Title word cross-reference

1 [TPKP12]. **$15K** [WGL+98]. 2
[GROZ04, Lab98, Liu8, ON08a, RS94, VGZB09, WYW05, WXQL08]. 3 [BDMN03b, BHR04, BHGR04, CDM98, DDL13, Dar02, GP08, GD03, JMC97, NW89, NH97, ON08b, PG94, QCG15, Sar03, TCD17, WY05, WLL+07, WZC+17, iYNK02, YB01, ZY05].

**$50/Mflop** [WSB+97].  **$7.3/Mflops** [KFM99]. 3 [PG96b]. $h = 0$ [DNS90]. **K** [MG05, CK95b]. **LU** [MG07]. **R** [CBN02].

**N** [Aar85, Alu94, APG94, Alu96, AGPS98, AAL+01, And99, Ano94a, Ano94c, ADB94, ADBGP99, Bag02, Bar86, BAP96, BAAD+97, BADG00, BAD01, BS97, BN97, BOX00, Bor86, BDS07, BME90, BME93, BEM94, DH86, Dem95, Dem96a, Dem96b, DHM03, FRE+08, FM95, FM96, FQG+92, HTG02, HJ96, IFM09, IHM05, K89, KFM99, KFMT00, KMT94, LKM02, Liu94, MIES90, MTES94, MT95, MD12, MG05, MMC99, McD97, NMH02, Oku96, PGB05, Per99, PRL03, SWW94, Sal96, Sha06, SP99, Sin92, SH95, SHT+95, SRK+12, TMES94, TWYC06, TYON12, TYNO12, Ten98, TL14, WPM+02, WS92, WS93, WN14, WSWL95, WSH+12, Xu95, Yin15, YF05, Ano94b, CK95a, CK95b, GKS94, GKS98, Gre90b, HNY+09, HN10, HS95, KK95, Xue98].

$N \log N$ [AO10, DYP93, ADO11]. $\nu$ [SH07]. **$O(\log_2 n)$** [JBL02]. **$O(N)$** [BSL11, Deh02, DTG96, OKF14, Xue98].

$O(N \log N)$ [BH86, FGM11, PJY95]. $r^{-\lambda}$ [CJ05]. **$R^{-\nu}$** [SH07]. $r \pm 1_{12}$ [Pan95].
-Body [Ano94b, CK95b, GKS94, KK95, BEM94, GKS98, Gre90b, HNY+09, HN10, HS95, Xue98, AGPS98, AAL+01, And99, ADB94, Bag02, BADG00, BS97, BN97, BOX00, FM96, HTG02, HJ96, KFM99, KFMT00, SWW94, SHG95, SHT95, Ten98, WPM+02, WS93, Xu95, Yin15, YF05, Aar85, Alu94, APG94, Alu96, Ano94a, Ano94c, ADBGP99, Bar86, BADP96, BAAD97, BDS07, BME90, BME93, CK95a, DH86, Dem95, Dem96a, Dem96b, DHM03, FRE+08, FM95, FQG+92, IFM09, IHH05, Kat89, KMT94, LKM02, Liu94, MIES90, MT95, MTES94, MT95, MD12, MG05, MMC99, NMH06, Oku96, PGB05, Per99, PRL03, Sal96, Shao6, SP99, Sin92, SRK+12, TMES94, TWYC06, TYON12, TYON12, TL14, WS92, WN14, WSWL95, WSH+12].

-D [NH97, BDMN03b, CDM98, DDL13, Dar02, GROZ04, GD03, JMC97, NW89, Sar03, TPKP12, WYW05, YB01, ZY05].

dimensional [Lab98].

-means [MG05].

-Nearest-Neighbors [CK95b].

1 [FMI+93, HFKM98, KMT94]. 1.349
[MFK00]. 10 [WGL+98]. 10th [PA02]. 11th [Ano95b]. '12 [Hol12]. 12th [Ano96]. 131
19th [MBA97]. 1A [OMH+94].

2 [BCAD06, GA96b, MHI07, Spr05]. 2-D
[GA96b]. 2-Pflops [MHI07]. 20.5Gflops
[MD12]. 20.5Gflops [W]. 2003
[ACM03, CHJN03]. 2009 [ERT12]. 2011
[LCK11]. 2012 [Hol12]. 240-Processor
[WWF02]. 25th [Ano95a]. 29.5 [MKFD02].
2A [EIM+92]. 2D [CCZ97]. 2nd
[HOST95, Mak93].
Adaptive [BT95, BSL09, BS97, BFO99, GE13, GP08, HEGH14, KK95, NPR93, PD15, SHHG93, SHT+95, Ten98, ZT07, AC17, BCP08, CGR88, CGR99, CHL06, CFR10, FOCB96, GY08, GL06, GCH+18, HJZ09, LCL+12, LB92a, LCHM10, LCHM13, PRL03, YBZ04, ZHPS10].

addition [HC08, KSC99].

address [HS95].

Advanced [HM86, Win95, dCGQS06, TYON12].

Advances [BLA05, SM05].

advantage [Ano92].

Adventures [CDCD97].

anities [KSS10].

AFMPB [LCHM10, LCHM13].

after [ZQSW94].

Algebraic [Car09, YTK14, Of08, PRT92].

Algorithm [BS00, Bor86, BFO99, CDM98, CSMCxx, Deh02, DD95, EB96, JMC97, JMMC98, KK95, Lea92, LO96a, MBS+00, MG09, MCBB07, NW99, NKV94, NT09, OR99, OLL03, OLL04, PRT92, Rah06, RCWY07, Sar03, ST02, SK04, Sud04, TCW08, TC09, WK18, WYO06, WL96, Xue98, YRGS13, YB204, YO06, YB12].

aproximation [ZCG00, ZBS11, ZCL+98, ZB95, ZD05, Lea92, MB16].

Algorithms [APG94, AGPS98, Ano94c, ADBG099, BF78, Bha97, BN97, Boy92a, CK95a, DS00, DGR96, LCE+06, Liu94, MBS+00, MBS15, Pri94, Ten98, BCP08, BHE+94, BHER94, BME93, BEM94, DHM03, Ess95, Gre94, K+96, Mak93, PRT92, Pel98, Win95, Yin09].

ALiCE [HTG02].

All-to-All [HP95].

almost [FL13].

Alpha [WGL+98].

Alpha/Linux [WGL+98].

Alternative [AD05, CL91].

AMBER [DK93].

AMBERCUBE [DK93].

AMS [RSS96].

Analyze [Ano97b].

analyses [Ham11, XWY+08].

Analysis [AP99, AP00, BH89, ERT12, HAS02, Hol12, JMMC98, LCL11, Sat10, VTG91, Ano97b, Car07, Car09, Dar00a, EG13, JMMC98, JKCG08, KS99, NH97, OC03, OLL04, Pe19, RC97, RSS96, SGD+04, SS07, Sud04, WK05, WK07b, WK07a].

Analytic [ABD04, BSSF96a, LCL14, BSSF96b, DDL13].

Analytical [Gus98, LBGS16, CC13].

analyze [SHM98].

Analyses [CSM06, JMC97].

Angels [AG88, Rod89].

Angles [CC04].

angular [GY08, WHG96b].

An枝 [AP99, Ano96, Ano97a, IEE92a, Mak93, PA02].

anomalies [ON09a].

Antennas [IEE94a, IE95, IE96a, IE97, MI95].

anterpolation [Sar03].

Appendix [Ano90].

Application [LSCM96, LJ96b, LJ96a, NH97, SGG+04, TCD17, VDO08, WSW+95, DHM03, ERS91, GROZ04, HNO06, LWM+02, SGD+04, YR98].

Applications [CK95b, CCKL09, OSW05, BHER94, HNY+09, LGG+13, Of07, ON08b, PD89, ZY05, dCGQS06, TDBEE11].

Applied [BGPW00, HDG+15, RSS96, Ano95b, Ano96, Ano97a, BN07, JdR+18, MB05, OMC08].

Approach [ÁC94, SHMC97, WC94a, AHLP93, BWS+95, KAN95, KAN96, PGB05, SHM98, WJGHS96a, YS18].

Approximate [Be06, CDG03, CDGS05, CP17, FPG05, Rei99, MG09, PRT92, YGSR01].

approximation [LX17].

Approximation [ADF01, LSCM96, A010, GP08, ST06].

approximations [DC07, HW11, Lem04, RŠZ09].

Approximate [Be06, CDG03, CDGS05, CP17, FPG05, Rei99, MG09, PRT92, YGSR01].

approximation [LX17].

Approximation [ADF01, LSCM96, A010, GP08, ST06].

approximations [DC07, HW11, Lem04, RŠZ09].

April [Dem95, Dem96a, Dem96b].

Apr [Dem95, Dem96a, Dem96b].

Aqueous [GP93].

Arbitrary [LS93, WZ+17, EIM+92, GSC01, GL96,
KS98b, LM02, Tau03b, YRGS13].
Architectural [DRS96]. Architecture [Lea92, NMH06, Sin92, TYON12, TYNO12].
Architectures [SHG95, HGD11, LCL+12, MMC99].
architectural [KLM02], armed [KLM+09].
array [CK91]. Art [WBI+97]. aspects [CHJN03]. aspects [CPP93, LDB96].
Astrophysical [Ano94a, KFM99, MTES94, MT95, MFK903, WS92, HN10, CMS94].
Astrophysics [FQG+92, HNY+99].
asymptotic [BK96, Dar00a].
atom [DKG92c, FRE+08].
atomic [AC94, DKG92a, Kon93].
Atoms [McD97, Pie93].
August [IEE96a, RSS96].
Australian [Ano92].
Autotuning [HEGH14].
Avalon [WGL+98]. Axial [SMC97, SM97].
B [Ano90]. balance [BAAD+97]. Balanced [PDB9].
Balancing [SHT+95, Ten98, FG96, MG05, PGdS+15].
Baltimore [IEE96a, EIE02]. Banff [EKT12].
Barnes [AAL+01, Ano94b, BJWS96, BGLM05, GKS94, GKS98, SHT+95, WSH+12, ZBS11, ZBS15].
banner [WHG96b]. Based [AAB+17, CD13, GSS98a, GSS00, MPPA06, YB01, AO10, BLA05, BN98, BHGR05, FMI+93, GROZ04, GKD09, GP08, HHKP00, HLL08, HLL+18, LM02, LDB96, Liu08, NN12, Sud04, Tak14, WL06, ZHFS11, ZG+16].
bases [FBHJ04, TW03]. basis [BLA05, BL97, BN98, BCR01, BU03, CNB02, GH08, GDC08, GD07a, LCZ07, Yin06].
BE [SGP+04]. Beach [IEE95]. Behaviour [ON09a].
Beltrami [SHMC97, SM97, SMC97]. BEM [And08, BN07, FP0G05, GF06b, GF06a, HKS05, MB05, NH97, Tau03a, WWY05, XWT09, XTH09, XYZ+08, hYtWbWL08, YBK+11, ZY05, ZG+16].
BEM-FEM [MB05]. Beowulf [WWF02].
Between [AAB+17, Pie93, CDM98, RŠŽ09]. beyond [ZB14].
Bianisotropic [SHMC97, SHM98].
BIE [Liu08].
biharmonic [GD06].
billion [YBK+11]. binary [PDB9].
binding [KSS10].
biomacromolecular [SKT94].
Biomolecular [SRP06, YBK+11, GCH+18, KP08, LCM07, LCHM10, LCHM13, SKT93].
biofluids [AO10, FGM11].
Biots [Ros06].
biofilms [FD09].
BLAS [CFF08, CFR10].
Bloom [DD95].
blocks [HM95].
block-diagonal [CG04].
blocking [TM16].
Blue [BRE+98].
BO12 [LB91].
board [ATM03].
Bodies [BT95].
Body [AGPS98, AAL+01, And99, Ano94b, ADB94, Bag02, BAGD00, BS97, BN97, BOX00, CK95b, FM96, GKS94, HP95, HTG02, HJ96, KFM99, KFM100, KK95, Pie93, SWW94, SHG95, SHT+95, Ten98, WPM+02, WZC+17, WS93, XU95, YIN15, YF05, Aar85, ALN94, APC94, ALN96, Ano94a, Ano94c, ADBG09, App85, Bar86, BAPD96, BAAD+97, BAD01, BDS07, BME90, BME93, BEM94, CK95a, DH86, Dem95, Dem96a, Dem96b, DMM03, EIM+92, EFT+93, FRT+08, FM95, FQG+92, GKS98, Gre90b, HFKM98, HNY+99, HN10, HS95, IFM09, IHM05, Kat89, KMT94, LAM02, Liu94, MIES90, MTE194, MT95, MD12, MG05, MCM99, NMM06, OME+92, Oku96, PGB05, Per99, PG96a, PRL03, Sal96, Sha06, SP99, Sin92, SRK+12, SCM+90, CMS94, TWY06, YON12, YNO12, TL14, WS92, WN14, WSL95, WSH+12].
body [Xue98, ZBG15].
Bologna [Ano95a].
Boltzmann [BH03, LCHM10, LCHM13].
Book [Gav11].
Born [ADO11, HC10].
Boston [K+96].
both [BMI+09].
Boulevard [AC99]. boundaries [MI08].
Boundary [BH03, BR93, Bre04, LJ96b, LJ96a, MBA97, OSW06b, SS07, WZC+17, WSW+95, AP03, Atk97, BSL09, Bes00, BWS+95, BHR04].
BHGR04, Car06, Car07, CWHG97, CWK08, Gas07, GBMN06, Gav11, GOS99, GP08, GD09, GODZ10, GAD13, Ham11, KMC09, KCF+05, LS05, LOSZ07a, LOSZ07b, LCQF18, LHL08, Lin95, Lin08, Lin09, LC94, Mil08, OSW05, OSW06a, O808, OKS09, ON08a, ON09a, ON09b, PN95, QCG15, RȘ09, SGG+04, Sat10, SKT93, Sin95, Tak14, TCD17, TW03, Tan04, VGZB09, WY05, WY07b, WY07a, WSWL95, XJM08, Yin09, iYNK02, YSM05, BR93].

Boundary-Integral [LJ96b].

boundary-value [Lin95].

Bounds [GSS98a, GSS00, WK18].

box [FD09].

breast [ES04].

Breit [JdR+18].

Bridging [AAB+17].

Broadband [WJYO06, GD09].

Brownian [DHM03].

Building [TD09].

buried [ESRS01, GSC01].

C [BGLM05].

CA [B+95, Ano95b, Ano96, Ano97a, Kar95, Wel91].

Calculate [BVW96, BV96b, BV96a, KMC09].

calculated [DM90].

calculates [ATMK03].

Calculating [BF099, DM90, LCHM10, LCHM13, SKT94].

Calculation [Deh02, HA17, NT96, BH86, BH03, FGM11, LCD14, RCWY07].

Calculations [BGGT90, Ber95, CDGS03, CDGS05, KSS10, KSS11, PN94, CSA95, KK16, KK98a, LCM07, PA14, SKT93, WHG96a, WJGHG96b, WHG96b].

Calderon [NN12].

California [ACM97, Rod89, Ful97, IEE95, PA02].

Canada [IEE97, HB93].

cancer [ES04].

Canonical [LCP93, KM00].

Capacitance [YB01, JC04, NW89].

capacitive [SGD+04].

Cardinal [Boy92b].

Carlo [ESRS01].

Carrier [SB98].

Cartesian [CGLM05, CS98, HC92, Le 97, SH07].

Case [BGLM05, GROZ04, PSS95, PSS95].

Cauchy [CL12, LCD14].

CE2014 [MBS15].

cell [CC13, CWD08, DK92a, DK92c, G989, KS98b, KN95, LM02, FL13].

cells [DK92c].

Center [ACM99, Hol12, IEE90, Kar95, Pan95, MFK00].

central [EIM+92].

challenge [Bha97].

channels [Gre90a].

characteristic [GDDC08].

Characterization [CB09].

Charge [ACh, CC13, GY08, Kan15].

charge-[CC13].

charged [AB95, CPP93, KN95].

Charges [ACh, CDJ07, DC07].

Chebyshev [Boy92a, LRW95].

Chem [Dac10].

Chemistry [ADG96, Mat95, SPS96, Les96].

Chennai [IEE98].

chips [MH07].

Chiral [SMC97, SM97, SHM98].

Christoffel [BT03].

cibles [Ano97b].

City [Hol12, RSS96].

Clara [Ful97].

class [PA14].

classical [Gre94, Rok85].

close [ZD05].

closed [BHR04].

closest [CK95a].

Closet [SW94].

Cluster [PNB94, HN10, WGL+98, YNS+09].

clustering [MG05, SWJ+05].

Clusters [ADB94, BP88, HL15, ZBS15, GIS98, GO05, Kon93].

Coarse [GB11, PA14].

coarse-grained [PA14].

Coarse-graining [GB11].

coated [ZG00].

COBE [ZQSW94].

Code [ADB94, Bag02, BH89, Bar90, BADG00, CDM98, CWA14, IFM09, SLCH98a, SLCH98b, B96, BAA+97, BAD01, BCD06, Dub86, GY08, G989, JdR+18, JKCG08, JP89, IWM+02, PD89, PG94, Spr05, Wam99, WSH+12].

Codes [SWW94, WSW+95, NMH06, Pud16, WSWL95].

Coefficients [GD03, Beb06, FST05, K11].

Cold [ZQSW94].

collective [BSvdG+94].

Collision [BT95, WN14, JdR+18].

collisional [TYON12].

collisionless [TYNO12].

Combined [JMC98, KM00].

Combining [CDGS03, CDGS05, CWD08, DDL13, DM12, FLZBG97, FLZBG97b, GDDC08, PRT92, ZB95].

Comment [KAN96, WJGHG96a].

Comments [FP96b].

Communication [HP95, YTK14, BSvdG+94, IK16, KOP8, S89, TPK12].

Communications [KP05a].

Companion [HDG+15].

Comparison [BN97, CD98,
EG09a, RŠZ09, WPM+02, Ess95, SKPP95]. competitive [Ano92]. Complement [MG11]. Complex [CSMCxx, MGM95, MBS15, SLC96, SLC97, Sy103, AC17, BGGC06, CC10, CC12, NW89, Rei99, TW03, ZB95]. complexes [KSS10].

Complexity [JBL02, Pan92, YTK14, Dar00a]. Complement [MG11]. Complex [CSMCxx, MGM95, MBS15, SLC96, SLC97, Syl03, AC17, BGGC06, CC10, CC12, NW89, Rei99, TW03, ZB95]. complexes [KSS10].

Comprehensive [AC94]. compressible [ECL02]. Compression [YGSR01, XTH09]. Computation [BEM94]. Computation [Gue97, GD03, GD05, GODZ10, McD97, MSV92, Pie93, YRGS13, ATMK00, SM05]. Computationally [KM00]. Computations [ERT12, Pan92, KAN95, KAN96, OKS09, Sy103, VOD08, WJGHG96a, YF98].

Computing [ACM97, B+95, B+99, HTA+97, Bar+86, EIM+92, EFT+93, FMI+93, FM95, HFKM98, HG99, KMT94, MIE99, MT95, OHM+94, OYK+94, OME+92, SCT+98, SMC97, TME94].

Computers [FHM99, LCP93, MT98, DK93, LB+97, NKV94, OKC+93]. Computing [ACM97, B+95, BGI+99, HTA+97, Hol12, IE94b, IE96b, IE98, LCK11, Mat95, PA02, SHMC97, WWF02, WS+95, CCL03, CPP93, IYK16, MHI07, MHC99, PRT92, Rod89, SH07, Xue98]. concise [PY96].

conditions [CWHG97, SBT93, Sin95].

Conducting [GA96a, HAS02]. conduction [RO04]. Conference [ACM96, ACM97, Ano92, Ano95a, B+95, BR93, HTA+97, Hol12, IE94b, IE96c, IE98, IE92, Kar95, KK88, LCK11, MC92, MBA97, Rod89, Wel91]. conformal [OR89]. Congress [BGWP00]. congressi [Ano95a]. conjunction [CCKL09]. connected [GGM93]. Connection [BME90, WS91, ZJ91]. conquer [CG04]. conserving [CC13]. constant [Rei99].


Correlations [ZQSW94]. Cosmological [Bag02, BH88, IFO09, YF05, Spr05]. Coulomb [ADG96, BFO99, CFH89, DNS90, DK92a, DK92b, DTG96, GGM91, GH02, HJZ09, HLS+18, KS98a, SPS96, SSF96, ZHS90]. Coulombic [HA17, PG96b, SKT93]. Coupled [LS05, MBS15, PNB94, SGS+04, NMDK99].

Coupling [BDMN03a, BDMN03b, Dar02, DM07, GBMN06, MB05]. course [BG97]. CPU [HEHG14]. crack [iYN02]. cracks [ON08]. current [WYW05]. CRAY [BAAD+97].


cutoffs [DK92]. cylinders [CG97, ZCG00]. Cylindrical [SHMC97, SMC97, SM97, SHM98].

Cyclops [AIA95, AI98]. Cylindrical [SHMC97, SMC97, SM97, SHM98].
D [NH97, BDMN03b, BHR04, BHGR04, CDM98, DDL13, Dar02, GROZ04, GP08, GD03, GA96b, JMC97, Liu08, NW89, ON08a, ON08b, PG94, QCG15, RS94, Sar03, TCD17, TPKP12, VGBZ09, WYW05, WY05, WY07a, WLYL+07, WXQL08, WZC+17, iYNK02, YB01, ZY05]. Dame [IEE96c]. Dangers [BS93]. Dark [ZQSW94]. Data [AAL+01, And99, BGLM05, HJ96, LY14, NPR93, SS89, SHT+95, WPM+02, BADP96, BAAD+97, DR95, KP08, LOSZ07a, RŠZ09, WS92, YGSR01]. Data-driven [LY14]. Data-Parallel [HJ96, NPR93]. data-sharing [BADP96]. data-sparse [LOSZ07a]. databases [Mak93]. DC [IEE94c]. debugging [RC97]. December [Ano92, IEE98, Kar95, K+96, Rod89]. Decomposition [CK95b, BJWS96, BP03, BCOY93, BCOY94, CvHMS94, CWD08, LM02, OSW06b, RT+08, ZT07]. Decoupled [PGdS+15]. deferred [JH08]. deformable [Ros06, ZD05]. della [Ano95a]. Delta [FQG+92]. Dense [CPD17, GSS98b, BGGC96, CG97, PG94]. densities [GY08]. Density [AC94, LBGS16, PN94, WWF02, KAN95, KAN96, WJGHG96a, WJGHG96b]. dependence [RC97]. dependent [MD98]. deployment [FL13]. Derivation [WHG94]. derivative [BN07], derivatives [BSSF96b]. Derive [RGK12]. Descent [JMC97, JMCB98, ESR01]. Descent-Fast [JMCB98] description [HF92]. Design [BGI+99, Lea92, ZBS15, And08]. detect [TD09]. Detection [BT95, ESR01, JdR+18]. Determination [PN94, Dac06]. Developer [IEE96c]. Development [ATMK03, TDBEE11]. developments [CC15]. Diagonal [Rah96, AP99, CG04, ESM98, KSC99, Rok98]. Diagonalizations [HC08]. Diego [Kar95]. Dielectric [BVW96, MG11, CDJ07, DC07, EG09a, Erg11, JBCM98, ZCG00]. difference [LC14], different [BME93, BEM94]. Differentiation [DGR96, KLZ+06]. Difficulties [BSS97]. Diffusion [CM06, KP08, STZ14]. digest [IEE94a, IEE95, IEE96a, IEE97]. DIMACS [Bha97]. dimension [MR07]. Dimensional [JMBC98, LS93, Pri94, SC95, WSW+95, BSL09, BL97, BCR01, CWK08, CC10, CC12, ESR01, ES04, ECL02, ESM98, GH98, GD09, Kro01, Lab98, LCQF18, NT09, OLLL03, PSSP95, PSS95, RRR03, SK04, Tak14, TC09, TG08, WY07b, WSWL95, XJM08, YR98, YB97]. Dimensions [CS98a, LO96a, MK96, Ni04, RRR05, SL91, BPT07, CGR99, CHL06, CCG+06a, CCG+06b, EG01, GR88a, GR97, GH02, GD06, LB92b, MCBB07, Rok90, Rok98, SKPP95, TSM16, YBZ04, SL97a]. dipolar [CPP93, CFH89, KN95]. Direct [Aar85, CPD17, BME90, BME93, BEM94, FL13, GL96, LHL08, NMI06]. direction [HM95]. Directional [BPT+14]. Dirichlet [GGM93, MI08]. disciplinary [WSH+12]. discretization [BDMN03a, BDMN03b, Dar02, GBM06]. discretizations [Beb06]. Discretized [VGT91]. dispersions [CG97]. distorted [HC10]. Distributed [AC94, IEE96b, MB16, SRDP06, YB01, BCOY93, DK93, GB11, HGD11, KP05b, LBC91, LMCPP92, MCMC99, MRH14]. Distributed-Memory [MB16, DK93, LMCPP92]. Distribution [AHu94, AP94, AGPS98, AN04c]. BAAD+97]. Distribution-Independent [AHu94, AP94, AGPS98, AN04c]. divide [CG04]. divide-and-conquer [CG04]. DNA [FOCB96]. domain [BCOY93, BCOY94, CWD08, GP08, LM02, Liu08, LCZ07, Mil08, OSW06b, OFH+08, RŠZ09, VW02]. domains [BHR04, GGM93, GK04]. Don’t [Bar90]. doubly [GK04]. doubly-periodic [GK04]. DR [MH07]. DREAM [OMH+04].
DREAM-1A [OMH+94]. driven [BSL11, LY14]. drops [ZD05]. dual [CCKL09, LCQF18, Liu08]. dual-level [LCQF18]. Dynamic [HEGH14, BAAD+97, CK95a, FG96, MG05]. Dynamical [SWW94, WSLW95].

Dynamics [BGGT90, BHGS90, BP88, CDCD97, HM86, JBL02, LCP93, MPPA96, NT96, OKF94, Sch94, TDBEE11, WLMP99, ATMK03, BSL11, BAL91, BSS97, BCL+92, BHE+94, BHER94, BCOY93, BCOY94, BP93, CvHMS94, EGHT97, FMI+93, GDK89, GZ07, HGS90, Ich02, KM00, KP05a, LM02, LBC91, LBI+97, LMCPP92, LWM+02, LRJ+99, NKV94, NT94, OMH+94, OYK+14, OP07, FGB05, Ske89, VZB09, VCM00, WS91, Win95, ZB95].

DynamO [BSL11].

Economization [LRW95]. Editor [GW98]. Editors [MBS+00, DS00]. EEG [KCF+05].

eects [AB95, BPK85]. efficiency [HLL+18, KK16]. Efficient [BS97, DH04a, EG08, HS08, NT96, RS06, SKT93, Ami00, App85, Bar86, BHR04, CL91, CCZ97, CWD08, EG09b, GR88b, KM00, Kro01, KS98a, LDB96, O80, PN95, TSM16, WL96, WHC94, YF98, ZGD+16].

eigendecomposition [CG04]. eigensolver [ZGD+16]. Eighth [HTA+97]. elastic [CCZ97, TC09]. elasticity [GKM96].

elastodynamic [CB14]. elastoplastic [WY07b]. Elastostatic [WZC+17, GG16, GH98, HLL08, Liu08, MB05, iYNK02, ZY05].

elastostatics [OSW05, PN95]. Electric [Gus98, PNB94, ZZ93, ABDO4, CS82, HF92, WFC08]. Electrically [HAS02, GDDC08].

Electrode [HB93]. Electrode-Electrolyte [HB93]. Electrify [HB93].

Electromagnetic [CMMCxx, EMV92, GA96a, GA96b, SLC97, BGCC06, Car09, ESR01, ES04, GH08, MG07, MD98].

Electromagnetics [Ano95b, Ano96, Ano97a, CJL+97, Erg11, Gib08, LZL04, OMC08].

Electromagnetism [CDGS03, CDGS05, BDMN03a, BDMN03b, Car06, Car07, DM07, SY03].

Element-Boundary [LJ96a, SGG+04].

Elements [BR93, Bre04, FST05, GAD13, Ros06].

Elizabeth [IE97]. elliptic [A+97, Beb06, FST05, LC14]. elliptical [Ros06].

Elongation [KLM+09]. embedded [SHM98].

EMC [HU97]. energetic [BPK85]. energies [DTG96, FM11].

energy [BSSF96a, BSSF96b, CC11, CPP93, FOCD96]. energy-conserving [CC13].

Engineering [MBS15, SM05]. Ensemble [LCP93]. entire [LCZ07]. entirely [Sar03].

Equation [CD13, GRHR98, GD03, MG11, NL04, SC95, Sta95a, AP03, AD04, BH03, CH06, CCG+06a, CCG+06b, CC10, CC12, CRW93, DDL13, Dar02, EG09a, GGM93, GKM96, GR97, GK04, GD03, GD09, GAD13, Kro99, LHL08, LC94, MCBB07, MMNB06, NN12, OLL04, ON08a, ON09a, QCG15, RS97, Ros97, Sta95b, Tak14, WLL+07, WFC08, iYNK02, ZC00, ZKL+07].

Equations [DY98, AHP93, AD05, Atk97, BDMN03a, BDMN03b, Car06, Car07, CCZ97, DH04b, Fu98, Gas97, GBMN06].
four [BCR01]. four-dimensional [BCR01].
Fourier [Boy92b, EMT99, Boy92a, CD13, DR95, EB94, EB96, HLL08, HW10, LHL08, OLLL03, OLL04, Sar03, ZHPS11].
Fourier-Based [CD13].
Fourier-series-based [ZHPS11].
Fourier-based [CD13].
Fractions [WHG96a]. fracture [XWY+08, ZBG15].
framework [TPKP12].
Fredholm [AHLP93]. free [BSL11, BKM09, Car06]. Frequencies [GHRW98, DH04b, ZC00].
Frequency [Nil04, BK96, DH04a, KMC09, QCG15, TSIM16, ZC00].}
Fractional [WHG96a]. fracture [XWY+08, ZBG15].
framework [TPKP12].
Fredholm [AHLP93]. free [BSL11, BKM09, Car06]. Frequencies [GHRW98, DH04b, ZC00].
Frequency [Nil04, BK96, DH04a, KMC09, QCG15, TSIM16, ZC00].
Functional [DRS96, KAN95, KAN96, LBGS16, WJGHG96a, WJGHG96b].
Functions [Boy92b, BL97, BN98, BCR01, Buh03, CBN02, KMC09, LCZ07, Tau03b, Yin06].
Future [EMT99].

GADGET [Spr05]. GADGET-2 [Spr05].
galactic [MFK00]. galaxies [SWJ+05].
Galaxy [FM96, FM95].
Galerkin [AHLP93, AP03, HKS05, OSW05, XWT09].
Gap [AAB+17]. Gauss [GS98a, GS91].
Gaussian [BSSF96a, BSSF96b, KS98a, Le 97, Ros06, Sa96].
Gegenbauer [CC05].
General [LCD14, McDo7, BSL11, FG96].
Generalization [Boy92b]. Generalized [ADO11, CBNO2, GR02, KAN95, KAN96, ST05, SK04, WJGHG96a, YR98].
Generation [HL15, Sa96]. geometric [CDF10].
Geometries [MGM95, AC17, KSSb, NW89].
Geometry [SC94, TW03]. Gflops [MHI07, WGL+98].
giant [RTZ+96].
giga-flops [WSB+97].
GMRES [BGCG06]. Good [Ten98].
GOTPM [DKPH04]. GPU [GE13, Ham11, HL15, HEGH14, Kan15, WN14].
GPU-accelerated [Ham11]. GPUs [HNY+09, HI10, YNS+09, YBK+11, YBNY12, YBNY13]. gradients [BSSF96a, LBGS16].
grain [Bar86].
grained [PA14].
graining [GB11].
granularities [BM93, BM94].
GRAPE [Aoi94a, CKE08, EIM+92, EFT+93, FM95, FM96, KFM99, KFM100, MIES90, MTES94, MT95, MT98, MFK00, MF01, MKFD02, MKFN03, Mak04, MHI07, MD12, OME+92, MES94, TYNO12, YF05].
GRAPE-2A [EIM+92].
GRAPE-3 [OME+92].
GRAPE-4 [Aoi94a, FM95, FM96, MTES94, MT95, MIES94].
GRAPE-5 [KFM99, KFM100].
GRAPE-6 [MF01, MF02, MF03].
GRAPE-8 [MD12].
GRAPE-DR [MIH07].
grids [GHI08].
grating [Sat10].
gravitating [TYON12].
Gravitational [CDM98, SWW94, Wam94, DHM03, MD12, OME+92, SCM+90].
Gravity [BOX00, Xu95].
Green [BKM09, Tau03b].
Greengard [Auo94a, FM95, FM96, MTES94, MT95, TM95].
GreeM [IFM09].
Green [BKM09, Tau03b].
Greengard [Auo94a, Au96, HM95, SB98].
Green’s [CB14].
Grid [Ber95, Bor86, Boy92a, HTG02, Bes00, Car06, DM90, ZGI+10].
grid-calculated [DM90].
Grid-Multipole [Ber95].
gridded [HIN11].
Gridless [AGR88b, AGR88a].
grids [GOS99, HW10].
ground [TCW08].
Group [Wel91].
groups [AB95, Kan15].
Guest [DS00, GW98].
guided [Sat10].
guided-mode [Sat10].
Guidelines [BV96b, BV96a].
guns [NH97].
GvFMM [BSSF96a, BSSF96b].

half [BSL09, CB14, GSC01, GG16].
half-space [BSL09, CB14, GG16].
Halos [ZQSW94].
Hamiltonian [CDF10].
Hanover [Mak93].
harmonic [CAJ09, GD07b, GODZ10].
hammonics [PJY96, ST02, WL96, YR98].
HARP [KMT94].
HARP-1 [KMT94].
Hartree [KAN96, WJGHG96a, KAN95].
Hashed [WS93].
Haskell [TL14].
head [GODZ10, KMC09].
head-related [GODZ10, KMC09].
heavy [RTZ+96].
heavy-ion [RTZ^+96]. Held [HTA^+97, HM86, AG88, Ano97b, K^+96, Rod89].
Helmholtz [AP03, BKM09, CD13, CC15, CHL06, CCG^+06a, CCG^+06b, CC10, CC12, DDL13, Dar02, GHRW98, GD03, GD09, GAD13, GS98b, NN12, Nil04, OLL04, ON08a, QCG15, Rok98, Sta95b, Sta95a, TCD17, VW02]. Hermite [KMT94, NMH06]. Heterogeneous [ADB94, HGD11, LCL^+12]. Hierarchical [Alu94, AGPS98, BH86, BJWS96, BH88, Deh02, Dem95, Dem96a, Dem96b, HS95, HJ96, SHG95, SHT^+95, EG09b, HNY^+09, HSA91, JP99, MG05, PG94, Sin92, VCM00, Wam99, WS92, Xue98, YGSR01]. hierarchical-element [VCM00]. High [ACM97, BGI^+99, BK96, CFR08, CFR10, FHM99, GBMN06, HL15, Ho12, IEE94b, IEE96b, IEE98, LCK11, Nil04, TWYC06, WWF02, DC07, GH08, GY08, IYK16]. High-Density [WWF02]. High-frequency [BK96]. High-order [TWYC06, DC07, GH08]. High-Performance [FHM99, IEE94b, IYK16]. Higher [PNB94, RRR05]. Highly [BS97, OME^+92, YBNY13]. Hilton [IEE90]. holes [MKF00]. homogeneous [CL01, YRGS13]. Hilton [IEE90]. homogenisation [HNO06]. host [SHM98]. Hotel [IEE97]. Hub [HL15]. Hut [AAL^+01, Ano94b, BJWS96, BGLM05, GKS94, GKS98, SHT^+95, WSH^+12, ZBS11, ZBS15]. Hybrid [HEGH14, JMC97, WN14, DKPH04, LCL04, LC93, OFH^+08, SGG^+04]. hydrodynamics [GCH^+18]. Hyglacl [WSB^+97]. hyper [DHM03]. hyper-systolic [DHM03]. Hypercube [BME93, BEM94, BME90, DK93]. hypercubes [SS89].

I/O [Mak93]. ICCAM [BGPW00]. ICCAM-98 [BGPW00]. ICS [KK88]. IEEE [IEE96b, IEE02, PA02, ACM97, Kar95]. Igniting [ACM03]. II [CC05, PGB05, WSB^+97]. Illinois [SLCL98a, SLCL98b]. image [DC07]. imaging [Ano97b]. impact [GIS98]. Implementation [And92, HI96, LHi94, MPPA96, NPR93, OP07, YBP1, AHLP93, Bes00, BJWS96, Bha97, CCG^+06a, Dar00b, GR88b, Hov03, KP05b, KP08, LO96b, Mak93, OCK^+03, RS06, Sin95, WHG94]. Implementations [BS97, WLMP99, BHE^+94, Buh03, TL14]. Implementing [KN95, SL91, MRH14, SL97a]. Implications [Sin92, SHG95, DR996]. implicit [CC13]. imposing [YS18]. Improve [HLL^+18]. Improved [MPPA96, YRR99, HR98, PRT92, PA14]. Improvement [Ich02]. Improving [CDCD97, GSS98a, GSS00, KK16]. incident [CCK10]. inclusion [HNO06]. Incomplete [MG07]. Independent [Ano94, ACPA94, AGPS98, Ano94c, SB98, MR07, YS18, YBZL03, YBZ04, Yin06, ZHS11]. India [IEE98]. indirect [GAD13, Ham11, LHL08]. Induction [Pie93]. industrial [And08, GLS06, SY03]. Inexact [LOSZ07a, LOSZ07b]. inextensible [VGZB09]. infinite [KS04, Mil08]. Inhomogeneous [SHMC97, SMC97, CL91, SM97, SHM98]. Innovation [ACM03]. Insight [IEE02]. Institute [BR93, HM86]. instruction [TYON12, TYNO12]. Integral [CL12, GKK96, GKO4, Kro99, LJ96b, LJ96a, MG13, SC95, ZCO0, AP03, ABD04, AD05, Atk97, BDNM03a, BDMN03b, Bes00, Car06, Car07, CC97, CCLK09, DM07, EG09a, Fug98, Gas97, GBMN06, GSS96, LCL04, LC93, LC94, NT09, OSW06a, ON09a, RZ09, RO04, Rok85, Rok90, Ros06, Tak14, TW03, Tau04, VGZB09, WLL^+07, WFC08, Yin09, YNKO2, ZGD^+16]. Integral-Equation [MG11, EG09a].
[AT87, CKS91]. lithography [YB97]. Load [SHT+95, Ten98, BAAD+97, FG96, MG05, PGdS+15]. Loading [HL15]. Local [RGKM12, CFR08, MCBB07, YS18]. Locality [SHT+95]. locally [GH98]. Loève [ST06]. logarithmic [JP89]. Logical [Bor86]. Loki [WBS+97]. London [DKG92a]. Long [Pie93, AO10, BAL91, BPK85, Ess95]. Long-Range [Pie93, Ess95]. lossy [GSC01]. Low [GHRW98, DH04a, QC15, TSIM16, TPKP12]. low-communication [TPKP12]. low-frequency [DH04a, TSIM16]. LSS [BCAD06]. Luther [ACM99]. M [PG96b]. M2L [TSIM16]. machine [HHKP09, BME90, WS91, ZJ91]. Machines [PA02, BCOY93, DK93, LBC91, Mak93]. Macromolecular [LCE+06, Ske89]. macromolecules [BH03, FLZB79a, FLZB79b, LDB96]. Madras [IEE98]. Madras [IEE98]. Magneto [Gus98]. magneto [VOD08]. magneto-static [VOD08]. magnetorheological [LRJ+99]. magnetostatic [BHGR05]. malignant [ES04]. Many [HP95, PG96a, Pie93, App85, EIM+92, EFT+93, HFKM98, OME+92, SCM+90]. Many-Body [HP95, Pie93, PG96a, App85, EIM+92, EFT+93, HFKM98, OME+92, SCM+90]. map [GGM93]. MAPLE [McD97, Pie93]. Mapping [BT03, LB92a]. mappings [OR98]. March [An95b, An96, An97a, Ful97, HTA+97]. Martin [ACM99]. Maryland [IEE96a]. Massachusetts [K+96]. Massively [BP88, IFM90, JLR02, KP05b, L96a, LCP93, MFKN03, LCL+12, LBI+97, MHI07, SRK+12, TMES94, WSH+12]. Massively-Parallel [MFKN03, MHI07]. matched [GROZ04, GKD09]. materials [GM94, NKV94, K+96]. Matérn [CWA14]. Mathematical [BCM02, CHJN03, Dar97]. Mathematics [BGPW00, HDG+15, An90, RSS96, dCGQS06]. Matrices [Pan92, CG04, CO06, XTH09]. Matrix [PNB94, SP01, Car06, FG96, XWT09]. matrix-free [Car06]. matrix-vector [XTW09]. Matter [ZQSW94, FRE+08]. Maxwell [DH04b, DY98, GBN06, GD07, H90, ON08b, ON09a, ON09b, Z00]. May [AG88, IEE94b]. MD [IEE02, DK93]. means [MG05]. mechanic [WW99]. mechanical [SGD+04, WY05, WY07a]. mechanical-electrostatic [SGD+04]. mechanics [BCM02, Bat03, hVwWhL08]. Media [GA96a, GA96b, GROZ04]. medium [ZCL+98]. MEG [KCF+05]. MEG/EEG [KCF+05]. Memory [MB16, YB01, BCOY93, DK93, KP05b, LBC91, LMCP92, MM09, RC97, Ske89]. MEMS [SGD+04]. Mesh [BOX00, DY93, DKPH04, KM00]. meshes [HS05, ZBG15]. meshless [BLA05, YNS+09]. Message [KP08]. Message-passing [KP08]. metamaterials [OMC08]. Meter [WWF02]. Method [Alu94, AAL+01, An92, An94b, BT03, BK15, BPT+14, BVW96, BV96b, BL05, BH88, CL12, CC15, CS08b, CPD17, CK11, EMV92, GP93, GKS94, Gue97, GA96a, GA96b, GS08, HOST95, HAS02, KLZ+06, LCD14, LSCM96, LJ96b, LJ96a, MI96, MB16, MK96, NT96, Nil04, PD15, RRR05, RW94, SC97, SM97, SHHG93, SC94, SC95, Sta95a, SP01, WC94a, WZC+17, Yin15, ZJ91, AGR88a, AGR88b, AP00, AP03, Ami00, ATMK03, BDNM03a, BDNM03b, BSL09, BG94, BWS+95, BV69a, BL98, BH03, BHR04, BHRG05, BSSF96a, BSSF96b, BK96, CDJ07, CL91, CC04, CC05, Car09, CWGH97, CDF10, CC97, CWK08, CCKL09, CCG+06b, CRG01, CRR93, CRW93, CRF08, CB09, Dac06, Dac09, Dac10, DYP93, Dar02, DM07, DM12, Dar97, Dar00a, Dar00b]. method
microlithography [Ful97]. microlocal
[BDMN03a, BDMN03b, Dar02, GBMN06].
micromagnetic [VOD08].

microprocessors [NMMH06, MSV92].
Microscopic [HB93]. Microstrip
[MN94, MI97, ZCL+98].

Microwave [Ano95a, Ano97b].
military [Ano97b]. million
[DKG92a, DKG92c]. million-atom
[DKG92c].

MIMD [FQG+92, LB92a].

mine [ESRS01].

Minimal [BF97]. Minimization
[OC05]. Minneapolis [HTA+97, IEE92b].

Minnesota [IEE92b]. MLFMA [SLC96].

MN [HTA+97]. model [Sat10].

modeling [BCM02, NDK99, NV94, ZKL+07].

Models [AC94, HB93, PK95, SGG+04].
modern [NMMH06]. Modification [SB98].

Modified
[Bar90, BAG00, CHL06, RC97].

module [DK93].

Molecular
[AC94, BGGT90, BAL91, BHL91, CDCD97, Gus98, HGS90, LBC91, LBI+97, LMCPP92, MPPA96, OKF14, WLM99, WS91, ATMK03, BSL11, BW94, ZKL+92].

molecular-dynamics [BCL+92, BP93].

Molecule [Pie93]. molecules [Kan15].

Moment
[Gus98, McD97, ZK93, BN98, CS82].
moment-based [BN98].

moments [BN98, Gus98, HHS90, Kon93].
moment [GY08, WHG96]. monostatic
[RCWY97].

Monotonic [Bor86]. Monte
[ERS01].

Monterey
Montreal [IEE97]. motion [DHM03, Kro01].

Mountain [MC92]. mover [CC13]. MPI [IEE96c, BCAD06, LO96b, Per99, SP99]. MPI-2 [BCAD06]. MPSim [LBI+97]. MR [BEM94]. Multi [AP03, Ang17, BAD01, Liu08, WSH+12].


Multilevel [CSMCxx, GS98b, MG11, SLC96, SLC97, TCW08, TC97, A+97, ATR+12, BDMN03b, DM12, EG08, EG09a, EG09b, Erg11, EG13, GDDC08, GKD09, HS08, HC10, LZL04, LC94, MG07, MG09, RCWY07, Sar03, WJYO06, YRGS13].

Multiple [BS93, BSS97, FLZB97b, FLZB97a, KM00, Kro02]. multiplication [XWT09]. multiply [GGM93]. multipoint [PRT92].

Multi-polar [LS93]. Multipole [AAB+17, And92, BT03, BK15, BPT+14, Ber95, BVW96, BV96b, BS00, BL05, BFO99, Boy92b, CDM98, CDGS03, CL12, CD13, CC15, CSMCxx, CKE08, CS98b, CC10, CC12, CJ05, CFR10, CPD17, CKB11, DDL13, DY98, EB96, EMRV92, FL13, GP93, GSS98a, GSS00, GR97, GHRW98, GW98, Gsc97, GD03, GA96a, GA96b, Gys98, GS98b, HOST95, HAS02, HA17, HEGH14, JMC97, JMC98, Kon93, KLZ+06, KK95, Le 97, Lea92, Lem08, LCD14, Lin95, LSCM96, LJ96b, LJ96a, LO96a, LCP93, LRW95, MI96, MBS+00, MG11, MB16, Mc97, Mck96, MPPA96, NT96, Nio4, NPR93, OC05, Pan95, PNB94, PD15, RR05, RGKM12, RW94, SRPD06, SPS96, SL91, SL97b, Sch94, SG97, SHMC97, SMC97, SHHG93, SHT+95, SC94, SC95, SLC96, SLC97, Sta95a, SP01].

Multipole [WC94a, WC94b, WLMP99, WZC+17, YR99, Yin15, YTK14, YBO1, Z91, ZZ93, AHLP93, AGR88a, AGR88b, AP99, AP00, AP03, Ami00, ATM03, ATR+12, AC17, BDMN03a, BDMN03b, BSL09, BG97, BWS+95, BV96a, BSS97, BCL+92, BHE+94, BHER94, BL98, BH03, BHGR04, BHGR05, BSSF96a, BSSF96b, BK96, CDJ07, CC04, CC05, Car09, CRSS, CS95, CWHG97, CDF10, CCZ97, CWW08, CCKL09, CRGR99, CCG+06b, CRG01, CPP93, CS82, CWD08, CRW93, CRF08, CS09, Dac06, Dac09, Dac10, Dar02, DM07, DM12, Dar07, Dar00a, Dar00b, DH04a, DH04b, DC07, DRS96, DKG92a, DKG92c, ESRS01, ES04, EB94, Eng11, EG08, EG09a, EG09b, Erg11, EG13, EG01, FOCCB96, FLZB97a, FLZB97b, FP05, FD09, Fu98, GDDC08, Gas97, GKM06, GF06b, GF06a, Gav11, GSC98, GY08, GR02].

multipole [GG16, GROZ04, GKC99, GE13, GB11, GGR98, GG99, GH02, GCH+18, GD05, GD06, GD08, GD09, GODZ10, GAD13, Ham11, HHPK09, HS08, Hav03, HC10, HW01, HW11, HF92, HU97, HR98, HGD11, HJZ09, HLL+18, IYK16, Kan15, KM00, KS10, KS11, KLM+09, KMC09, KS98a, KS98b, KS04, KP05a, KP05b, KPS, KAN95, KAN96, KCF+05, Lab98, LM02, LDB96, LOS20b, LCL+12, LBS16, LB91, LB92a, LB92b, LJ98, LZL04, LOG12, Len04, LQVF18, LGG+13, LC14, Liu08, Liu09, LX17, LY14, LCZ07, LCM07, LCMH10, LCM13, LWM+02, MI95, Mak99, MG07, MG09, MD98, MB05, MR07, MRH14, MN806, NW90, NT90, NT94, NN12, NH97, OSW5, OSW60a, Ov07, OF80, OCS9, OCK+03, OYK+14, OC03, OMC08, OFH+08, OP07, ON09a, PRT92, PN05, PJJ96, PSP04].

multipole [PSPS95, PSS95, PA14, QCG15, Rah96, RSZ09, RTZ+96, RO04, RT08, RS97, RS06, RCWY07, SGG+04, Sar03, Sat10, SL97a, ST06, SWW99, SM97, SHM98, [Ano95b, Ano96, Ano97a]. MontreÁal
SKT94, Sin95, SKPP95, SP97, Sta95b, SB96, SK04, Sud04, STZ14, Syi03, Tak14, TSIM16, TCD17, Tan03b, Tan04, TCW08, TC09, TG08, TD09, VOD08, WJY006, WL96, WYW05, WY05, WY07b, WY07a, WLL+07, WXQL08, WHG94, WJGHG96a, WHG96a, WJGHC96b, WHG96b, XWY+08, XJM08, YS18, YR98, Ya97, YBZL03, YBZ04, Yin06, YNS+09, YK+11, YB12, YBN13, iYNK02, YSM05, ZCG00, ZT07, ZHPS10, ZHPS11, ZCL98, ZY95, ZKL07, ZGD16, ZB95, ZD05, CB14. multipole-accelerated [BHE+94, BHER94, ZD05].

Multipole-Based [GSS98a, GSS00, YB01, LDB96].

Multipole-to-local [CFR08, YS18].

Multipoles [And92, AC94, GSS98b, HLL08, LHL08, Mak99, OLLL03, OLL04].

Multiprocessor [SHG95, LMCPP92, Sin92, Ske89].

Multiprocessors [BB87, HS95].

multiquadrics [CBN02].

Multiresolution [NKV94]. Multiscale [ERT12, TW03].

Multithreaded [BZ05]. Multivariable [BL05].

multivariate [FBHJ04].


New-version-fast-multipole-method [LCM07]. Newport [IEE95]. News [Kan15].

NH [Mak93]. no [BEM04].

Node [BK15, FRI+08]. Node-Level [BK15].

Non-BB87, BCP08, DR95]. non-equispaced [DR95]. non-standard [BCP08].

Non-Uniform [BB87]. nonbond [DKG92a]. nonbonded [ATM03]. non-equispaced [PSN04].

Nonlinear [CAJ90]. nonlinearity [CC13]. nonoscillatory [GR02].

normal [GC16]. Nose [BVW96]. Notre [IEE96c].

November [ACM96, ACM97, ACM99, ACM03, Hol12, IEE90, IEE92b, IEE93, IEE94c, IEO92, K+96, LCK11]. nuclear [PGB05].

numbers [DK89, Ich02].

numbers [D+18, WYW05]. numerica [Ise97].

Numerical [CL91, GKZ07, Kro02, Pri94, TDBEE11, dCGQ06, Atk97, BCM02, BHC93, CDF10, CG97, CHJN03, Dar00b, GCG+99, Gre90b, GM94, GH98, KSC99, Kro01, OR98, PRT92, RSS96, TYNO12, Wam99, ERT12].

O [Mak93]. Object [BT95, SHMC97, ESRS01, SM97, SHM98].

Objects [BVW96, BV96b, SL96, SL97, BV96a, EG09a, Erg11, TC09].

Oblique [SM97, CCKL09]. obstacles [Mak93].

Oct [WS93].

October [WS93].

Off [HL15, DH86].

Off-Loading [HL15]. One [Ano94a, MTES94, WWF02, FRI+08, HM95, MR07, SK04, YR98].

one-dimensional [SK04, YR98].


Opening [And08]. OpenMP [AA+17].

operator [CFR08, Lem98, Lem04, YS18].

Operators [CJ05, Beb06, CS82, ESM98, FBHJ04, Rah96, Ro98, TW03].

OPFMM [CRG01]. opportunities [Ano90].

Optical [Ful97].

Optimal [DKG92b, HHH09, BWS+95, BME90, CRG01, MG05, PRL03].

optimal-parameter [CRG01].

Optimization [BK15, MSB15].

Optimizing [PD15, ZBS11]. Orbitals [Gus98, Le 97, ZZ93, KS98a].

Order [Bor86, LS93, RRR05, Alu96, DC07, GH08, GBMN06, GL96, PRL03, TWY06, Tau03a, Tau04].

Oregon [ACM99, IEE93]. organic [CKS91]. organization [AO10].

organizations [TD09]. Origin [Le 97].

orthotropic [ON09b]. other [ZB95].

orthotropic [ON09b]. other [ZB95].
overlapping [KP05a]. overview [SB96].

P [PG96b]. PA [ACM96]. pair [CK95a].
Polytechnic [BR93]. Portable [BK15, BS97, OCK+03, WS95b, WS95a]. Portland [ACM99, IEE93]. posed [HM95]. posteriori [XTH09]. Potential [CK95b, Gre87, Gre90a, HA17, SPS96, YR99, CK95a, GB11, Gre88, GR88a, GD07b, HHHP09, HF92, HR98, LCQF18, MI08, OLLL03, PA14, Rok85, Tau03a, WXQL08]. Potentials [CK95b, Gre87, Gre90a, HA17, SPS96, YR99, CK95a, GB11, Gre88, GR88a, GD07b, HHHP09, HF92, HR98, LCQF18, MI08, OLLL03, PA14, Rok85, Tau03a, WXQL08]. Potentials [CJ05, MB16, McK96, Pie93, DM90, LDB96, SH07]. power [PRT92]. PPPM [YF05, ZB14]. Practical [BN97, Pan95, CAJ09, Mak93]. practice [CK00]. Prager [GCH+18, LGG+13]. pragmatic [SB96]. Precise [Ami00]. preconditioned [BGGC06, GD07a]. Preconditioner [CDGS03, CDGS05, CPD17, Car06, DDL13, OF08, TCD17]. Preconditioners [MG11, ABD04, Car09]. Preconditioning [NN12, Beb06, FPG05, LZZL04, MG07, MG09, RCWY07]. predictor [TWYC06]. predictor-corrector [TWYC06]. preeminent [YB12]. preprocessing [SK04]. Prescription [GS98b, CRW93]. presented [Ano97b]. pressure [YRGS13]. Price [WS95b, WS95a]. Price/performance [WSB+97]. Princeton [HM86, HDG+15]. Principles [OKF14]. Pro [WSB+97]. Problem [APG94, AGPS98, Ano94a, Ano94c, Dem95, Dem96a, Dem96b, HTG02, MTES94, Yin15, CCKL09, DH86, DH03, Gre90b, IOM05, Kat89, KS98a, Mil08, Pud16, SSF96, TL14, WXQL08]. Problems [BB87, EMRV92, GA96b, KK95, LJ96b, LJ96a, MG11, MBS15, SWW94, SG97, WZC+17, AP00, AD05, ATR+12, BSL09, Bes00, BCP08, BHGR04, BHGR05, BGGC06, CC04, CC05, Car09, EG08, EG09a, Erg11, FST05, Fu98, GDC08, GLS06, HM95, HNO06, HU97, JH08, Lab98, LCQF18, Lin95, Lin08, MIES90, Oku96, ON08a, ON08b, ON09b, Rah96, RO04, SCM+90, TWYC06, WJYO06, WY07b, WSWL95, XWY+08, XJM08, iYNK02, ZY05]. Proceedings [ACM96, ACM97, AG88, ERT12, Hol12, HM86, IEE02, Kar95, LCK11, Rod89, Ano92, Ano95a, IEE92a, IEE98, KK88, PA02, Wd91, B+95, BGPW00, HB93, HTA+97, IEE90, IEE92b, IEE93, IEE94b, IEE94c, IEE96b]. Proceedings. [IEE96c]. process [JdR+18]. processes [Sal96]. Processing [B+95, HTA+97, BCOY94, Rod89]. Processor [WWF02, FL13, MI07]. processors [GD08]. produced [Kon93]. products [And08]. Professor [Wil00]. Program [CDCD97, YB01, App85, LBI+97, WS95b, Win95]. Programmable [PA02, HFKM98]. programming [MRH14]. Programs [BGLM05, RC97]. PROGRAPE [HFKM98]. PROGRAPE-1 [HFKM98]. Progress [Ano95b, Ano96, Ano97a]. Prolate [KLZ+06]. Propagation [Ano97b, IEE94a, IEE95, IEE96a, IEE97, WC94a, WC94b, CHN03, GLS06]. propagator [ZB95]. properties [WY05, WY07a]. Protein [NT96, Kan15, KSS10, NS11, NT94]. protein-protein [KSS10]. proteins [ZB95]. protonatable [Kan15]. Provably [Ten98]. pseudo [CKS91, OFH+08]. pseudo-pairwise [CKS91]. pseudo-spectral [OFH+08]. pseudoparticle [Mak99]. Pseudospectral [Boy92b, KLZ+06]. Purpose [Ano94a, BGGT90, CKE08, FM96, FH99, KM10, MTE94, MT98, MFKN03, EIM+92, EFT+93, FMI+93, FM95, HFKM98, KMT94, MIES90, MT95, OMH+94, OME+92, SCM+90, TME94]. Quadrature [WK18]. Quantum [SPS96, KLM+09, SSF96]. quartic [WHG96b]. quasars [SWJ+05]. Queen [IEE97]. Radar [Gue97, Ano97b, Ano97b]. Radial
[Buh03, BLA05, BL97, BN98, BCR01, CBN02, GD07a, PSN04, Yin06]. **Radiation** [CSMxx, SG97, CWK08, YRGS13]. **Radiosity** [SHT+95, HSA91, MMNB06]. **Radome** [BVW96]. **random** [CG97, ESRS01, ST06]. **Range** [Pie93, AO10, BAL91, BDS07, BP93, Ess95, KMC09]. **range-limited** [BDS07]. **ranged** [BPK85]. **rank** [HW11]. **Rapid** [Gre87, KLZ+06, Rok85, Rok90, BH03, EGHT97, Gre88, GR88a, HSA91, PJY95]. **Ray** [WC94a, WC94b]. **Ray-Propagation** [WC94b]. **RCS** [BVW96, BV96b, BV96a, Gue97, RCWY07]. **reacting** [NMDK99]. **reaction** [DC07]. **ready** [BAD01]. **real** [MKF01, SH07]. **realistic** [NKV94]. **Recurrence** [CSA95]. **Recursions** [GD03]. **Red** [WSB+97]. **redefinition** [PJY96]. **Reduced** [HW11, HF92, DKG92c]. **Reduced-rank** [HW11]. **reduction** [JP89]. **reference** [ZB95]. **regime** [QCG15]. **region** [MKFD02]. **regular** [Bes00, CDF10, HW10]. **regularization** [JP89]. **reinforced** [WY05, WY07a]. **related** [Ano90, BCH93, GCG+99, GODZ210, KMC09, ON08b]. **relations** [CSA95]. **Remarks** [CCG+06a]. **Renewing** [Ano90]. **renormalization** [BG94]. **Reply** [KAN96]. **representation** [DM07, GODZ210, STZ14, TW03]. **Research** [ERT12, Ano90]. **resonances** [GIS98, RTZ+96]. **Resonant** [ES04, Sat10]. **review** [Ano95b, Ano96, Ano97a, Gav11]. **reviews** [Les96]. **Revision** [CC12, ZHPS10]. **Revisiting** [KS04]. **Rigid** [BT95, JBL02, CAJ09, HNO06, ZBG15]. **rigid-inclusion** [HNO06]. **rigorous** [SKPP95]. **Ring** [BGHS90]. **Rockefeller** [IE90]. **Rokhlin** [HM95, HS08, SB08]. **Rome** [MBA97]. **Root** [GGM01]. **Rotating** [WHG96b]. **Rotation** [GD03, Dac06]. **Rotne** [GCH+18, LGG+13]. **Rough** [JMC97, JMBC98, ESR01, JMBC98]. **Round** [DH86]. **Round-off** [DH86]. **RPYFMM** [GCH+18]. **run** [RC97]. **run-time** [RC97]. **Runs** [Bar90]. **Runtime** [AAB+17]. **SAI** [MG09]. **Salt** [Hol12]. **sampling** [LX17]. **San** [ACM97, B+95, Kar95]. **Santa** [Ful97]. **Savart** [Ros06]. **SC** [LCK11]. **SC2002** [IEE02]. **SC2003** [ACM03]. **SC97** [ACM97, ACM97]. **SC′99** [ACM99]. **Scalability** [RS97]. **Scalable** [Ano94b, BHE+94, BHER94, GKS94, GKS98, HAS02, HGD11, IEE94b, MSV92, OCK+03, OKF14, YB12]. **scalar** [GD07b, KSC99]. **Scale** [BADG00, OKF14, SRPD06, WLMP99, ZQS94, Ang17, ATR+12, EG08, Erg11, EG13, FLZ97a, FLZ97b, GF06b, GF06a, KP08, LCQF18, LCZ07, LWM+02, PN95, WY05, WY07a, WSH+12, XWY+08]. **Scaling** [CDCD97, FRE+08, YBNY12, Goe99, KLM+09, SSF96, WJG96b]. **Scatterers** [HOST95]. **Scattering** [BVW96, EMRV92, GA96a, GA96b, HAS02, JMC97, JMBC98, LJS95, LJS96a, SHM97, SMC97, SLC97, ZCG00, AP99, AP00, ADO05, BN07, BGCC06, CC04, CC05, Car09, CWK08, DH04a, ERS01, GO98, EG09a, Fu98, GH08, GSC01, GD05, HC10, HW10, JMC98, Lab98, LC94, MG07, Rah96, RTZ+96, Rok90, SM97, SHM98, TCM08, TC09, WJYO06]. **scheduling** [YF98]. **scheme** [NMDK99, NMH06, WLL+07]. **Schrödinger** [ZKL+07]. **Schur** [MG11]. **Schwarz** [BT03]. **Sci** [BEM94]. **Science** [FHM99, IEE92a]. **sciences** [SM05]. **Scientific** [B+95, HTA+97, MT98, MSV92, CL03, LKMO2, MHO07, PD89, Rod89]. **Screened** [BFO99, GH02, HJZ09, ZHPS10]. **Seattle** [IEE94a, LCK11]. **Second** [IEE96c, AHLP93, BSSF96b, KS11, Tau04]. **Section** [Gue97]. **seismic** [Fuj98]. **self** [TYON12]. **self-gravitating** [TYON12]. **Seminar** [RSS96]. **semiseparable** [CG04]. **sensitivity** [DH86]. **Sensor** [Ano97b].
separated \cite{Eng11}. September \cite{Ano95a}.
Sequential \cite{WSW95} series \cite{CC04,CC05,ZHPS11}. set \cite{TYON12,TYNO12}.
Sets \cite{CK95b,PD15,Eng11}. Seventh \cite{B95}.
Sham \cite{BSSF96b}. shape \cite{LM02}. shaped \cite{YRGS13}.
shared \cite{HS95,RC97,Ske89} shared-memory \cite{Ske89}.
sharing \cite{BADP96}.
shells \cite{CAJ09}.
short \cite{BG97,BP93}.
short-range \cite{BP93}.
shunt \cite{SGD04}.
SIAM \cite{B95,BEM94,HTA97,RSS96,Rod89}.
Sides \cite{BT03}.
signature \cite{Ano97b}.
Siloxane \cite{MPPA96}.
Siloxane-Based \cite{MPPA96}.
SIMD \cite{TYON12,TYNO12}.
simple \cite{AB95,PJY95}.
Simulating \cite{ZBG15,ZGI10,VGZB09}. Simulations \cite{Aar85,AAL01,Ano94b,ADGP99,BAGP99,BHGS90,BH98,GP93,GKS94,HP95,IFM09,KFM09,LJ98,MKFD02,MD12,OYK14,OMC08,PG94,SWW99,Spr05,TYON12,TYNO12,WW05,YB97,YBNY13}.
Simulation \cite{AT87,And99,BADG00,CK91,FM96,Ten98,WP+92,A09,App85,BCM02,BAD97,BCL92}.
Simulator \cite{BSL11}.
Sinc \cite{Boy92a}.
Single \cite{CJ05,PJY96}.
Singular \cite{FBHJ04,QCG15}.
Singularities \cite{Pel98} sized \cite{Sat10} sizes \cite{LCZ07}.
Skeletons \cite{SW94}.
Slater \cite{Gus98,ZZ93}.
Slater-Type \cite{Gus98,ZZ93} slightly \cite{ZD05}.
Society \cite{IEE95,IEE96b,IEE97}.
Software \cite{Kan15,TDBEE11,TYNO12}.
solid \cite{Bat03,PJY96,WL96,hYtWbWL08}.
solids \cite{WYW05}.
Solutions \cite{Erg11,HCV10,KS11}.
Solvation \cite{FGM11}.
Solved \cite{MG11}.
solvent \cite{DC07}.
Solving \cite{HTG02,VTG91,Car06,Car07,LC93,LCHM10,SRK12}.
some \cite{Sha06}.
sound \cite{CAJ09}.
Source \cite{SB98,CKB11}.
Space \cite{BT95,YF98,BSL09,BMK09,CB14,GSC01,GG16,HH95,HS95,SRK12}.
space-time \cite{TF98}.
space/time \cite{TF98}.
space-time-efficient \cite{TF98}.
Spaces \cite{BF78}.
Spanning \cite{BF78}.
Sparse \cite{GOS99,LZL04,Rok98,Tau03a,LOSZ07a,MG09,RSZ09,TW03}.
sparse-approximate-inverse \cite{MG09}.
Spatial \cite{BT95,BL05,CVHMS94,ZT07}.
Special \cite{Ano94a,BGKT90,CE09,FM96,FHM99,KFMT00,MTES94,MKFD02,DK92a,EFT93,EGHT97,ESRS91,FROCB96,FRE98,GF06a,GKS98,GR87,GDK89,GCH+98,HFK98,HN+99,KN00,K+96,Kro99,KP08,LAB91,LKM02,MK95,MG05,MMC99,OME+92,PA14,Sa96,Sh96,SKT93,SKT94,TMES94,VCM00,Wam99,WS92,WS98,Xue98}.
simulator \cite{BSL11}.
Sinc \cite{Boy92a}.
Single \cite{CJ05,PJY96}.
Singular \cite{FBHJ04,QCG15}.
singularity
Spectral [ES04]. Spectral
RCWY07, OFH+08, PN95]. speeding
[AO10]. sphere
BP03, CDJ07, DC07, Lin95]. spheres
[GD05]. spherical
[GODZ10, KSC99, PJY96, ST02, YR98].
Spline [CS98b, DKG92b]. Splines
[CS98a, BL97, BCR01, BPT07]. Square
[GGM01]. Stability [Nil04, Sud04]. stable
[DH04b]. standard [BCP08]. static
[VOD08]. Station [ERT12]. statistical
[Kan15]. Steepest
[JMC97, JMBC98, ESR01].

steepest-descent [ESRS01]. Stellar
[HM86]. Step [BS93, FLZB97a, FLZB97b,
KM00, RCWY07]. stepping [BS99].
stochastic [FST05, Sal96]. Stokes
[GGM01]. Stokesian [Ich02]. Storage
[Hol12, LCK11]. Strategy [BB87, BCOY93, EBG09].
stratified [ZCL+98]. stress [GG16]. Strips
[GA96a]. strong [Kan15]. Structural
[BPK85]. Structure
[BADG00, NT96, ZQSW94, GF06b, GF06a,
Goe99, Kat99, KS99a, NT94]. Structures
[And99, CSMCxx, GGM01, MI96, RW94,
WPM+02, Car09, CWK08, EG13, LCZ07,
WS92, ZCL+98, ZY05]. studies [RTZ+96].
Study [BGLM05, HM86, Pri94, Dar97].
studying [Kro01]. sub [LCZ07].
sub-entire-domain [LCZ07]. Subdivision
[BT95]. Summation [CWA14, LS93, Ami00,
BAL91, HM95, ZB14]. Summer [RSS96].
Sums
[DNS90, BG94, DYP93, KS04, RO04, SL97b].
Sunnyvale [Wel91]. Supercomputers
[FQG+92]. HM86, BAD01].
Supercomputing
[ACM96, Ano92, IEE90, IEE92b, IEE93,
IEE94c, Kar95, Ano92, KK88]. Surface
[MG11, CCZ97, ESR01, ZBG15]. Surfaces
[CSMCxx, HAS02, JMC97, JMBC98, GH08,
JBMC98]. Surfaces-Wire [CSMCxx].
suspended [VGZB09]. switch [SGD+04].

Switching [HL15]. Symbolic [Pie93].
symmetric [CG04, OSW06a]. Symposium
[Ano97b, HB93, IEE92a, IEE94a, IEE95,
IEE96a, IEE96b, IES97, PA02, K+96,
Mak93]. Syracuse [IEE96b]. System
[BGI+99, RGKM12, BAAD+97, TEM94,
ZB95, HTG02]. Systems
[AAB+17, CPD17, GP93, Gre87, HEGH14,
MT98, VTG91, YF05, AB95, BWS+95,
BGGC06, CL91, CDF10, CFH89, DYP93,
DKG92c, EIM+92, EFT+93, Gre88, Ich02,
KS98a, KS98b, KN95, LM02, LBGS16,
LB92a, LBI+97, LCM07, LCHM10, LCHM13,
PGB05, PG96b, TYON12, YB12, ZB95].

Systolic [BHGS90, DHM93].

T3D [BAAD+97]. tails [ADG96].
tangential [GH08]. Target [SB98, GSC01].
targets [Ano97b]. Task [AAB+17].
Task-Based [AAB+17]. tearing
[LS05, LOSZ07a, LOSZ07b, OSW06b].
Technique [WZC+17, Gas97, KLM+09].
Techniques
[CDGS03, CDGS05, PRT92, SW99].
Telescoping [LRW95]. Template
[BGLM05]. Tennessee [IEE94b]. tensor
[CB14, CSA95, GCH+18, HC08, HLL+18,
LGG+13]. Tensors [PNB94]. Terabytes
[IEE02]. teraFLOPS [TEM94]. Term
[DNS90]. terms [JP99]. test [AB95].
Tflops [Ano94a, HNV+09, HN10, MTES94,
MFK00, MKF01, MKFD02]. theorem
[KSC99, Lab98]. theorems [HC08].
Theoretical [CC15]. theory
[AP99, Buh03, CK00, GD07b, K+96,
LBGS16, Pel98, Rok85, Rok90, Tan03a].
thermodynamics [Kan15]. Thin
[ZCL+98, CAJ09, ZY05]. Thin-stratified
[ZCL+98]. Third [KK88, Rod89, Bha97].
Thousands [BT03]. Three
[CS98a, JMC98, LO96a, Nil04, Pie93,
Pri94, SL91, SC95, WSW+95, YB97, BLS09,
BPT07, CWK08, CGB99, CC+06b,
ESRS01, ES94, ESM98, GR88a, GR97,

3889].
REFERENCES


References

Ainsworth:1997:WMM


Agullo:2017:BGB

Emmanuel Agullo, Olivier Aumage, Berenger Bramas, Olivier Coulaud, and Samuel Pitoiset. Bridging the gap between OpenMP and task-based runtime systems for the Fast Multipole Method.


T. Askham and A. J. Cerfon. An adaptive fast multipole accelerated Poisson solver for complex geometries. Jour-
REFERENCES


 V. Antonuccio-Deoglu and U. Becciani. A parallel tree

Antonuccio-Delogu:1999:PTA


Adamson:1996:CCT


Anandakrishnan:2011:GBA


Anderson:1988:VMP


Aluru:1998:DIH


Ambrosiano:1988:FMM


Ambrosiano:1988:GPS

John Ambrosiano, Leslie Greengard, and Vladimir Rokhlin. Gridless plasma simulations via the fast multipole method. In Kartashev and Kartashev [KK88], pages
REFERENCES


Allen:1993:GIM


[BR93]

Aluru:1994:DIH


[Alu94]

Aluru:1996:GBA


[Alu96]

Amisaki:2000:PEE


[Ami00]

Anderson:1992:IFM


[And92]

Anderson:1999:TDS


[And99]
Andjelic:2008:BON


Angelidis:2017:MSV


Anonymous:1990:RUM


Anonymous:1994:GOS


Anonymous:1994:SPF


Anonymous:1994:TDA

html. IEEE catalog number 94CH34819.

**Anonymous:1995:ECP**


**Anonymous:1995:PAC**


**Anonymous:1996:PAC**


**Anonymous:1997:PAC**


**Anonymous:1997:RSA**


**Anandakrishnan:2010:ABN**


**Amini:1999:ADF**

[S. Amini and A. T. J. Profit. Analysis of a diagonal form of

Amini:2000:ATE

Amini:2003:MLF

Aluru:1994:TDI

Appel:1985:EPM

Alpert:1991:FAE

Allen:1987:CSL
M. P. Allen and D. J. Tildesley. Computer Simulation of
Atkinson:1997:NSB


Amisaki:2003:DHA


Araujo:2012:SLS


Ying:1997:VM


Bailey:1995:PSS


Becciani:1997:PTC

REFERENCES

Becciani:2001:YRF


Becciani:2000:MPT


Becciani:1996:WDS


Bagla:2002:TCC


Belhadj:1991:MDS


Barnes:1986:USS


Barnes:1990:MTC

REFERENCES


**Brown:1994:DDP**


**Beylkin:2008:FAA**


**Beatson:2001:FER**


**Bachelot:2003:CMF**


**Bachelot:2003:CFM**


**Bowers:2007:ZMP**

Kevin J. Bowers, Ron O. Dror, and David E. Shaw. Zonal methods for the parallel execution of range-limited...

**Bebendorf:2006:AIP**


**Brunet:1994:EHA**


**Berman:1995:GMC**


**Bespalov:2000:URG**


**Bentley:1978:FAC**


**Boschitsch:1999:FAM**

REFERENCES


Barnes:1986:HFC
J. E. Barnes and P. Hut. A hierarchical $O(N \log N)$ force-calculation algorithm. Nature, 324(6270):446–449, 1986. CODEN NATUAS. ISSN 0028-0836 (print), 1476-4687 (electronic). This paper appears to be the origin of fast multipole algorithms; its $O(N \log N)$ complexity was later improved to $O(N)$ [GR87]. See also [App85], which might predate this work.

Bouchet:1988:CSU

Barnes:1989:EAT

Bordner:2003:BES

Bhatt:1997:PA

Board:1994:SIM
REFERENCES


REFERENCES


[BME93] Jean-Philippe Brunet, Jill P. Mesirov, and Alan Edelman. Hypercube algorithms for di-
Blelloch:1997:PCB [Bor86]


Beatson:1998:FER [Boy92a]


Bonnet:2007:FBT [BN07]


Boris:1986:VNN


Bode:2000:TPM [BOX00]


Boyd:1992:FA [Boy92a]

Boyd:1992:MEP


Boyer:1988:MDC


Buchholtz:1993:VAM


Bohme:2003:FAF


Brooks:1985:SEE


Beatson:2007:FEP


Benson:2014:PDF


Bannerman:2011:DFG


Bishop:1997:DMT


Buran:1996:AEG


Buran:1996:KSA


Barnett:1994:ICC


Bandi:1995:ASS


Banjai:2003:MMS


**Buhmann:2003:RBF**


**Bindiganavale:1996:GUFb**


**Bindiganavale:1996:GUFa**


**Bindiganavale:1996:DNR**


**Bharadwaj:1995:FMB**


**Chadwick:2009:HSP**


**Carpentieri:2006:MFT**

DEN CMPTA2. ISSN 0010-485X (print), 1436-5057 (electronic).

Carpentieri:2007:PAP


Carpentieri:2009:APF


Cruz:2009:CAF


Chaillat:2014:NFM


Cherrie:2002:FER


Carayol:2004:EEF


Carayol:2005:EEF

REFERENCES

and numerical analysis = Modelisation mathématique et analyse numérique: M²AN, 39(1):183–221, 2005. CODEN RMMAEV. ISSN 0764-583X (print), 1290-3841 (electronic).


REFERENCES


Chen:2009:ADI


Chen:1997:FMM


Cecka:2013:FBF


Crowley:1997:AIS


Chartier:2010:RFM


Carpentieri:2003:CFM

B. Carpentieri, I. S. Duff, L. Giraud, and G. Sylvand. Combining fast multipole techniques and an approximate inverse preconditioner for large ele-
REFERENCES


REFERENCES


Cheng:1997:NEE


Cheng:1998:FAM


Chandrasekaran:2004:DCA


Chen:2003:CTS


Cheng:1999:FAM


Chen:2006:AFS

[CL06] Hongwei Cheng, Jingfang Huang, and Terry Jo Leiterman. An adaptive fast solver for the modified Helmholtz equation in two dimensions. *Journal of Compu-
REFERENCES


**Chowdhury:2005:SLM**


**Chew:1997:FSM**


**Callahan:1995:DMP**


**Cottet:2000:VMT**


**Cruz:2011:FMM**

REFERENCES


[CPD17] Pieter Coulier, Hadi Pouransari, and Eric Darve. The inverse fast multipole method: Using a fast approximate direct solver as a preconditioner for dense linear systems. *SIAM Journal on Scientific Comput-
REFERENCES


[CSA95] Matt Challacombe, Eric Schwegler, and Jan Almlof. Recurrence relations for calculations of the Cartesian multi-

**Chao:19xx:MFM**


**Clark:1994:PMD**


**Chen:2014:FST**


**Cocle:2008:CVC**


**Challacombe:1997:PBC**


**Chen:2008:FFM**

REFERENCES


REFERENCES


REFERENCES


[Ding:1992:OSC] Hong-Qiang Ding, Naoki

**Ding:1992:RCM**


**Dubinski:2004:GPH**


**Davis:1990:CEF**

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
</tr>
</thead>
</table>
REFERENCES

9606 (print), 1089-7690 (electronic).


[EG09a] Özgür Ergül and Levent Gürel. Comparison of integral-equation formulations for the fast and accurate solution of scattering problems involving dielectric objects with the multi-


[EG09b] Özgür Ergül and Levent Gürel. Comparison of integral-equation formulations for the fast and accurate solution of scattering problems involving dielectric objects with the multi-


REFERENCES


[Ergul:2009:HPS]


[Ergul:2013:FAA]


[Eichinger:1997:FAR]


[Ebisuzaki:1992:GSP]


[Engheta:1992:FMM]


[Edelman:1999:FFF]
Engblom:2011:WSS


Ergul:2011:SLS


Engquist:2012:NAM


El-Shenawee:2004:RSM


Ergin:1998:FET


El-Shenawee:2001:MCS

[ESRS01] M. El-Shenawee, C. Rappaport, and M. Silevitch. Monte Carlo simulations of electromagnetic wave scattering from a random rough surface
REFERENCES


**Esselink:1995:CAL**


**Fann:2004:SOM**


**Fong:2009:BBF**


**Franklin:1996:GMI**


**Fedichev:2011:CEM**


**Fukushige:1999:HPS**

REFERENCES


Fortin:2013:ADD

Figueirido:1997:ELS

Figueirido:1997:LSS

Fukushige:1995:BSG

Fukushige:1996:BSG

Fukushige:1993:SPC
Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1993.


REFERENCES


[Gumerov:2013:FMA]

[Gaspar:1997:FSB]

[Gavrilyuk:2011:BRF]

[Gramada:2011:CGE]
REFERENCES


[NGD07a] Nail A. Gumerov and Ramani Duraiswami. Fast radial basis function interpolation via

**Gumerov:2007:SPF**


**Gumerov:2008:FMM**


**Gumerov:2009:BFM**


**Garcia:2008:ISE**


**Grest:1989:VLC**


**Goude:2013:AFM**


**Gaul:2006:LSSb**

[L. Gaul and M. Fischer.]


REFERENCES


REFERENCES

Ginste:2009:ECP


GKM96


GKS94


Gra:1998:SPF


GKZ07


Greengard:1996:DAP

Giraud:2006:PSL


Greengard:1994:NEE


Gumerov:2010:CHR


Goedecker:1999:LSE


Griebel:1999:SGB


Glosli:1993:FMM


Grytsenko:2008:ACA


Greengard:1987:FAP

L. Greengard and V. Rokhlin. A fast algorithm for particle simulations. *Journal of
REFERENCES


This paper is credited as the origin of the fast multipole method, with an $O(N)$ algorithm. It was reprinted in the same journal, vol. 135, pp. 280–292, August 1997.

Greengard:1988:REPb


Greengard:1988:EIF

Leslie Greengard and Vladimir Rokhlin. On the efficient implementation of the fast multipole algorithm. Technical Report TR-602 (or RR-602??), Yale University, New Haven, CT, USA, ????. ??? pp. This thesis won an ACM Distinguished Dissertation Award, and was later published as a book [Gre88].

Greengard:1997:NVF


Gimbutas:2002:GFM


Greengard:1988:REP


Greengard:1988:REPb


Greengard:1990:PF

REFERENCES


REFERENCES


[GY08] Timothy J. Giese and Darrin M. York. Extension of

**Hoft:2017:FUM**


**Hamada:2011:GAI**


**Hariharan:2002:SPF**


**Halley:1993:PSM**


**He:2008:DVT**

REFERENCES


REFERENCES


REFERENCES

5981 (print), 1097-0207 (electronic).

**Huang:2018:IEC**


**Hamada:2010:TAB**


**Houzaki:2006:FPR**


**Hamada:2009:THB**

REFERENCES


REFERENCES


REFERENCES


IEEE:1993:PSP


IEEE:1994:IAP


IEEE:1994:PSH


IEEE:1994:PSW


IEEE:1995:IAP


IEEE:1996:IAP

REFERENCES


REFERENCES

Suite 300, Silver Spring, MD 20910, USA, 2002. ISBN 0-7695-1524-X. LCCN ?????

Ishiyama:2009:GMP


Izaguirre:2005:PMS


Iserles:1997:AN


Ibeid:2016:PMC


Yoshida:2002:NFM


Jaramillo-Botero:2002:UFM

REFERENCES

Jandhyala:1998:FAA


Jiang:2004:NCE


Jansen:2018:TCC


Jia:2008:KDC


Jeon:2008:PTC


Jandhyala:1998:CSD


Jandhyala:1997:HFS

[JM97] V. Jandhyala, E. Michielssen, and W. C. Chew. A hybrid fast steepest descent — multipole algorithm for analyzing 3-D scattering from

Jernigan:1989:TCL


Kaxiras:1996:MTS


Kutteh:1995:GFM


Kutteh:1996:RCG


Kantardjiev:2015:SNU


Karin:1995:PAI

REFERENCES

NY 10036, USA and 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1995. ISBN 0-89791-816-9. LCCN ???? URL http://www.supercomp.org/sc95/proceedings/. These proceedings are not available in printed form. However, they are available on the Worldwide Web, and on CD-ROM, available from ACM (ACM Press order number 415952) and IEEE (IEEE Computer Society Press order number FW07435).

Katzenelson:1989:CSB


Kybic:2005:FMA


Kawai:1999:MAB

Atsushi Kawai, Toshiyuki Fukushima, and Junichiro Makino. $7.3$/Mflops astrophysical N-body simulation with treecode on GRAPE-5. In ACM [ACM99], page ???

Kawai:2000:GSP


Kartashev:1988:SPI


Krishnan:1995:PAF

S. Krishnan and L. V. Kale. A parallel adaptive fast multipole algorithm for n-body problems. Proceedings of the
REFERENCES

International Conference on Parallel Processing, ??(??):III, ???. 1995. CODEN PC-PADL. ISSN 0190-3918.

Kozyuchenko:2016:IAE

Korchowiec:2009:ECT

Kovvali:2006:RPP

Kawata:2000:CEC

Kreuzer:2009:FMB

Kokubo:1994:HSP
Kutteh:1995:ICM


Kondratyev:1993:MME


Kurzak:2005:COF


Kurzak:2005:MPI


Kurzak:2008:MPI


Kropinski:1999:IEM


Kropinski:2001:ENM

M. C. A. Kropinski. An efficient numerical method for studying interfacial motion in two-dimensional creeping


Bongkeun Kim, Jiming Song, and Xueyu Song. Calculations of the binding affinities of protein-protein complexes with the fast multipole...


Kian-Tat Lim, Sharon Brunett, Mihail Iotov, Richard B. McClurg, Nagarajan Vaidehi, Siddharth Dasgupta, Stephen Taylor, and William A. Goddard III. Molecular dynamics
for very large systems on massively parallel computers: the
MPSim program. *Journal of Computational Chemistry*, 18
(4):501–521, March 1997. CODEN JCCHDD. ISSN 0192-
8651 (print), 1096-987X (electronic).

*C. C. Lu and W. C. Chew. Fast algorithm for solving hy-
560, December 1993.

*C. C. Lu and W. C. Chew. A multilevel algorithm for
solving a boundary integral equation of wave scatter-
ing. *Microwave and Optical Technology Letters*, 7(10):
466–470, July 1994. CODEN MOTLEO. ISSN 0895-
2477 (print), 1098-2760 (electronic).

*Sebastian Liska and Tim Colonius. A parallel fast
multipole method for elliptic difference equations. *Journal
CODEN JCTPAH. ISSN 0021-9991 (print), 1090-
science/article/pii/S0021999114005415*

Pierre-David Létourneau, Cris Cecka, and Eric Darve.
Cauchy fast multipole method for general analytic kernels.
A426, ???? 2014. CODEN SJOCE3. ISSN 1064-
8275 (print), 1095-7197 (electronic).

Benedict Leimkuhler, Christophe Chipot, Ron Elber, Aatto
Laaksonen, Alan Mark, Tamar Schlick, Christoph Schütte,
and Robert Skeel, editors. *New Algorithms for Macro-
molecular Simulation*, volume 49 of *Lecture Notes in
Computational Science and Engineering*. Springer-Verlag,
Berlin, Germany / Heidelberg, Germany / London,
UK / etc., 2006. CODEN LNCSA6. ISBN 3-
540-25542-7 (print), 3-540-
31618-3 (e-book). ISSN 1439-
7358. LCCN QP517.M3
N49 2006. URL http://
/link.springer.com/book/
10.1007/3-540-31618-3. Pa-
pers from the fourth edition of
Algorithms for Macromolec-
ular Modelling, Leicester, UK
August 2004.

Benzhuo Lu, Xiaolin Cheng, Jingfang Huang, and J. And-
drew McCammon. AFMPB:
An adaptive fast multipole

Lu:2013:AAF


Lashuk:2012:MPA


Lu:2007:NVF


Lustig:1993:FMM

Li:2018:MDL


Lu:2007:AFM


Lambert:1996:MBA


LeRouzo:1997:MEC


Leathrum:1992:PFMa


Lemou:1998:MEF


Lemou:2004:MAF


Leszczynski:1996:CCR

Jerzy Leszczynski, editor. *Computational chemistry: re-

Liang:2013:FMM


Liu:1994:PIB


Liu:2008:FMB


Liu:2009:FMB


Liu:1996:AFMb

REFERENCES

Lu:1996:AFMa


Lee:1998:PPS


Lin:1992:MDD


Lu:1996:MPF


Lu:1996:PIF

REFERENCES

Lee:2012:MMM

Langer:2007:IDS

Langer:2007:IFM

Ly:1999:SPD

Lustig:1995:TFM

Lambin:1993:ESM

Langer:2005:CBF
[LS05] Ulrich Langer and Olaf Steinbach. Coupled boundary and finite element tearing and interconnecting methods. In Domain decomposition methods in science and engineer-

Lu:1996:AFA


Lu:1996:AFA


Lupo:2002:LSM


Liu:2017:FMM


Ltaief:2014:DDE


Lee:2004:SIP


REFERENCES


[Melder:2015:RTC]


[Melder:1992:SIM]


[Melder:1997:CGM]


[Melder:1998:TDP]
Makino:2012:GA


Makino:2000:TSB


Makino:2003:GMP


Marzouk:2005:MCO


Malas:2007:IPM


Malas:2009:AMF


Malas:2011:SCP

[Tahir Malas and Levent Guler] Schur complement preconditioners for surface integral-equation formulations of dielectric problems solved with the mul-

**REFERENCES**


**[Mil08]** G. H. Miller. An iterative boundary potential method for the infinite domain Poisson problem with interior

**Makino:2001:PET**


**Makino:2002:TSP**


**McCurdy:1999:ECP**


**Moric:2006:FMM**


**Mckenney:1996:MDS**


**Martinsson:2007:AKI**


**Milthorpe:2014:PFM**

Josh Milthorpe, Alistair P. Rendell, and Thomas Huber. PGAS-FMM: Implementing a distributed fast
REFERENCES


Mehrotra:1992:USC


Makino:1995:ABS


Makino:1998:SSS


Makino:1994:GOT


Nishida:1997:AFM


Nilsson:2004:SHF

REFERENCES


REFERENCES


Nakashima:2009:WFM


Nabors:1989:FMA


Ohnuki:2003:TEA


Ohnuki:2005:EMM


Ogata:2003:SPI


Of:2007:FMM

REFERENCES


Okumura:1992:GHP


Ohno:1994:DSP


Otani:2008:PFM


Otani:2009:BPF

REFERENCES


Otani:2009:FOP


Ormseth:2007:IFM


ODonnell:1989:FAN


Of:2005:AFM


Of:2006:FMM


Of:2006:BET


Ohno:2014:PMD

Yousuke Ohno, Rio Yokota, Hiroshi Koyama, Gentaro Morimoto, Aki Hasegawa, Gen Masumoto, Noriaki Okimoto, Yoshinori Hirano, Huda Ibeid, Tetsu Narumi, and Makoto

Pocek:2002:FAP


Poursina:2014:IFM


Pan:1992:CCM


Panas:1995:PET


Park:1989:BBT


Pouransari:2015:OAF

REFERENCES

CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

**Pellegrini:1998:EFS**


**Pereira:1999:PBI**


**Pfalzner:1994:HTC**


**Pfalzner:1996:MBT**


**Pollock:1996:CPF**


**Papa:2005:CMD**


**Pearce:2015:DLB**

Olga Pearce, Todd Gamblin,

Piecuch:1993:MSC  

Perez-Jorda:1995:SAR  

Perez-Jorda:1996:CRS  

Peirce:1995:SMM  

Pluta:1994:DHE  

Pringle:1994:NST  

Pruett:2003:ABA  
C. David Pruett, Joseph W. Rudmin, and Justin M. Lacy.


Qu:2015:FMA


Qu:2015:FMA

Rahola:1996:DFT


Rahola:1996:DFT

Reif:1999:ACP


Reif:1999:ACP

Raja:2012:ALS

REFERENCES

springer.com/chapter/10.1007/978-3-642-31020-1_1/.


[RRR03] Prabhakar Ramachandran, S. C. Rajan, and M. Ramakrishna. A fast, two-dimensional panel

**Ramachandran:2005:FMM**


**Russo:1994:FTV**


**Rokhlin:1997:SFM**


**Rudberg:2006:EIF**


**Renegar:1996:MNA**


**Ravnik:2009:CBW**

REFERENCES

CMMECC. ISSN 0045-7825, 0374-2830.

[RTA+08] Rodríguez:2008:USV

Ringbom:1996:FSG

Rokhlin:1994:FMM

Salmon:1996:GCC

Sarvas:2003:PIA

Sato:2010:AFS

Strickland:1996:POF
James H. Strickland and Roy S. Baty. A pragmatic

Strickland:1998:MCG


Song:1994:FMM


Song:1995:FMM


Sabariego:2004:AFM


Sharp:2006:BSP


Singh:1995:IHB


Singh:1993:PAF


Shanker:1998:FMA

REFERENCES


REFERENCES

**Solvason:1995:RCE**


**Shimada:1993:ECC**


**Shimada:1994:PFM**


**Schmidt:1991:IFM**


**Schmidt:1997:EIF**


**Schmidt:1997:MES**


**Song:1996:MFM**


Song:1997:MFM


Song:1998:FISa


Song:1998:FISb


Shanker:1997:OSI


Simos:2005:ACM


Shanker:1997:SIC


Solvason:1997:EEF

REFERENCES


[SS89] Y. Saad and M. H. Schultz.
REFERENCES


Germany / Heidelberg, Germany / London, UK / etc., 2003.

Takahashi:2014:IBF


Tausch:2003:SBP


Tausch:2003:FMM


Tausch:2004:VOF


Tong:2009:MFM


Takahashi:2017:AIF


Tong:2008:MFM

[TCW08] Mei Song Tong, Weng Cho Chew, and Michael J. White. Multilevel fast multipole algorithm for acoustic wave scat-

**Tranouez:2009:BUF**


**Tromeur-Dervout:2011:PCF**


**Teng:1998:PGP**


**Tornberg:2008:FMM**


**Totoo:2014:PHI**


**Taiji:1994:GTM**

M. Taiji, J. Makino, T. Ebisuaki, and D. Sugimoto. GRAPE-

**Tang:2012:FLC**


**Takahashi:2016:EBM**


**Tausch:2003:MBS**


**Tang:2006:HOP**


**Tanikawa:2012:PGN**


**Tanikawa:2012:BSS**

A. Tanikawa, K. Yoshikawa, T. Okamoto, and K. Nitadori. N-body simulation for self-gravitating collisional systems with a new SIMD instruction...

**Vosbeek:2000:ACD**


**Veerapaneni:2009:BIM**


**VandeWiele:2008:AFM**


**Victory:1991:CAF**


**Van:2002:TDF**


**Wambsganss:1999:GLN**

Wagner:1994:RPA


Wagner:1994:RPF


Welch:1991:TPW


Wang:2008:FSM


Warren:1998:AAL


White:1994:DEI


White:1996:FTF


White:1996:RAQ

[WHG96b] Christopher A. White and Martin Head-Gordon. Rotating around the quartic angular momentum barrier in fast multipole method calculations. Journal of Chemical Physics, 105(12):5061–??,
REFERENCES

1996. CODEN JCPSA6. ISSN 0021-9606 (print), 1089-7690 (electronic).


REFERENCES

CODEN JCPSA6. ISSN 0021-9606 (print), 1089-7690 (electronic).


REFERENCES


REFERENCES


[Wang:2017:BEM] Qiao Wang, Wei Zhou, Yong-gang Cheng, Gang Ma, Xiaolin Chang, and Qiang Huang. The boundary element method with a fast multipole accelerated integration technique for 3D elas-

**Xu:2008:FMV**


**Xiao:2009:PCW**


**Xue:1998:THT**


**Xue:1995:NPB**


**Yeung:1997:TNL**

REFERENCES


[YBZ04] Lexing Ying, George Biros,

**[YF05]**


**[YBZL03]**


**[YF98]**


**[YF05]**


**[YGS01]**


**[Yin06]**

REFERENCES

Ying:2015:BPF

Yokota:2009:FMM

Yarvin:1998:GOD

Yarvin:1999:IFM

Yang:2013:CRP

Yan:2018:FIP
REFERENCES

Yu:2005:EUS


Yokota:2014:CCF


Zhou:1995:NMD


Zhang:2014:PFS


Zhu:2015:SRB


Zhang:2011:OBH


Zhang:2015:DMB

Zhao:2000:IES

Zhang:2000:SDC

Zhao:1998:TSM

Zinchenko:2005:MAA

Zheng:2016:AEA

Zwart:2010:SUI

ZHPS10


Zheng:1993:EMM