] Guangwei Si, Min Tang, and Xu Yang. A pathway-based mean-field model for *E. coli* chemotaxis: Mathematical derivation and its hyperbolic and parabolic limits. *Multiscale Modeling & Simulation*, 12 (2):907–926, ???? 2014. CODEN MMSUBT. ISSN 1540-

3459 (print), 1540-3467 (electronic).

Scheichl:2011:WAP

[SVZ11] Robert Scheichl, Panayot S. Vassilevski, and Ludmil T. Zikatanov. Weak approximation properties of elliptic projections with functional constraints. *Multiscale Modeling & Simulation*, 9(4):1677–1699, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1677_s1`.

Simpson:2011:CSC

[SW11] G. Simpson and M. I. Weinstein. Coherent structures and carrier shocks in the nonlinear periodic Maxwell equations. *Multiscale Modeling & Simulation*, 9(3):955–990, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p955_s1`.

Sini:2019:EHC

[SW19] Mourad Sini and Haibing Wang. Estimation of the heat conducted by a cluster of small cavities and characterization of the equivalent heat conduction. *Multiscale Modeling & Simulation*, 17(4):1214–1251, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Storath:2020:WSR

[SW20] Martin Storath and Andreas Weinmann. Wavelet sparse regularization for manifold-valued data. *Multiscale Modeling & Simulation*, 18(2):674–706, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shi:2014:NBA

[SWF+14] Feng Shi, Simi Wang, M. Gregory Forest, Peter J. Mucha, and Ruhai Zhou. Network-based assessments of percolation-induced current distributions in sheared rod macromolecular dispersions. *Multiscale Modeling & Simulation*, 12(1):249–264, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shi:2013:PIE

[SWFM13] Feng Shi, Simi Wang, M. Gregory Forest, and Peter J. Mucha. Percolation-induced exponential scaling in the large current tails of random resistor networks. *Multiscale Modeling & Simulation*, 11(4):1298–1310, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Schutte:2004:APF

[SWHH04] Christof Schütte, Jessika Walter, Carsten Hartmann, and Wilhelm Huisinga. An averaging principle for fast degrees of freedom exhibiting long-term correlations. *Multiscale*

Modeling & Simulation, 2(3): 501–526, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60030`.

Sun:2005:MAM

[SWOP05] Shuyu Sun, Mary F. Wheeler, Mandri Obeyesekere, and Charles Patrick, Jr. Multiscale angiogenesis modeling using mixed finite element methods. *Multiscale Modeling & Simulation*, 4(4):1137–1167, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62444`.

Sini:2021:AAW

[SWY21] Mourad Sini, Haibing Wang, and Qingyun Yao. Analysis of the acoustic waves reflected by a cluster of small holes in the time-domain and the equivalent mass density. *Multiscale Modeling & Simulation*, 19(2):1083–1114, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Shen:2009:FEC

[SXZ09] Lihua Shen, Jack Xin, and Aihui Zhou. Finite element computations of Kolmogorov–Petrovsky–Piskunov front speeds in random shear flows in cylinders. *Multiscale Modeling & Simulation*, 7(3):1029–1041, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tsaneva-Atanasova:2005:COM

[TASY+05] K. Tsaneva-Atanasova, T. J. Shuttleworth, D. I. Yule, J. L. Thompson, and J. Sneyd. Calcium oscillations and membrane transport: The importance of two time scales. *Multiscale Modeling & Simulation*, 3(2): 245–264, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60247`.

Touboul:2024:TSB

[TCB24] Marie Touboul, Rémi Cornaggia, and Cédric Bellis. Topological sensitivity-based analysis and optimization of microstructured interfaces. *Multiscale Modeling & Simulation*, 22(2): 836–868, June 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M1593528`.

Tavallali:2014:EIS

[THS14] Peyman Tavallali, Thomas Y. Hou, and Zuoqiang Shi. Extraction of intrawave signals using the sparse time-frequency representation method. *Multiscale Modeling & Simulation*, 12(4): 1458–1493, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tzou:2015:MFP

[TK15] J. C. Tzou and T. Kolokolnikov. Mean first passage time for a small rotating trap inside a reflective disk. *Multiscale Modeling & Simulation*, 13(1):231–255, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Thompson:2015:SAD

[TKM15] W. F. Thompson, R. A. Kuske, and A. H. Monahan. Stochastic averaging of dynamical systems with multiple time scales forced with α-stable noise. *Multiscale Modeling & Simulation*, 13(4): 1194–1223, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Trucu:2013:MMB

[TLCW13] Dumitru Trucu, Ping Lin, Mark A. J. Chaplain, and Yangfan Wang. A multiscale moving boundary model arising in cancer invasion. *Multiscale Modeling & Simulation*, 11(1):309–335, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Taylor:2017:EBC

[TMC+17] Dane Taylor, Sean A. Myers, Aaron Clauset, Mason A. Porter, and Peter J. Mucha. Eigenvector-based centrality measures for temporal networks. *Multiscale Modeling & Simulation*, 15(1):537–574, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tadmor:2004:MIR

[TNV04] Eitan Tadmor, Suzanne Nezzar, and Luminita Vese. A multiscale image representation using hierarchical (BV, L^2) decompositions. *Multiscale Modeling & Simulation*, 2(4):554–579, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60044`.

Tao:2010:NSP

[TOM10] Molei Tao, Houman Owhadi, and Jerrold E. Marsden. Nonintrusive and structure preserving multiscale integration of stiff ODEs, SDEs, and Hamiltonian systems with hidden slow dynamics via flow averaging. *Multiscale Modeling & Simulation*, 8 (4):1269–1324, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Torrilhon:2006:TDB

[Tor06] Manuel Torrilhon. Two-dimensional bulk microflow simulations based on regularized Grad's 13-moment equations. *Multiscale Modeling & Simulation*, 5(3):695–728, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Turco:2009:TPF

[TPC09] A. Turco, D. Passerone, and F. Cardin. Tonelli principle: Finite reduction and fixed energy molecular dynamics trajectories. *Multiscale Modeling & Simulation*, 7(3):1171–1191, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Taylor:2021:TEB

[TPM21] Dane Taylor, Mason A. Porter, and Peter J. Mucha. Tunable eigenvector-based centralities for multiplex and temporal networks. *Multiscale Modeling & Simulation*, 19(1):113–147, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [TPM22].

Taylor:2022:ETE

[TPM22] Dane Taylor, Mason A. Porter, and Peter J. Mucha. Erratum: Tunable eigenvector-based centralities for multiplex and temporal networks. *Multiscale Modeling & Simulation*, 20(3): 1167, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1493707`. See [TPM21].

Tanushev:2007:MWG

[TQR07] Nicolay M. Tanushev, Jianliang Qian, and James V. Ralston. Mountain waves and Gaussian beams. *Multiscale Modeling & Simulation*, 6(2):688–709, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Templeton:2006:TWN

[TS06] Jeremy A. Templeton and Mohammad Shoeybi. Towards wall-normal filtering for large-eddy simulation. *Multiscale Modeling & Simulation*, 5(2): 420–444, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tao:2019:NMH

[TTD19] Yunzhe Tao, Xiaochuan Tian, and Qiang Du. Nonlocal models with heterogeneous localization and their application to seamless local-nonlocal coupling. *Multiscale Modeling & Simulation*, 17(3):1052–1075, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

tenTusscher:2005:WPE

[tTP05] K. H. W. J. ten Tusscher and A. V. Panfilov. Wave propagation in excitable media with randomly distributed obstacles. *Multiscale Modeling & Simulation*, 3(2):265–282, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60265`.

Tafti:2010:FBV

[TU10] Pouya Dehghani Tafti and Michael Unser. Fractional Brownian vector fields. *Multiscale Modeling & Simulation*, 8(5):1645–1670, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1645_s1`.

Tanskanen:2006:ISD

[TW06] Antti J. Tanskanen and Raimond L. Winslow. Integrative structurally detailed model of calcium dynamics in the cardiac diad. *Multiscale Modeling & Simulation*, 5(4):1280–1296, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tran:2017:ERC

[TW17] Giang Tran and Rachel Ward. Exact recovery of chaotic systems from highly corrupted data. *Multiscale Modeling & Simulation*, 15(3):1108–1129, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tao:2015:OSU

[TWZ15] Ran Tao, Zhen Wu, and Qing Zhang. Optimal switching under a regime-switching model with two-time-scale Markov chains. *Multiscale Modeling & Simulation*, 13(1):99–131, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tang:2020:FAM

[TY20] Gao Tang and Haizhao Yang. A fast algorithm for multiresolution mode decomposition. *Multiscale Modeling & Simulation*, 18(2):707–736, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Tosin:2019:KCH

[TZ19] Andrea Tosin and Mattia Zanella. Kinetic-controlled hydrodynamics for traffic models with driver-assist vehicles. *Multiscale Modeling & Simulation*, 17(2):716–749, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Usabiaga:2012:SSF

[UBDB+12] Florencio Balboa Usabiaga, John B. Bell, Rafael Delgado-Buscalioni, Aleksandar Donev, Thomas G. Fai, Boyce E. Griffith, and Charles S. Peskin. Staggered schemes for fluctuating hydrodynamics. *Multiscale Modeling & Simulation*, 10(4): 1369–1408, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Villa:2004:MMS

[VBMS04] Elizabeth Villa, Alexander Balaeff, L. Mahadevan, and Klaus Schulten. Multiscale method for

simulating protein-DNA complexes. *Multiscale Modeling & Simulation*, 2(4):527–553, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60478`.

vanDuijn:2021:MPM

[vDM21] Cornelis J. van Duijn and Andro Mikelic. Mathematical proof of the Mandel–Cryer effect in poroelasticity. *Multiscale Modeling & Simulation*, 19(1):550–567, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vanderlei:2011:CMC

[VFEK11] Ben Vanderlei, James J. Feng, and Leah Edelstein-Keshet. A computational model of cell polarization and motility coupling mechanics and biochemistry. *Multiscale Modeling & Simulation*, 9(4):1420–1443, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1420_s1`.

Visconti:2017:MFD

[VHPT17] Giuseppe Visconti, Michael Herty, Gabriella Puppo, and Andrea Tosin. Multivalued fundamental diagrams of traffic flow in the kinetic Fokker–Planck limit. *Multiscale Modeling & Simulation*, 15(3):1267–1293, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vladimirov:2010:TDP

[VK10] Igor G. Vladimirov and A. Y. Klimenko. Tracing diffusion in porous media with fractal properties. *Multiscale Modeling & Simulation*, 8(4):1178–1211, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vidotto:2019:HMS

[VKK+19] Ettore Vidotto, Timo Koch, Tobias Köppl, Rainer Helmig, and Barbara Wohlmuth. Hybrid models for simulating blood flow in microvascular networks. *Multiscale Modeling & Simulation*, 17(3):1076–1102, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

VanKoten:2019:SCS

[VL19] Brian Van Koten and Mitchell Luskin. Stability and convergence of the string method for computing minimum energy paths. *Multiscale Modeling & Simulation*, 17(2):873–898, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vasilyeva:2024:GMF

[VM24] Maria Vasilyeva and S. M. Mallikarjunaiah. Generalized multiscale finite element treatment of a heterogeneous nonlinear strain-limiting elastic model. *Multiscale Modeling*

& Simulation, 22(1):334–368, February 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vdovina:2005:OUA

[VMK05] Tetyana Vdovina, Susan E. Minkoff, and Oksana Korostyshevskaya. Operator upscaling for the acoustic wave equation. *Multiscale Modeling & Simulation*, 4(4):1305–1338, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/62214`.

Vellender:2011:WFB

[VMM11] A. Vellender, G. S. Mishuris, and A. B. Movchan. Weight function in a bimaterial strip containing an interfacial crack and an imperfect interface. application to Bloch–Floquet analysis in a thin inhomogeneous structure with cracks. *Multiscale Modeling & Simulation*, 9(4):1327–1349, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i4/p1327_s1`.

vanNoorden:2009:CPD

[vN09] T. L. van Noorden. Crystal precipitation and dissolution in a porous medium: Effective equations and numerical experiments. *Multiscale Modeling & Simulation*, 7(3):1220–1236, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

VanKoten:2013:SLS

[VO13] Brian Van Koten and Christoph Ortner. Symmetries of 2-lattices and second order accuracy of the Cauchy–Born model. *Multiscale Modeling & Simulation*, 11(2):615–634, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Voss:2011:SPS

[VS11] T. Voss and J. M. A. Scherpen. Structure preserving spatial discretization of a 1-D piezoelectric Timoshenko beam. *Multiscale Modeling & Simulation*, 9(1):129–154, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p129_s1`.

Vanderhoydonc:2012:NEM

[VV12] Ynte Vanderhoydonc and Wim Vanroose. Numerical extraction of a macroscopic PDE and a lifting operator from a lattice Boltzmann model. *Multiscale Modeling & Simulation*, 10 (3):766–791, ???? 2012. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vanderhoydonc:2016:CRA

[VV16] Ynte Vanderhoydonc and Wim Vanroose. Constrained runs al-

gorithm as a lifting operator for the one-dimensional in space Boltzmann equation with BGK collision term. *Multiscale Modeling & Simulation*, 14(4):1488–1512, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

VanLeemput:2008:MAE

[VVR08] Pieter Van Leemput, Wim Vanroose, and Dirk Roose. Mesoscale analysis of the equation-free constrained runs initialization scheme. *Multiscale Modeling & Simulation*, 6(4):1234–1255, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

VanLeemput:2007:AHL

[VVVR07] Pieter Van Leemput, Christophe Vandekerckhove, Wim Vanroose, and Dirk Roose. Accuracy of hybrid lattice Boltzmann/finite difference schemes for reaction–diffusion systems. *Multiscale Modeling & Simulation*, 6(3):838–857, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vauchelet:2021:NSK

[VY21] Nicolas Vauchelet and Shugo Yasuda. Numerical scheme for kinetic transport equation with internal state. *Multiscale Modeling & Simulation*, 19(1):184–207, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vergara:2008:MBC

[VZ08] Christian Vergara and Paolo Zunino. Multiscale boundary conditions for drug release from cardiovascular stents. *Multiscale Modeling & Simulation*, 7(2):565–588, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Vandecasteele:2020:EMM

[VZS20] Hannes Vandecasteele, Przemysław Zieliński, and Giovanni Samaey. Efficiency of a micro-macro acceleration method for scale-separated stochastic differential equations. *Multiscale Modeling & Simulation*, 18(3):1272–1298, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Witzig:2018:MIP

[WBE+18] Jakob Witzig, Isabel Beckenbach, Leon Eifler, Konstantin Fackeldey, Ambros Gleixner, Andreas Grever, and Marcus Weber. Mixed-integer programming for cycle detection in nonreversible Markov processes. *Multiscale Modeling & Simulation*, 16(1):248–265, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Williams:2008:ARF

[WBG08] Sarah A. Williams, John B. Bell, and Alejandro L. Garcia. Algorithm refinement for fluc-

tuating hydrodynamics. *Multiscale Modeling & Simulation*, 6 (4):1256–1280, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wang:2015:MCC

[WCW15] Xin Wang, Liqun Cao, and Yaushu Wong. Multiscale computation and convergence for coupled thermoelastic system in composite materials. *Multiscale Modeling & Simulation*, 13(2): 661–690, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wang:2008:ADN

[WF08] Wei-Wei Wang and Xiang-Chu Feng. Anisotropic diffusion with nonlinear structure tensor. *Multiscale Modeling & Simulation*, 7(2):963–977, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Weber:2014:CMR

[WF14] M. Weber and K. Fackeldey. Computing the minimal rebinding effect included in a given kinetics. *Multiscale Modeling & Simulation*, 12(1):318–334, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wouters:2019:SMR

[WG19] Jeroen Wouters and Georg A. Gottwald. Stochastic model reduction for slow-fast systems with moderate time scale separation. *Multiscale Modeling & Simulation*, 17(4):1172–1188, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Walter:2010:SMR

[WGM10] J. Walter, O. Gonzalez, and J. H. Maddocks. On the stochastic modeling of rigid body systems with application to polymer dynamics. *Multiscale Modeling & Simulation*, 8 (3):1018–1053, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Washio:2013:MHS

[WiOT+13] Takumi Washio, Jun ichi Okada, Akihito Takahashi, Kazunori Yoneda, Yoshimasa Kadooka, Seiryo Sugiura, and Toshiaki Hisada. Multiscale heart simulation with cooperative stochastic cross-bridge dynamics and cellular structures. *Multiscale Modeling & Simulation*, 11(4):965–999, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Weber:2007:SCP

[WKWD07] Marcus Weber, Susanna Kube, Lionel Walter, and Peter Deuflhard. Stable computation of probability densities for metastable dynamical systems. *Multiscale Modeling & Simulation*, 6(2):396–416, ???? 2007. CODEN MMSUBT. ISSN 1540-

3459 (print), 1540-3467 (electronic).

Wang:2022:ANA

[WLL22] Yating Wang, Wing Tat Leung, and Guang Lin. AMS-Net: Adaptive multiscale sparse neural network with interpretable basis expansion for multiphase flow problems. *Multiscale Modeling & Simulation*, 20(2):618–640, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1405289`.

Wang:2008:DGM

[WLS08] Wei Wang, Xiantao Li, and Chi-Wang Shu. The discontinuous Galerkin method for the multiscale modeling of dynamics of crystalline solids. *Multiscale Modeling & Simulation*, 7 (1):294–320, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wolfsteiner:2006:WMM

[WLT06] Christian Wolfsteiner, Seong H. Lee, and Hamdi A. Tchelepi. Well modeling in the multiscale finite volume method for subsurface flow simulation. *Multiscale Modeling & Simulation*, 5 (3):900–917, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wu:2010:PDB

[WN10] Hao Wu and Frank Noé. Probability distance based compression of hidden Markov models. *Multiscale Modeling & Simulation*, 8(5):1838–1861, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1838_s1`.

Wu:2014:OEF

[WN14] Hao Wu and Frank Noé. Optimal estimation of free energies and stationary densities from multiple biased simulations. *Multiscale Modeling & Simulation*, 12(1):25–54, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wolf:2022:HSS

[Wol22] Sylvain Wolf. Homogenization of the Stokes system in a non-periodically perforated domain. *Multiscale Modeling & Simulation*, 20(1):72–106, ???? 2022. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1390815`.

Wang:2019:IDA

[WOW19] Dong Wang, Braxton Osting, and Xiao-Ping Wang. Interface dynamics for an Allen–Cahn-Type equation governing a matrix-valued field. *Multiscale Modeling & Simulation*, 17(4):

1252–1273, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wang:2018:SAM

[WPA18] Ting Wang, Petr Plechác, and David Aristoff. Stationary averaging for multiscale continuous time Markov chains using parallel replica dynamics. *Multiscale Modeling & Simulation*, 16(1): 1–27, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Williams:2013:EHR

[WSK13a] Matthew O. Williams, Peter J. Schmid, and J. Nathan Kutz. Erratum: Hybrid Reduced-Order Integration with Proper Orthogonal Decomposition and Dynamic Mode Decomposition. *Multiscale Modeling & Simulation*, 11(4):1311, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See [WSK13b].

Williams:2013:HRO

[WSK13b] Matthew O. Williams, Peter J. Schmid, and J. Nathan Kutz. Hybrid reduced-order integration with proper orthogonal decomposition and dynamic mode decomposition. *Multiscale Modeling & Simulation*, 11(2):522–544, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). See erratum [WSK13a].

Wang:2013:CSB

[WTJT13] P. Wang, D. M. Tartakovsky, K. D. Jarman, Jr., and A. M. Tartakovsky. CDF solutions of Buckley–Leverett equation with uncertain parameters. *Multiscale Modeling & Simulation*, 11 (1):118–133, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wessel:2005:RAS

[WTT05] S. Wessel, S. Trebst, and M. Troyer. A renormalization approach to simulations of quantum effects in nanoscale magnetic systems. *Multiscale Modeling & Simulation*, 4(1): 237–249, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60206`.

Wang:2021:SEE

[WXZ21] Zhongjian Wang, Jack Xin, and Zhiwen Zhang. Sharp error estimates on a stochastic structure-preserving scheme in computing effective diffusivity of 3D chaotic flows. *Multiscale Modeling & Simulation*, 19(3):1167–1189, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wang:2018:ART

[WY18] Hao Wang and Siyao Yang. Analysis of the residual-type and the gradient recovery-type a posteriori error estimators

for a consistent atomistic-to-continuum coupling method in one-dimension. *Multiscale Modeling & Simulation*, 16(2):679–709, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Wallner:2007:SPL

[WYG07] J. Wallner, E. Nava Yazdani, and P. Grohs. Smoothness properties of Lie group subdivision schemes. *Multiscale Modeling & Simulation*, 6(2):493–505, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xiong:2009:SCM

[XEMK09] Ruichang Xiong, Rebecca L. Empting, Ian C. Morris, and David J. Keffer. Self-consistent multiscale modeling in the presence of inhomogeneous fields. *Multiscale Modeling & Simulation*, 8(1):193–203, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xu:2016:MIB

[XGBD16] Feifei Xu, Max Gunzburger, John Burkardt, and Qiang Du. A multiscale implementation based on adaptive mesh refinement for the nonlocal peridynamics model in one dimension. *Multiscale Modeling & Simulation*, 14(1):398–429, ???? 2016. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xia:2014:HDF

[XH14] Bingxing Xia and Viet Ha Hoang. High dimensional finite elements for multiscale wave equations. *Multiscale Modeling & Simulation*, 12(4):1622–1666, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xu:2024:ISC

[XH24] Fei Xu and Qiumei Huang. Improved self-consistent field iteration for Kohn–Sham density functional theory. *Multiscale Modeling & Simulation*, 22(1): 142–154, January 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xiu:2005:EFM

[XK05] Dongbin Xiu and Ioannis G. Kevrekidis. Equation-free, multiscale computation for unsteady random diffusion. *Multiscale Modeling & Simulation*, 4(3):915–935, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/61500`.

Xiu:2004:TSN

[XT04] Dongbin Xiu and Daniel M. Tartakovsky. A two-scale nonperturbative approach to uncertainty analysis of diffusion in random composites. *Multiscale Modeling & Simulation*, 2(4): 662–674, 2004. CODEN MMSUBT. ISSN 1540-3459 (print),

1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60268`.

Xu:2020:CAF

[Xu20] Fei Xu. A cascadic adaptive finite element method for nonlinear eigenvalue problems in quantum physics. *Multiscale Modeling & Simulation*, 18(1): 198–220, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xie:2014:MCD

[XX14] Hui Xie and Xuejun Xu. Mass conservative domain decomposition preconditioners for multiscale finite volume method. *Multiscale Modeling & Simulation*, 12(4):1667–1690, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xiao:2023:MAD

[XXZ23] Si Xiao, Xianmin Xu, and Zhen Zhang. Multiscale analysis for dynamic contact angle hysteresis on rough surfaces. *Multiscale Modeling & Simulation*, 21(1): 400–425, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1504603`.

Xie:2009:SEP

[XY09] Gang Xie and Thomas P.-Y. Yu. Smoothness equivalence properties of general manifold-valued data subdivision schemes. *Multiscale Modeling & Simulation*, 7 (3):1073–1100, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xu:2018:TMN

[XYZ18] Jie Xu, Fangfu Ye, and Pingwen Zhang. A tensor model for nematic phases of bent-core molecules based on molecular theory. *Multiscale Modeling & Simulation*, 16(4):1581–1602, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Xie:2021:WPF

[XZ21] Peng Xie and Yi Zhu. Wave packets in the fractional nonlinear Schrödinger equation with a honeycomb potential. *Multiscale Modeling & Simulation*, 19 (2):951–979, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ye:2023:CEM

[YC23] Changqing Ye and Eric T. Chung. Constraint energy minimizing generalized multiscale finite element method for inhomogeneous boundary value problems with high contrast coefficients. *Multiscale Modeling & Simulation*, 21(1):194–217, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/21M1459113`.

Yang:2018:ISE

[YCD18] Chang Yang, Jonathan Claustre, and Fabrice Deluzet. Iterative solvers for elliptic problems with arbitrary anisotropy strengths. *Multiscale Modeling & Simulation*, 16(4):1795–1823, ???? 2018. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ye:2021:AAN

[YCD21] Changqing Ye, Junzhi Cui, and Hao Dong. Asymptotic analysis of nonlinear Robin-type boundary value problems with small periodic structure. *Multiscale Modeling & Simulation*, 19(2): 830–845, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Yang:2008:DRI

[YCF+08] Xiaofeng Yang, Zhenlu Cui, M. Gregory Forest, Qi Wang, and Jie Shen. Dimensional robustness and instability of sheared, semidilute, nanorod dispersions. *Multiscale Modeling & Simulation*, 7(2):622–654, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Yu:2005:MMD

[YDL05] Peng Yu, Qiang Du, and Chun Liu. From micro to macro dynamics via a new closure approximation to the FENE model of polymeric fluids. *Multiscale Modeling & Simulation*, 3(4): 895–917, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60279`.

Ying:2009:FCP

[YF09] Lexing Ying and Sergey Fomel. Fast computation of partial Fourier transforms. *Multiscale Modeling & Simulation*, 8(1): 110–124, ???? 2009. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Yin:2007:TVR

[YGO07] Wotao Yin, Donald Goldfarb, and Stanley Osher. The total variation regularized L^1 model for multiscale decomposition. *Multiscale Modeling & Simulation*, 6(1):190–211, ???? 2007. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ying:2015:DPH

[Yin15a] Lexing Ying. Directional preconditioner for 2D high frequency obstacle scattering. *Multiscale Modeling & Simulation*, 13(3):829–846, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ying:2015:FDC

[Yin15b] Lexing Ying. Fast directional computation of high frequency boundary integrals via local FFTs. *Multiscale Modeling & Simulation*, 13(1):423–439, ????

2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ying:2015:SPP

[Yin15c] Lexing Ying. Sparsifying preconditioner for pseudospectral approximations of indefinite systems on periodic structures. *Multiscale Modeling & Simulation*, 13(2):459–471, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ying:2015:SPL

[Yin15d] Lexing Ying. Sparsifying preconditioner for the Lippmann–Schwinger equation. *Multiscale Modeling & Simulation*, 13(2):644–660, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Ying:2017:TNS

[Yin17] Lexing Ying. Tensor network skeletonization. *Multiscale Modeling & Simulation*, 15(4):1423–1447, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Yang:2015:CIA

[YLY15] Haizhao Yang, Jianfeng Lu, and Lexing Ying. Crystal image analysis using 2D synchrosqueezed transforms. *Multiscale Modeling & Simulation*, 13(4):1542–1572, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Young:2011:CMA

[YM11] Jennifer Young and Sorin Mitran. A continuum-microscopic algorithm for modeling fibrous, heterogeneous media with dynamic microstructures. *Multiscale Modeling & Simulation*, 9(1):241–257, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i1/p241_s1`.

Yin:2011:SRA

[YWS11] G. Yin, Le Yi Wang, and Yu Sun. Stochastic recursive algorithms for networked systems with delay and random switching: Multiscale formulations and asymptotic properties. *Multiscale Modeling & Simulation*, 9(3):1087–1112, ???? 2011. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v9/i3/p1087_s1`.

Yang:2014:AAL

[YY14] Zaibao Yang and Wen-An Yong. Asymptotic analysis of the lattice Boltzmann method for generalized Newtonian fluid flows. *Multiscale Modeling & Simulation*, 12(3):1028–1045, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Yin:2013:ASA

[YYW13] G. Yin, Quan Yuan, and Le Yi Wang. Asynchronous stochastic approximation algorithms for networked systems: Regime-switching topologies and multiscale structure. *Multiscale Modeling & Simulation*, 11(3):813–839, ???? 2013. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Yang:2023:SCM

[YZX23] Yahong Yang, Luchan Zhang, and Yang Xiang. Stochastic continuum models for high-entropy alloys with short-range order. *Multiscale Modeling & Simulation*, 21(4):1323–1343, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1496335`.

Zhang:2010:GEM

[ZBFO10] Lei Zhang, Leonid Berlyand, Maxim V. Fedorov, and Houman Owhadi. Global energy matching method for atomistic-to-continuum modeling of self-assembling biopolymer aggregates. *Multiscale Modeling & Simulation*, 8(5):1958–1980, ???? 2010. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/mms/resource/1/mmsubt/v8/i5/p1958_s1`.

Zhang:2006:ANM

[ZBK+06] Xiaoyu Zhang, Chandrajit L. Bajaj, Bongjune Kwon, Todd J. Dolinsky, Jens E. Nielsen, and Nathan A. Baker. Application of new multiresolution methods for the comparison of biomolecular electrostatic properties in the absence of global structural similarity. *Multiscale Modeling & Simulation*, 5(4):1196–1213, January 2006. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zancanaro:2021:HMR

[ZBPR21] Matteo Zancanaro, Francesco Ballarin, Simona Perotto, and Gianluigi Rozza. Hierarchical model reduction techniques for flow modeling in a parametrized setting. *Multiscale Modeling & Simulation*, 19(1):267–293, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhao:2023:CEM

[ZC23] Lina Zhao and Eric Chung. Constraint energy minimizing generalized multiscale finite element method for convection diffusion equation. *Multiscale Modeling & Simulation*, 21(2):735–752, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1487655`.

Zhang:2015:MDD

[ZCH15] Zhiwen Zhang, Maolin Ci, and Thomas Y. Hou. A multiscale

data-driven stochastic method for elliptic PDEs with random coefficients. *Multiscale Modeling & Simulation*, 13(1):173–204, ???? 2015. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhang:2014:MAC

[ZCL14] Lei Zhang, Liqun Cao, and Jianlan Luo. Multiscale analysis and computation for a stationary Schrödinger–Poisson system in heterogeneous nanostructures. *Multiscale Modeling & Simulation*, 12(4):1561–1591, ???? 2014. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhou:2005:KSS

[ZFW05] Ruhai Zhou, M. Gregory Forest, and Qi Wang. Kinetic structure simulations of nematic polymers in plane Couette cells. I: The algorithm and benchmarks. *Multiscale Modeling & Simulation*, 3(4): 853–870, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60946`.

Zou:2004:MDA

[ZG04] Yu Zou and Roger Ghanem. A multiscale data assimilation with the ensemble Kalman filter. *Multiscale Modeling & Simulation*, 3(1):131–150, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60116`.

Zou:2005:EES

[ZG05] Yu Zou and Roger Ghanem. Error estimation in the spatial discretization of multiscale bridging models. *Multiscale Modeling & Simulation*, 3(4): 940–956, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60195`.

Zhang:2021:SLR

[Zha21] Duan Z. Zhang. Stress from long-range interactions in particulate systems. *Multiscale Modeling & Simulation*, 19(2): 1066–1082, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhao:2019:BCK

[ZHY19] Weifeng Zhao, Juntao Huang, and Wen-An Yong. Boundary conditions for kinetic theory based models I: Lattice Boltzmann models. *Multiscale Modeling & Simulation*, 17(2):854–872, January 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhu:2017:VPF

[ZJ17] Yuhua Zhu and Shi Jin. The Vlasov–Poisson–Fokker–Planck system with uncertainty and a one-dimensional asymptotic preserving method. *Multiscale Modeling & Simulation*, 15(4):

1502–1529, ???? 2017. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhang:2023:PFP

[ZJL+23] Yaming Zhang, Ning Jiang, Jiangyan Liang, Yi-Long Luo, and Min Tang. Pattern formation of a pathway-based diffusion model: Linear stability analysis and an asymptotic preserving method. *Multiscale Modeling & Simulation*, 21(1): 349–373, ???? 2023. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/22M1490958`.

Zou:2008:UQA

[ZK08] Yu Zou and Ioannis G. Kevrekidis. Uncertainty quantification for atomistic reaction models: an equation-free stochastic simulation algorithm example. *Multiscale Modeling & Simulation*, 6 (4):1217–1233, ???? 2008. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zagaris:2004:FSD

[ZKK04] Antonios Zagaris, Hans G. Kaper, and Tasso J. Kaper. Fast and slow dynamics for the computational singular perturbation method. *Multiscale Modeling & Simulation*, 2(4): 613–638, 2004. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60357`.

Zhang:2021:MAA

[ZMC21] Yongwei Zhang, Chupeng Ma, and Liqun Cao. Multiscale approach and analysis for transient simulation of light interaction with nonlocal metallic nanostructure arrays. *Multiscale Modeling & Simulation*, 19 (2):921–950, ???? 2021. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhang:2024:BDO

[ZML+24] Zecheng Zhang, Christian Moya, Wing Tat Leung, Guang Lin, and Hayden Schaeffer. Bayesian deep operator learning for homogenized to fine-scale maps for multiscale PDE. *Multiscale Modeling & Simulation*, 22(3):956–972, September 2024. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `https://epubs.siam.org/doi/10.1137/23M160342X`.

Zhang:2020:MFB

[ZPC+20] T. Zhang, A. Parker, R. P. Carlson, P. S. Stewart, and I. Klapper. Multiscale flux-based modeling of biofilm communities. *Multiscale Modeling & Simulation*, 18(2):1025–1052, ???? 2020. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhang:2019:CSA

[ZS19] Linan Zhang and Hayden Schaeffer. On the convergence of the SINDy algorithm. *Multiscale Modeling & Simulation*, 17 (3):948–972, ???? 2019. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic).

Zhang:2005:NOS

[ZYL05] Q. Zhang, G. Yin, and R. H. Liu. A near-optimal selling rule for a two-time-scale market model. *Multiscale Modeling & Simulation*, 4(1):172–193, 2005. CODEN MMSUBT. ISSN 1540-3459 (print), 1540-3467 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/60633`.