A Bibliography of Publications of Yousef Saad

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Abstract
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Title word cross-reference

3D [GHS10]. exp(−τA)b [SSS10]. f(A)b [CAS11]. ILU [LSC03]. ILUS [CS97c]. k [CrFS09]. LU [CS97c, LSS03b, Saa94d]. \( \text{tr}(f(A)) \) [CS18, UCS17].

'02 [AGPS03].

1988 [BTS+89]. 1993 [BCEP94].

20th [Sv00].

5 [WS93].

Abaffy [Saa92h]. ABS [Saa92h]. Abstract [SS85c]. accelerated [LS13b]. accelerating [KKPS18]. Acceleration [BRZS18, KS87, Saa84b, CS99, rFS09, KS92, ZSTC06a]. acceptors [SKBS88]. ADI [MS92, MS93]. advances [GGL94]. algebra [DS91a]. Algebraic [LS17, GHS10, LSS03a, SS02b, SST04, SSC04, XLS16]. Algorithm [DS91b, LXV+16, Saa85a, SYEG00, ZS07, ESS86, GS87, GS88b, GS88a, GS89b, Saa74c, Saa80a, Saa82a, Saa86c, SS86c, SL86, SL88, SW93, Saa93a, SW96b, Saa91a]. algorithms [Saa74b]. Algorithms [AGPS03, ASSS11, BDG+10, CS92, CS85a, CS86, CTJ+95, CTSZ07, CZC+09, LXES19, Saa84g, Saa92a, Saa94a, Saa94b, Saa94c, BGSS14, BS94, CS93, CS96, FRSY96, GS94, KS87, Saa90b, Saa94e, US19, VS14].

Alternating [JSS87, SS85c]. Analysis [BSS09, BSS10, Saa92b, Saa94b, Saa97, Saa16, BJR+09, Saa94e, Saa00b]. analytics [KMB+18]. Anderson [BRZS18]. angle [LSS86, SL86, SL88]. Application [CS12, CTWS94]. Applications [AGPS03, ASSS11, BKS08, BDG+10, Saa06, Saa93a, Saa94a, Saa94b, Saa94c, BGSS14, BS94, CS93, CS96, FRSY96, GS94, KS87, Saa90b, Saa94e, US19, VS14].
approach [GS90a].
Approximate [GS90a].
Approximation [CS97a, CS97f].
Approximations [CS97a, CS97f].
Architectures [IS86b, IS86a, SS86b].
arising [Saa86e, SMSW00].
ARMS [SS85e, SS87].
Arnoldi [BSS10, DS91b, Saa80c, SSW98].
array [SSS85].
Assignment [DS91b, Saa88d].
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Automatic [GS94, Saa92a].
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Block [LS03, LSS03b, MS93, SS80, SZ99a, SZ99b, Saa03a, ZS08, CS97d, GS87, GS88b, GS88a, GS99b, Saa86b, SZ01, MS92].
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Book [Saa83c, Saa95].
bordered [CS85b].
Bounds [Saa94b, Saa94e].
Brownian [ACSS12].
Bulk [TZA+06].
calculation [ZSTC06a]. Calculations [BCEP94, SSC10, AJT+07, CTS93, CTS94, JKSC99, SSC+96, ZSTC06a].
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Centenary [BCEP94].
century [Sv00].
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charge [BSTC05].
charging [RG90b].
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classes [rFS09].
clusters [CTJ+95, JTD+94].
CM [PSWF93, WS93].
CM-5 [WS93, PSWF93].
Coarse [MS07a].
Coarse-Grid [MS07a].
Coarsening [MS07b, OKLS15, US19].
codes [GS83, JKSC99, US19].
Communication [SS85a, Saa85a, SS85d, SS86c, SS86b, SM95, Saa89a, SS89b].
Community [CS12].
Compensation [MOKS12].
Complement [DKXS18, LS05b, Saa89a, Saa89b].
complexities [GS89d].
Complex [PS85, PS87, Saa83a, Saa84a, Saa86b, Saa86c, Saa86e, Saa87c].
Component [JSS07].
Component-based [JSS07].
Computational [SM95, Fit86].
Computations [BTS+89, FWPS92, PSWF93, SW88a, Saa94a, SW88b, SW90, Saa90a].
Computers [FWPS92, SS02a, AS88, AS89].
Computing [BCEP94, BKS08, Saa74a, XLS18, LLC02, dGGS+05].
Conference [BCEP94, Fit86].
Confined [BCEP94].
Conjugate [SS85g, SS85f, SS86a, SYEG00, Saa06, Saa85c].
Conquer [LS13a].
consistent [ZSTC06a, ZSTC06b].
Constructed [BS05b].
construction [CrFS09].
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contour [KKPS18].
control [DS91a, Saa90d].
Convergence [BS94, Saa80b].
convergent [BS89].
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Cornelius [BCEP94].
correcting [UMS17].

dans [Saa74b]. Data [SS85a, SS85d, SS86b, SS89a, SS89b, Saa94a, SM95, CrFS09, KMB +18, SS14]. Davidson [SSW98, SS98b, ZS07]. December [BCEP94]. Decomposition [CS92, HS06, KXS18, LS17, Saa94a, TS11, CS93, CS96, KKPS18, LXS16, PS07, Saa92a, SSZ98, UMS17]. decoupling [KS87].

Definite [SS80, VSS14]. Deflated [CS97b, SYEG00]. deflation [Saa88d]. Dense [CS12, ISS84, ISS86, KMB +18]. Dense-Linear-System [ISS86]. Densities [XLS18, BSTC05, LSY16]. Density [BKS08, BSK +03, RGSB08, SS11, dlGGS +05].

density-functional [RGSB08]. dependent [BSK +03, RGSB08, dlGGS +05]. Design [Saa78b, SW95, SW96a, Saa87a, SMSW00]. Detection [CS12]. Diagonal [S299c, Saa05, TS11, BKS07, TS12]. diagonalization [JKSC99, ZCS14]. diatomic [CTWS94]. Dielectric [¨OBSC03]. difference [CTS93, CTS94, CTWS94, JTD +04, SSS85].

Differential [CSS85, CSS87, SS81]. Dimension [CSS9a, KC509, KS91, Saa83b].

dimensional [CrFS09, LSS86, SS14]. Dimensionality [KS07, NBS10, SrFS08]. Dirac [SS11]. Direct [SS85c, SS87, SW96b]. Direction [SS85c, JSS87].

disjoint [Saa83d]. Distributed [MS94, Saa92e, Saa94a, SM95, SS98a, SS99a, SS99c, Saa07].

Distributions [CS14]. Divide [LS13a]. Domain [CS92, KXS18, KKPS18, LS17, Saa94a, SSZ98, S299b, TS11, CS93, CS96, LXS16, PS07, Saa92a]. Domain-Based [S299b]. Domain-Decomposition-Type [TS11]. Dominance [Saa05]. d’origine [Saa74b]. DQGMRES [SW93, SW96b].

dual [Saa92d, Saa94d]. Dynamic [SSW98]. dynamics [ACSS12, CJWS96, JTD +94].

E. [Saa92h]. Editorial [Saa00a, BGSS14].

Effective [CS09a]. Efficient [AJT +07, PS016, GS90b, GS92b, GS92a, dlGGS +05, LSS86]. eigendecomposition [S298]. eigenelements [Saa80e].

Eigenfaces [SrFS08]. Eigenproblems [ZS07, KCS90, KCS11, SSM15].

Eigensolutions [Saa85b]. Eigenvalue [BSS10, rFS12, IS85, IS86b, LXV +16, PS89, Saa93c, Saa84b, Saa11b, Saa16, SSF93, XL816, DPKS16, KLS16, KKPS18, Saa82b, Saa83e, Saa89b, Saa92g, S3C +96, SSF95, SS98b, WSS98, ZS08].

Eigenvalues [BS05a, Saa74a, LXS19]. Electronic [JKSC99, SCS10, AJT +07, CTS93, CTS94, CKV +03, CTZ07, CZC +09, SSC +96]. element [KSS03, KSSG04]. Elimination [Saa85a, Saa86a, Saa96, Saa86c, Saa86d, Saa92c].

Elliptic [CSS85, CSS87, GS78, GS88b, GS88a, GS89b, GS89d, KSS92, SS81, SSM85].

Enhanced [Saa99b, ZS01]. Environments [Saa78b, Saa92e, CS99, Saa87a]. equation [KSS03, KSSG04, LSS86, SL86, SL88, ZCS14].

Equations [CSS85, GS92a, KS92, MS93, BS87, BS90, BS91, CSS87, ESS86, GS87, GS88b, GS88a, GS89b, GS98c, SSS89a, SSS89b, SSS90a, SSS90b, SSS90c, SSS90d, PS07, SS81, SSS85, Saa90c].

Eric [Saa95]. Error [Saa94b, CS18, Saa94e, SMS17]. estimate [CS818]. Estimation [UCS17, PS016]. estimator [KSS07]. Études [Saa74b].

Evolution [TZA +06, CTZ07]. Evolving [Saa16]. EVSL [LXS19]. Exact [Saa03a].

excited [BGB +10, SKBS88]. Experimental [CS97e]. exploration [Fit86]. Exponential [Saa92b, CS98a].

Extended [SS85c]. Extraction [CS12]. Extreme [rFS12].
F [Saa95]. Face [KS05a]. faces [KS05a].
Factored [BS02b, BS02c, BS02a].
Factorization
[HS06, LS05a, Saa92d, Saa94d].
Factorizations [MOKS12, CCS10]. Fast
[CrFS09, UCS17, VS14, XLS18, GS87,
GS88b, GS88a, GS89b, GS89d, US19].
February [GGL94]. feedback [Saa88d].
Fermi [SS11]. few [Saa94b, Saa94e]. field
[ZSTC06a, ZSTC06b]. Filtered
[BKS08, rFS12, Saa06, AKS17, ZSTC06a,
ZSTC06b, ZCS14]. Filtering
[KXS18, LXV+16]. Filters [XS16]. Finding
[Saa03a], finite [CTS93, CTS94, CTWS94,
JTD+94, KSS03, KSSG04].
finite-difference [CTWS94].
finite-difference-pseudopotential
[JTD+94]. first [AJT+07]. first-principles
[AJT+07]. flexible [Saa91a, Saa93a]. flows
[LLCS02]. fMRI [SS14]. forces [CJWS96].
format [CS97c], free [ZCS14]. Function
[XS17, SS11]. Functional [BKS08, BSK+03,
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[BSS10, Saa00b].

Gaussian
[Saa86d, CS14, Saa85a, Saa86c, Saa86a].
General [CS92, CS94, LSC03, Saa94b,
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CS96, Saa92a, Saa92e, Saa94c, Saa94e,
SSZ08, SZ90c, SZ91, SS02b, Saa07].
Generalized [XLS18, SS86c]. Globally
[BS89]. GMRES [Saa91a, SS86c, Saa93a].
GPU [AKS17, LS13b]. GPU-accelerated
[LS13b]. Gradient
[SS85g, SS85f, SS86a, SYEG00, Saa85c].
Gradient-like [SS85g]. Gram [Saa86e].
Graph [HS06, SrFS08, VS14, CrFS09,
GS94, OKLS15]. Graph-Based [SrFS08].
Greedy [MS07b, MS07a]. Grid [MS07a].
Guest [BGSS14].

Hand [Saa87d, KMB+18]. Harnessing
[BGB+10]. Harwell [SW89].

Harwell-Boeing [SW89]. held [GGL94].
Helmholtz [KSS03, KSSG04, OKS10].
Hermitian [LXV+16, Saa74a]. Heuristic
[Sa94]. Hierarchical [DKXS18, HS06].
High [CSW00, CrFS09, SS14].
high-dimensional [SS14]. High-order
[CSW00]. Higher
[CTWS94, SKBS88, JTD+94].
High-order [CTWS94, JTD+94]. Highly
[Saa94c]. Houston [Fit86]. Hybrid
[BS87, BS90, ES88, GHS10].
hydrodynamic [ACSS12]. Hypercube
[CS85a, CS85b, CS86, CS87]. Hypercubes
[SS85a, SS85d, SS85b, Saa86a, SS88, Saa86d,
Saa89a].

ILU [CSW00, CS97e, HS06, LS05a, MS94,
OKLS15, Saa92d, Saa92e, Saa96, SZ99a,
SZ99c, SZ91, Saa03a, Saa05]. ILUM
[Saa92c, Saa96]. ILUs [BS02c, BS05b].
ILUT [Saa92d, Saa94d, SZ99b]. IMA
[GGL94]. Impact [IS85, IS86b, IS86a].
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[LXES19, AKS17, BSK+03].
Implementations
[SS85f, SS86a, Saa91b, Saa93b]. Implicitly
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[LS06, MOKS12, CCS10, CS97c, Saa92d,
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[CCS10]. Indefinite [DKXS18, XS17, CS97e,
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Indexing [SrFS08, VS14]. industrial
[SAD+00]. Inexact [WS98]. Initio
[OBSC03, JTD+94]. inner [Saa91a, Saa93a].
inner-outer [Saa91a, Saa93a]. Institute
[BTS+89]. integration [KKPS18].
interactions [ACSS12]. Interior [rFS12].
International [BCEP94]. interval [DP16].
intervals [Saa83d]. Invariant
[BKS08, PS07]. Inverse
[BS02b, BS05b, CS94, CS98b, TS11, BS02a,
CS97d, CS97f, TS12]. Inverse-Based
[BS05b]. Inverses [BS02c]. Invert
[PS87, PS85]. Iron [TZA+06]. irregularly
[FRSY96]. Issue [ASSS11, BDG⁺10].
Iteration [Saa16, ZSTC06b, ZCS14].
Iterations [BK08, CS98b, Saa00b].
Iterative [BTS⁺89, CS85b, GS83, SS81, Saa83d, SM95, Sv00, Saa03b, CSS02, GGL94, JSS07, KMB⁺18, LS13b, SW94, SW95, SW96a, SKL⁺97, Saa01].

J. [Saa92h]. Jacobi [SS98b]. January [Fit86].

Kernels [SM95]. Kit [Saa90a]. Kohn [SCS12, ZCS14]. Krylov
[Saa89a, Saa90b, ACSS12, BSS09, BS87, BS89, BS90, BS94, CS99, CCSY98, CS97b, CS14, ESS86, GS92b, GS92a, Saa81, Saa84c, Saa90d, Saa91b, Saa92b, Saa92e, Saa92f, Saa93b, Saa97, Saa98, Saa11a, ZS08].

Laguerre [SSS10]. Lanczos
[BCEP94, AKS17, BGB⁺10, BSTC05, BK08, CrFS09, CS18, CS92, CS94, LSC03, LS13a,¨OBSC03, PS87, Saa85b, SW89, Saa96, SZ99b, Saa16, BSS09, CS93, CS96, CS97d, CS97e, LS05a, LS16, PS85, Saa74a, Saa80c, Saa86b, Saa86e, Saa92c, Saa94e, UMS17, XLS16].

Lanczos-Type [Saa94b, Saa94e]. Large
[BK08, BKS07, BGSS14, CS98a, Saa83a, Saa83b, SW88b, Saa90a, SW94, TS11, BJR⁺09, BK08, BGSS14, CS98a, Saa83a, Saa83b, SW88b, Saa90a, SW94, TS11, BS87, BS89, BS90, BS91, CSS02, CS85b, CS96, CS97d, CS97e, LS05a, LS16, PS85, Saa74a, Saa80c, Saa86b, Saa86e, Saa92c, Saa94e, UMS17, XLS16].

Latent
[SF85, VS14]. Least
[ACSS11, LS06, Saa83a, Saa87c, XS16, Saa84a, Saa86b, Saa86e]. Least-Squares
[LS06, XS16]. Level
[SSZ98, SZ99c, SZ01]. Library
[LXES19, SW94, SW95, SW96a, SKL⁺97]. Like
[DS91b, SS85g]. Linear
[DKXS18, ITS07, ISS84, ISS86, MS92, MS93, MS94, SS85g, SS85e, SS87, SS98a, SZ99a, SSS9c, SSS02a, X17, AS88, DS91a, ESS86, GS83, GSS03, Jss07, KMB⁺18, LS13b, OKS10, Saa81, Saa83d, Saa84c, SSS85, SSS6c, Saa87c, Saa88d, Saa88a, Saa88b, Saa88c, SSZ98, SZ99c, SS99b, Sv00, SZ01, Saa01, Saa02b, Saa03b, Saa07, SMSW00]. Liquid [LCS02]. Localized [CJWS06]. Low
[CS09b, DKSX18, LS13a, LS17, UMS17, CS08, LS16, XLS16]. Low-Rank
[LS13a, LS17, LS16, XLS16]. LR [Saa74b]. LU [CCS10]. Lyapunov [Saa90c].

Magnetism [TZA⁺06]. March [GGL94].
Markov [PSS92, Saa91c]. Massively
[FWS92]. Material [SÖS⁺00]. Materials
[SCS10]. Mathematical
[Fit86, Fit86].

Matrices
[CS92, CS94, LSC03, LS13a, ÖBS03, PS87, Saa85b, SW89, Saa96, SZ99b, Saa16, BSS09, CS93, CS96, CS97d, CS97e, LS05a, LS16, PS85, Saa74a, Saa80c, Saa86b, Saa86e, Saa92c, Saa94e, UMS17, XLS16].

Matrix
[AGPS03, ASSS11, AEKS90, BDG⁺10, FWS92, IS86a, OKLS15, PSWF93, SW88a, Saa92b, Saa94a, SW94, TS11, BJR⁺09, BK08, BGSS14, CS98a, Saa83a, Saa83b, SW88b, Saa90a, SW95, SW96a, SAD⁺00, TS12, US19, VS14, dlGGS⁺05]. Memory
[Saa87b, SM95, Saa87a]. Message
[Saa87b, Saa87a, WS93]. Method
[SS80, Saa87d, CTS93, CTS94, CTWS94, CS18, JTD⁺94, KSS03, KSSG04, LSS86, Saa80c, Saa85c, SCS12, TS12, ZS08, ZCS14].

Methods
[BTS⁺89, CCSY98, CS14, DS91b, GS92a, LS17, PS92, SS81, SS85c, SS85e, SS85f, SS86a, Saa87b, SS87, Saa91b, Saa92e, Saa93b, Saa97, SC10, Saa11a, Saa11b, SS98, SÖS⁺00, TS11, ACSS12, BSS09, BS87, BS89, BS90, BS91, CSS02, CS85b, rFS09, Fit86, GS90b, GS92b, GGL94, JSS87, JSS07, KS92, KCS09, KCS11, Saa80a, Saa80b, Saa81, Saa82a, Saa82b, Saa83d, Saa83b, Saa83e, Saa84c, Saa84d, Saa89a, Saa90b, Saa90d, Saa91c, Saa92g, Saa92f, Saa98, Saa01, Saa03b, Saa98b]. Minimal
[SS86c, SW93, SW96b]. Minimum
[Saa00b]. Minneapolis
[BTS⁺89, GGL94].
Minnesota [BTS+89, GGL94]. MIQR [LS06]. Modeling [PSS92, Fit86]. models [Saa91c]. modern [CSS02, SSC04].
Modification [MOKS12]. Modified [CS99, Saa84a, Saa86b]. module [SW94, SW95, SW96a]. Molecular [CJWS96, BGB+10, JTD+94].
molecular-dynamics [JTD+94]. molecules [CTWS94]. moment [Saa84a, Saa86b]. Multi [Saa96, Saa92c, SSZ98, SZ99c, SZ01].
Multi-Elimination [Saa96, Saa92c]. Multicolor [SS99b]. Multigrid [CSS85a, CSS86].
models [Saa91c]. modern [CSS02, SSC04]. Modiﬁcation [MOKS12]. Modiﬁed [CS99, Saa84a, Saa86b]. module [SW94, SW95, SW96a].
Molecular [CJWS96, BGB+10, JTD+94].
multi-level [SSZ98, SZ99c, SZ01]. Multicolored [SS99b]. Multigrid [CSS85a, CSS86].
models [Saa91c]. modern [CSS02, SSC04]. Multi-Elimination [Saa96, Saa92c]. Multicolor [SS99b].
Multigrid [CSS85a, CSS86].
Modern [CSS97a, CSS97b, Saa84b, SS85g, Saa88d].
N [Saa83c]. Nanocrystals [CTSZ07, CZC+09]. Neighborhood [KS07, KS05b].
Newton [Saa95]. News [Saa95]. Newton [Saa95]. Non [SS99c].
Non-standard [SS99c]. nonlinear [BS87, BS90, BS91, BS94, rFS09, KS92, Saa88d].
Non-symmetric [LS83b, MS92, MS93, MS07b, Saa84b, Saa85g, Saa85b, Saa86e, Saa83a, Saa84c, Saa86c, Saa87c, Saa88a, Saa88b, Saa88c, Saa89b].
Normal [BS90]. North [BCEP94]. null [ITS07]. null-space [ITS07]. number [Saa86e]. numbers [Saa84a, Saa86b].
Numerical [PSS92, Saa83b, Saa87b, Saa89b, Saa90c, Saa92g, SCS10, Saa11b, Saa87a, Saa91c].
Oblique [Saa80a, Saa82a]. Observer [DS91b]. October [BTS+89]. ODE [GS83].
Operator [Saa92b, CS98a]. OPRA [KS05a]. OPRA-faces [KS05a]. Optimal [CS09b, CS08]. Optimization [NBS10, NBS12, BS89, KC59, KCS10].
order [CSS02, CTWS94, JTD+94]. origin [Saa74c]. Orthogonal [BS99b, Saa74c]. Orthogonalization [SW93, SW96b]. other [Saa80a, Saa82a].
Outer [Saa91a, Saa93a]. Overlapping [CSS92, CSS93, CSS96, LS05b].
overview [Saa90d].
P_SPARSLIB [SW94, SW95, SW96a, SKL+97]. Package [SW88a, SS02a, SW88b, WS89]. papers [GGL94].
Parabolic [GS92a, GS89c, GS89a, GS90b, GS91a, GS92b]. Parallel [BDG+10, BS89, BSK+03, CSS02, CSS97, FSWS92, FSY96, GS90a, HS06, IS85, IS86b, IS86a, SS85e, SS85f, SS86b, SS86a, Saa87b, Saa87c, Saa87d, SS89b, Saa92c, Saa92e, Saa94c, SW95, SW96a, SKL+97, Saa99b, Saa01, Saa02a, Saa05a, ZSTC06a, AS88, AS89, CS99, GS97, GS88b, GS88b, GS89b, GS89c, GS89a, GS89d, GHS10, SS80a, Saa87a, Saa89b, Saa92c, Saa94c, SW95, SW96a, SKL+97, Saa99b, Saa10, AGPS03, ASSS11].
Parlett [Saa83c]. pARMS [LS80a, SS02a]. Partial [CSS85, BS91b, Saa85b, XS16, CSS87, Saa88d]. partially [BSTC05].
Particle [LLCS02]. partitioned [CS97d].
Partition [GS94, LLCS02, Saa74a, VSS14]. Passing [Saa87b, Saa87a, WS93]. Performance [WS93].
Periodic [AJT+07].
Physical [CSS02, SSC04]. Pivoting [BS02b, BS02a, LS05a]. Plane [JKSC99, Saa83a, Saa84a, Saa88a, Saa86b, Saa86c, Saa87c]. Plane-wave [JKSC99]. PMAA [AGPS03].
PMAA’10 [ASSS11]. Point [LS80a, LS80b]. Pole [Saa88d]. Polynomial [BS89, CAS11, LVS+97, GS90b, Saa85c]. Polynomials [BS89, CAS11, LVS+97, GS90b, Saa85c].
Portable [Saa83d, Saa83a, Saa87c, SSS10]. positive [Saa80a, Saa82a]. Positive [Saa80a, Saa82a].
posteriori [CS18]. potential [CTS93, CTS94]. Practical [BTS\textsuperscript{+}89, Saa84c, Saa85c, BTS\textsuperscript{+}89].

Preconditioned [CCSY98, CS14, SS85f, SS86a, Saa91b, Saa93b, Saa98, LS13b, Saa91a, Saa92f, Saa93a]. Preconditioner [BS02b, DKS18, LS05b, LS06, Saa96, SZ99a, SZ99b, XS17, BS02a, CS97c, Saa92c, XLS16].

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