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## Title word cross-reference

$(0, +\infty)$  [DO18].  $(0, 2)$  [Lén06].  $(1, 1)$  [GS06].  
 $(l)$  [SF93].  $(n)$  [BR08]. 1  
[Bar06, NP20, XS20]. 2  
[BLM06, CP03, HKKR18, Mar07, Mar11]. 3  
[BLM06, BB01, BRC<sup>+</sup>16, BHRT03, TV07].  
3500 [JC06]. 9 [Kou97].  $[-1, 1]$  [BCGAM08].  
 ${}_1\psi_1$  [Sch06].  ${}_3\Phi$  [Lei19].  ${}_q(1, 1)$  [Arv06].  ${}_q(2)$   
[Arv06].  $A$  [AR07].  $A, V$  [AR07].  $\alpha$   
[JN07, VC14].  $C^0$  [BW12].  $C^n$  [PP06].  $e^z$   
[VCL08].  $\ell^p$  [CRZT20].  $\ell_1$  [DdSV20].  
 $\exp(-\tau A)b$  [SSS10].  $F$  [GN16, Zha04].  $f(A)b$   
[MR17].  $H(\text{curl})$  [Cal15].  $H(\text{div})$  [Hip97].  
 $H - LU$  [LO07].  $H_2([0, T], \mu, R^d)$  [Sch03].  
 $H_\infty$  [CKP15].  $k$  [MSV95, PQRT06].  $L$   
[CHR02, KR20].  $L^2$  [Bar06].  $l_1$  [Ger17].  $\Lambda$   
[COSV93].  $M$  [BU07].  $R^4$  [JO14].  $\text{MR}^3$   
[WL11, WL12].  $N$  [ANCQ06].  $N(II)$   
[BMSR06].  $N \leq 4$  [Meu12].  $P$   
[ZB10, Car11, Car12, Pry14].  $\psi$  [AR07].  $Q$   
[MM99, Arv06, AK06, EMJ16, IL06, Ost10,  
Psa04, Roz06].  $q > 1$  [Ost10].  $Q_1$  [MC05].  $qd$   
[WL11].  $QR$  [AMVW15, FXG19].  $QZ$   
[VW13].  $R$  [Lub06].  $R^3$  [DGH14].  $R_d$   
[She04].  $s$  [IE17].  $\Theta$  [BB00].  $U_q(\mathfrak{so}(5))$   
[Roz06].  $V$  [Zha04].  $x^T A^{-1} y$  [FMR15a].  $Z$   
[BHRT03].  
**-Bernstein** [Ost10]. **-biharmonic** [Pry14].  
**-classical** [MM99]. **-continued** [IL06].  
**-control** [CKP15]. **-curve** [CHR02, KR20].  
**-cycle** [Zha04]. **-D** [BRC<sup>+</sup>16, XS20].  
**-eigenpairs** [CRZT20]. **-fractal** [VC14].  
**-Hahn** [Arv06]. **-interpolation** [EMJ16].

**-matrices** [BU07]. **-methods** [BB00].  
**-numerical** [Psa04]. **-orthogonal** [Roz06].  
**-pinch** [BHRT03]. **-point** [Kou97].  
**-polynomials** [AK06]. **-regular** [ZB10].  
**-regularization** [Ger17]. **-smoothing**  
 [GN16]. **-step** [IE17, MSV95]. **-th**  
 [ÁNCQ06]. **-type**  
 [DdSV20, Lén06, WL11, Lei19].

**/9** [dJvdPDV17].

**4th** [Mar07, Mar11].

**5-** [dJvdPDV17]. **5-/9-point** [dJvdPDV17].

**75th** [GOR<sup>+</sup>08].

**9-point** [dJvdPDV17].

**a-posteriori** [Gat04]. **Abel**  
 [MG14, Mok15, Mok16]. **Abel-type** [MG14].  
**abstracts** [Ano09a, Ano10b, Ano13a,  
 Ano14c, Ano15b, Ano15d, Ano16, Ano17b,  
 Ano17c, Ano18c, Ano19a, Ano20c].  
**accelerated**  
 [BGP04, Che99, DdSV20, SSVS12].  
**accelerating** [WNK18]. **Acceleration**  
 [AS09, AS05a, BK13, Lóp16, Val19, WO97].  
**Accumulation** [Ore10, NU05]. **accuracy**  
 [Ful03, Ves96]. **accurate**  
 [Bra00, EBJ21, MACI06, TC08, WLR02].  
**ACMS** [HKKR18]. **acoustic** [HL20]. **action**  
 [AS05a]. **adapted** [Val19]. **Adaptive**  
 [BFK<sup>+</sup>10, DDS<sup>+</sup>18, JOT08, KKR18,  
 MSV95, Wac13, BMS08a, BMM97, BRS08,  
 CW16, FFK<sup>+</sup>15, Ful97, JG14, KCW18,  
 KRR16, MR18, NP96, PD17, KNS19].  
**Addendum** [BBF<sup>+</sup>00a]. **Additive**  
 [BGyS21, MR18, Bre03, DHI03, FSS97,  
 Han06, Mar07, MP08, Par21]. **Addressing**  
 [BC05]. **ADI** [BMS08b, BKS15, Kür19].  
**adjoint**  
 [BFM12, GS15, GHS14, KK08, Neu16].  
**admissible** [DTM17]. **ADMM** [FTRH20].

**ADMM-Softmax** [FTRH20]. **Advancing**  
 [PLM03]. **against** [BP07]. **aggregation**  
 [BDH15, Ema10, MMP09, NP19b, Not10].  
**aggregation-based** [NP19b, Not10].  
**aggregation/disaggregation** [MMP09].  
**aggressive** [BFH<sup>+</sup>15, TV18]. **ahead**  
 [GH94]. **air** [LHL<sup>+</sup>20]. **airfoil** [RFHS08].  
**Alan** [Pot05]. **algebra**  
 [AAS21, DENP09, FMR15a, Gau02, Sus07].  
**Algebraic** [BBKL15, EMS09, NP19a, Pop08,  
 AO10, ABM93, Aré09, Bra00, EMS13,  
 HS08b, HJ09, JN07, JC06, KLRW19, KM96,  
 KM07, LC14, LT18, Man03, MN08, Meu01,  
 Not10, PMLFT09, PGH11, Rom07, Sch93].  
**algebras** [Arv06, JO14, JO17, Opf15].  
**algorithm** [ABM93, AMVW15, BEG15,  
 BR14, Bar05, BK13, BP03, BW12, Bun97,  
 BMX07, CL03, Die97, Dis97, Faß96, Faß07,  
 For02, Gan04, HMRS04, HJ09, JC17, Kal20,  
 Kou97, Kre05, LV08, LDB13a, LDB13b,  
 LC14, Man08, Osb08, PPS18, Ste97b, Tif11,  
 Tu05, Tu07, TW16, VW13, WNK18,  
 WLHH18, WL11, WL12, YNYF15, ZC19].  
**algorithmic** [Koe99]. **Algorithms**  
 [LZ08a, Aur15, BR08, CW16, Cha11, CS94,  
 DDR95, ENH10, Els05, FI20, GKM16, IN11,  
 JVV12, KCW18, MR18, MH01, Pav99,  
 PCP06, RKvdDA14, Ves96, ZX17]. **aligned**  
 [Dis97]. **all-at-once** [GW19]. **Almost**  
 [Ade17]. **along** [Dos08, Sch05]. **Alternating**  
 [HNP10, WNK18, ZM13]. **Alternative**  
 [Che06]. **American** [Oos03].  
**American-style** [Oos03]. **AMG**  
 [Ema10, GN16, Haa00]. **AMGr** [GN16].  
**Ampère** [DG06, Nei14]. **amplitude**  
 [GSW08]. **anaerobic** [SCCJC09]. **Analysis**  
 [AR07, BSS09, BDH15, Bre03, CG18, ELT21,  
 FCA21, FK08, HLP10, LMN10, NV19, Sch93,  
 Xu06, AM11, Ahm19, AAS21, ACS00, AK10,  
 BBD<sup>+</sup>08, BJR<sup>+</sup>09, BDR09, BF12, CMO18,  
 CCDR08, CC00, Che97, DNV05, DN11,  
 DSC08, FJMS06, For02, FH13, GS07, Gau02,  
 GGM12, GO10, HHP13, HLNT18, HR14,  
 JS18, Kin11, MB06, MC05, MH01, MX96,

MX97, MG14, NP19a, Nei14, PLM03, SAA09, SG94, WD08, XS20, YNYF15, Yan98].

**analytic** [DDPS20, JJ10, MY02, MR93, MPS18, Ost10]. **analytical** [ÁNCQ06].

**Andoyer** [Bre94]. **Anger** [LP17]. **angle** [GMT16]. **anisotropic** [ADM07, BBKL15, CL03, DGP99, MC05, Mav97, NC06].

**annihilation** [Lor99]. **announcement** [PQRT06]. **ANSYS** [PLM03]. **anti** [Ahm19, Cab07]. **anti-palindromic** [Ahm19]. **anti-periodic** [Cab07]. **Any** [DTM17, Sch16]. **AOR** [FMP96]. **Apostol** [KS18]. **Apostol-type** [KS18]. **Appell** [LP08]. **Application** [OR11, ZK17, Bor09, CMM95, GW10, HLC10, KM08, KLS17, LP17, LKF08, Oos03, Sim10, LP08].

**Applications** [Bar11, BGSC20b, BGSC20a, BJR<sup>+</sup>09, BB01, BCDI15, BRC<sup>+</sup>16, BCDV06, CMP01, EMJ16, FXG19, FLMT05, FMR15a, KZ07, NNR99, OS98, RÁRP06, She10, YHL<sup>+</sup>20, ZM13].

**applied** [BDG04, DS11, EMS13, FS08, JO05, LR16, MST08, PGH11, TV07].

**approach** [AM06, Arv06, Bor09, DG06, FJMS06, FMSV08, FTRH20, GW10, HHP19, KKR20, KS18, MM99, MS08, PMLFT09, TMS97, Tif13]. **approximants** [Bar06, Zho06]. **Approximate** [Kür19, SV10a, BL08, CFM<sup>+</sup>10, ET09, LN10, MPV13, MPV15, WA08].

**Approximating** [Ash17, vBHS14, BR08].

**Approximation** [GSW08, GRS00, VCK08, Yam06a, AR09, AMRT06, ABH17, BEG15, BY98, BK06, BLM06, BSS09, BCDO18, BEJ<sup>+</sup>18, BKK<sup>+</sup>18, Bor09, Del02, ER01, ERS17, Faß96, FFK<sup>+</sup>15, FP01, FMR15b, GCPP99, HLX14, LT14, Lub06, Man03, MJ11, Mas02, MMN18, Mok16, Nal19, NP20, Nav05, Ost10, Rap06, ST08, Sch03, SG98, VB95, VC15].

**Approximations** [BFdP<sup>+</sup>18, FLMT05, Fro09, Kha06, RV08, WA08]. **arbitrary** [LO13, LWH20]. **arcs** [BDD06]. **area** [Leo06, Leo09, VA09]. **argument** [GRS00].

**arguments** [Pea15]. **arising** [CCC07, DE06, EMS13, NB08a, NRS17, Woh00].

**arithmetic** [DDR95, Lau08]. **Arnoldi** [EMS09, EHJM17, GN13, HS97, HJ09, Mee98, Meu15]. **arrays** [Dam02]. **aspects** [FM02, SAA09]. **assessment** [BBD18].

**assignment** [CC00]. **associated** [Arv06, EV93, HS12, MS06, SG99, Sta02].

**asymptotes** [BEG15]. **Asymptotic** [AD04, BKS18, DB08, FLMT05, Kou97, Dam02, DT09]. **Asymptotics** [HC05, MFMGO05, Sta02, Man06].

**Asynchronous** [FSS97, BMPS95, SME02].

**atmospheric** [Auz18, RS21a, RS21b]. **atom** [RR07]. **atomic** [TT05]. **atoms** [ÁNCQ06].

**Augmented** [Neu19, AVV14, DG06, Gat07, RS21a, RS21b, Zít08]. **automatic** [Sch08b].

**autonomous** [HHO14]. **average** [MR18].

**averaged** [DRST16]. **avoiding** [CKD15].

**aware** [Sil03]. **axisymmetric** [KMC11].

**B** [KK08, ZK17]. **B-spline** [KK08].

**B-splines** [ZK17]. **backward** [AD09, GJV13]. **bacteria** [SCCJC09].

**Bakhvalov** [NV19]. **Bakhvalov-type** [NV19]. **balancing** [BM05, Wat06a].

**balayage** [Göt06]. **ball** [BLM06, Xu06].

**Banach** [CMO18]. **bang** [Wac13].

**bang-bang** [Wac13]. **barrier** [NV19].

**barrier-function** [NV19]. **barycenter** [OR11]. **Barzilai** [HNP10]. **based** [Bar11, BHN13, BB08, BBK18, BDR09, BDH15, BFK<sup>+</sup>10, BD20, CP00, DK13, EL05, EHJM17, FCA21, Gat04, GSV12, GN16, Gut12, HKKR18, HRT08, HK14, HLP10, HLP15, HLC10, JC17, KL21, Kin11, KLRW19, KL18, Lam10, LMR15, MJ11, NP19b, NP96, Not10, Tif11, YG08]. **bases** [Fer05, MS06, PCP06]. **basic** [FM02]. **basis** [GSV12, HOR08, KCW18, KKR18, KKR20, LW06, WE13, WA08]. **BDDC** [BPS17, CW16, HKLW20a, HKLW20b, KCW18, KKR18, KLRW19, KKR20, PD17, Tu05, Tu07, TW16]. **Behavior**

[LM00, Böt04, DB08, KS06]. **behaviour** [FP01, GJV13]. **Beijing** [LHL<sup>+</sup>20]. **BEM** [HLP15, Kol12]. **BEM-based** [HLP15]. **Benchmarking** [Ema10]. **bending** [SG94]. **Beowulf** [FO03]. **Bernoulli** [HMRS04]. **Bernoulli-like** [HMRS04]. **Bernstein** [BCGAM08, DRST16, Gau10, Ita06, Lub06, Nal19, Ost10, WA08]. **Besov** [Tik05]. **Bessel** [Man06, Rap06, Ste02]. **best** [BLM06, Bar06, Kha06, Mas02, Ran07, Van07]. **beta** [BH20, LWH20]. **Beta-type** [LWH20]. **between** [Gau02, LMS09, Mee98, SK06, ZY13]. **beyond** [VW13]. **Bezoutians** [ER14]. **BFGS** [ABHK09, SHH<sup>+</sup>12]. **biased** [BCDO18]. **BiCGSTAB** [EJS03, SF93]. **bidiagonal** [WL12]. **bidiagonalization** [CHR02, HRT08, ZX17]. **Bidomain** [GGM12]. **bifurcation** [SY09]. **biharmonic** [BGS10, CPS18, KRZ16, Pry14, Zha04]. **bilinear** [FMR15a, Kim07b]. **binary** [KM08]. **Binet** [GM18]. **Binet-type** [GM18]. **Bingham** [AVV14]. **binomial** [JN10]. **bio** [LKF08]. **bio-heat-transfer-equation** [LKF08]. **biofilm** [DE06]. **Biorthogonal** [VVV19]. **Biot** [HK18]. **biperiodic** [HR14]. **birthday** [GOR<sup>+</sup>08, RS14]. **bisection** [DDR95, EH15]. **bisection-like** [DDR95]. **Bivariate** [BCDV06, MM09a]. **Block** [BGSC20b, BGSC20a, Bar15, BU07, CFM<sup>+</sup>10, FLS17, Val19, WL11, AHS17, ABA20, AK10, CS99, DN11, Dub01, ELT21, EJS03, EMS09, EHJM17, Fat98, GGM12, HK17, HJ09, HN08b, KN03, KLS17, Lam08b, MPV15, MZLG14, NZ14, SS09, Soo17, TZ17, TLF07, LZ08b]. **Block-proximal** [Val19]. **block-triangular** [GGM12]. **block-tridiagonal** [CS99]. **blocks** [Gre04, GS06]. **blow** [NB08b]. **blow-up** [NB08b]. **blur** [Bar05]. **bodies** [Kro06]. **Boltzmann** [CL03]. **Boosting** [PMLFT09]. **Borges** [JST18]. **Borsuk** [AFHM04]. **Borwein** [HNP10]. **Bouligand** [CN19]. **bound** [COSV93]. **boundaries** [VK95]. **Boundary** [ET09, KL12, Ash17, BHN13, BK16, ČF18, Che99, Che09, DB08, ER01, FFK<sup>+</sup>15, GN14, HJ08b, HL20, HLP10, KK08, Lam05, LMN10, Mar18, MST08, Nas15, Sch08a, SZ20]. **boundary-value** [Che09]. **bounded** [AR07]. **Bounds** [Sch02, Vos99, AD04, Bea98, BR08, CHR02, CGT05, CKP15, FSS18, Leo09, LR16, MPS18, PP08, TV18]. **Bregman** [DdSV20]. **broadcasting** [YHL<sup>+</sup>20]. **Bruijn** [COSV93]. **bubbly** [TV07]. **bucket** [AO10]. **bucket-sorted** [AO10]. **bulges** [Kre05].

**Cache** [DHK<sup>+</sup>00, Sil03]. **Calculation** [Kan08, BL08, HLC10]. **calculations** [SK06]. **capabilities** [PLM03]. **Carathéodory** [ST08]. **Cascadic** [LH12]. **case** [BGSC20b, BGSC20a, BL08, HS08a, HS08b, LDB13a, LDB13b, LT05, MX96, MX97, Ost10, TLF07, Wat06a]. **cases** [TT05]. **Cassini** [VK99]. **Cauchy** [BMP09, CR96, Drm15, JR02, JR04]. **Cauchy-like** [BMP09]. **Cayley** [AMVW17]. **CCFD** [FCA21]. **cell** [MM09b, VA09]. **Center** [Bra97]. **centrosymmetric** [ER14]. **certain** [ABBS07, Arv06, BMP09, Nov05]. **CFD** [Ema10]. **CG** [BK02, LT05]. **CGNE** [Neu19]. **chains** [BBD<sup>+</sup>08, BU07, BKK<sup>+</sup>18, CG18, FMSV08, HMRS04, Jac10, Tif11, Tif13]. **Chan** [Zei99]. **change** [KCW18]. **changing** [Fra21]. **channel** [Kan19a, Kan19b]. **Characteristics** [Tik05]. **characterization** [GS94]. **characterizing** [SS08]. **Chebyshev** [BK13, FP01, GN16, HH93, WR09]. **Chebyshev-like** [HH93]. **Chinese** [YHL<sup>+</sup>20]. **choice** [CW16, Kin11, Kin13, Wu03]. **Cholesky** [BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, GM04, RT05]. **Cholesky-like** [BBF<sup>+</sup>00a, BBF<sup>+</sup>00b]. **CholeskyQR2** [YNYF15]. **Christoffel** [DK10]. **Ciarlet** [YG96]. **CIP** [Sch08a]. **circle** [Bar06, BDD06, BCDI15, CBGV05,

Gau06, Gla08, MS14, SL12, Sin95]. **circles** [Roş09]. **circuits** [KJ09]. **Circulant** [Ng97]. **circular** [CMR12]. **citation** [BDR09, BF12]. **citation-based** [BDR09]. **class** [ABBS07, ENH10, JG14, LT18, MFMGO05, Tik05]. **classical** [Gau02, HK18, LZ07, MM99, RS12]. **clusters** [FO03]. **Coarse** [KKR20, HKKR18, HKLW20a, HKLW20b, KRR16, KLRW19, MR18]. **Coarsening** [AO10, Bol08, Bra00, BFH<sup>+</sup>15, Dis97, Mav97, Spr02, TV18]. **coefficient** [Lam05, SCCJC09]. **coefficients** [LDB13a, LDB13b, LH12]. **Coercive** [SZ20]. **coin** [BCDO18]. **Collocation** [GSV12, JR04, JKM14, AS14, ACS00, ER01, JR02, KK08, KL12, LR16, PGH11, YG08, ZK17]. **column** [PCP06]. **Combinatorial** [PCP06, Tif13]. **combined** [BKK<sup>+</sup>18, PPN13, SSVS12]. **Communication** [BM05, CKD15]. **communication-avoiding** [CKD15]. **commutator** [ET09, Pea15]. **commuting** [She10]. **Comonotone** [VC15]. **compact** [GGCT09, PSC97, SSVS12]. **compact-WENO** [GGCT09]. **companion** [BDG04]. **Comparing** [Spr02]. **Comparison** [LMS09, Sta03, Ful97, JVV12, KRR16, LMM12, Mee98, RV08, VW97]. **complement** [KLS16, Zha00]. **complementarity** [Oos03]. **complete** [Meu12]. **completion** [LM20, RKvdDA14]. **complex** [AM11, BMX99, Ber04, KP13, KM17, PPS18, SF93, SHZF08, TT05, VCK08]. **complexity** [BMS08a]. **component** [HK14]. **composite** [SMS<sup>+</sup>19]. **compressible** [Ema10]. **compression** [MB06]. **Computation** [ACR99, Car12, HRV13, KMC11, Nar18, Bra97, KLS17, MS14, MVV09, MR93, MACI06, Nov05, Sch08b]. **computational** [SAA09]. **computations** [BC05, DS11, EH15, FO03, HS08b, KS00, ST02]. **computer** [NND06]. **Computing** [AMVW17, JO07, LY14, MPV13, MPV15, SSS10, BFM20, IN11, JVV12, KQT13, KM08, LWH20, MV15, MH01, NNR99, OS15, PCP06, TC08, VVM09]. **concerning** [EP07]. **Condition** [AK10, MS06, BP07, DB08, Sim10, Zha01]. **Conditional** [AS14, BBK18, Dis97]. **conditioned** [Kin13, Peñ04]. **conditions** [BHN13, BKO17, ČF18, Che09, ET09, Gat07, HL20, MST08, Neu16, Sch08a]. **conductors** [BHRT03]. **confidence** [NO02]. **configurations** [vBHS14]. **confluent** [DT09, LR04]. **Conformal** [CMR12, LT94, SL16]. **conjecture** [KV95, Zei99]. **conjugate** [CKD15, Dub01, GJV13, KN03, NP96, ST02]. **connected** [CMR12, DK10, HS12, SL16]. **connections** [KKR20]. **considered** [Lau08]. **consistent** [Aré09, BKS18]. **consolidation** [HK18]. **constant** [COSV93, HR06, LDB13a]. **constitutive** [Mál08]. **constrained** [Bar05, Bar11, QvGvW<sup>+</sup>15, Ran07, VC14]. **constraining** [LMSY14]. **constraint** [CLRS04, JOT08, RZ12]. **constraints** [CW16, KCW18, LMM12, Ram08, RR10]. **Construction** [JST18, XBC19]. **constructions** [HR06]. **constructive** [BMFJ<sup>+</sup>06, MJ11]. **contemporary** [JVV12]. **contents** [Ano09a, Ano10b, Ano13a, Ano14c, Ano15b, Ano15d, Ano16, Ano17b, Ano17c, Ano18c, Ano19a, Ano20c]. **context** [LO13]. **continued** [IL06, Khr06, LB96]. **Continuous** [BB00, BMSR06, Fra21, CKP15, HJ09, KQT13, Lor99, Man06]. **continuous-time** [CKP15, HJ09]. **contour** [ST08]. **control** [CKP15, DSSS13, Kol12, PW13, Pea15, Wac13]. **controlled** [BKO17, DJ06a]. **convection** [BZ03, ELST18, FK08, Kou97, MST08, PSC97, PW13, RV08, WLR02]. **convection-diffusion** [ELST18, FK08, Kou97, MST08, PSC97, PW13, RV08, WLR02]. **Convergence**

[BEN94, Che09, ELST18, FS08, Ger17, HK17, HHP13, HP20, HR14, JS18, Kin11, KL18, MC05, MMP09, MG14, RR10, Yan98, Zha04, Ade17, BK02, Bog05, ENH10, EBJ21, Fat98, FFK<sup>+</sup>15, FP01, Fro09, Kin13, LT05, Mas06, MN08, NR14, OS98, Par21, PSS99, Sch16, SG94, Ste02, TV18]. **convergent** [BPP15, BMS08a, Bra06, HMRS04]. **converse** [CC97]. **convex** [BEG15, BSDMGFTR09, BSS09, For02, Kro06, RZ12]. **convolution** [NND06, Ng97, Yam06a]. **convolution-like** [Ng97]. **coordinate** [Gut12, Yam06b]. **coordinates** [SJ08, SSVS12]. **coquaternionic** [JO14]. **coquaternions** [JO17]. **correction** [GK14]. **correctness** [DDR95]. **corrector** [PPN13]. **countable** [AK06]. **counterexample** [SS08]. **Counting** [KP13]. **coupled** [GSV12, HJ16, HR14, HC06, NRS17]. **coupling** [GS07]. **course** [Gan08]. **CPU** [JO08]. **CPU-GPU** [JO08]. **Creating** [AH12]. **Creation** [Lor99]. **criteria** [ABBS07, AL08, HJV18]. **critical** [Kan08, Kan15, Kan19a, Kan19b]. **Cross** [BB08, GS16]. **Cross-Gramian** [BB08]. **Cross-points** [GS16]. **Crout** [LS05]. **Crouzeix** [LMR15]. **CT** [Bar11]. **Cubature** [OSLS20, Van19]. **cubic** [MYZ18, VC15]. **current** [AR07, Kol12]. **curvature** [CHR02]. **curve** [CHR02, KR20, Sch16]. **curved** [AR09]. **curvilinear** [Yam06b]. **cut** [SG99]. **cycle** [Zha04]. **cyclic** [HK17]. **cylinder** [SG99].

**D** [BLM06, BB01, BRC<sup>+</sup>16, BHRT03, CP03, HKKR18, Mar07, Mar11, TV07, XS20]. **DAE** [BKO17]. **DAE-index** [BKO17]. **damped** [ZY13]. **Darboux** [BD04]. **Darcy** [AM06, GS07, HJ16, LMS09]. **Data** [RKvdDA14, BB08, DdSV20, DdAR17, FFK<sup>+</sup>15, GK08, GK14, Sil03]. **data-sparse** [BB08]. **dataflow** [EL05]. **Davidson** [HN08a, SvdVM98, SS98]. **Davison** [Sad15]. **deblurring** [BHN13, BD20, HJ08a]. **Decay** [BR08, FSS18]. **decaying** [PMLFT09]. **decomposition** [BBD18, BP03, BGyS21, CW16, CS94, Dub99, FXG19, FKSV07, Gan04, GS16, Haa00, HJV18, Hen94, KRZ16, LO07, LNG15, MM04, Pav99]. **Decompositional** [BBD<sup>+</sup>08]. **decompositions** [MR93, Peñ04, RY15, Ste95]. **decrease** [Dos08]. **dedicated** [GOR<sup>+</sup>08, RS14]. **Dedication** [Pot05]. **deferred** [GK14]. **deficient** [SGG15]. **defined** [Cot06]. **definite** [CMP01, FSS18, GMT16, LT05, LZ07, Pan19, ZB10]. **definition** [Kno08]. **deflated** [MZLG14, WE13]. **deflation** [CKD15, Gut12, KKR20, MX15, TV07]. **degenerate** [DE06]. **degree** [Bar06, Gla08, Ran07]. **delay** [CDN09, FMMS08, FL07, GN14, KS06]. **denoising** [BBK18, FCA21, FM02, LMSY14]. **dense** [Che99]. **dependency** [WD08]. **dependent** [BD17, HOR08, Lam08a]. **deposition** [MM09b]. **Derivation** [Lam08a]. **derivative** [AG19, Car11, Car12]. **derivatives** [BK06, LWH20, PQRT06]. **derived** [Gre04]. **descending** [TDL09]. **descent** [AEEG08, LMM12, NZ14]. **described** [Mál08]. **detection** [FL07]. **detective** [Lau08]. **determinants** [Sch02]. **development** [GRS00, Pea15]. **developments** [FLMT05]. **devices** [SMS<sup>+</sup>19]. **DGFEM** [FK08]. **diagonal** [VVM09]. **Diameter** [Leo09, Leo06]. **difference** [ÁNACS07, Bra06, Cab07, CP00, CP03, FMR15b, Mar18, MS07, RR07, RV08, SK06]. **differences** [BRC<sup>+</sup>16]. **different** [DJJ11, LMS09, Zha01]. **differential** [Aré09, BSS16, Die97, EBJ21, FL07, GJV13, JN07, KS06, Khr06, KM96, KM07, LT18, MYZ18, MFMGO05, NRS17, Ore10, Sch93, Sch05, SCCJC09]. **differential-algebraic** [Aré09, JN07, KM96, KM07, LT18, Sch93]. **differentiation** [Aur15]. **diffusion**

[BZ03, BHRT03, BBKL15, DE06, ELST18, EG06, FK08, FMR15b, Kou97, LDB13a, LDB13b, LR16, LK21, MST08, PSC97, PW13, RV08, WLR02]. **dimensional** [ÁNCQ06, Bre03, HK14, NP20, RV08]. **dimensions** [Cal15, DG06, Hip97, Kim07a, KRR16, KL12]. **Direct** [CDN09, BFM20]. **directed** [CEHT10]. **direction** [ZM13]. **Directional** [Mav97]. **Dirichlet** [DG06, For02, GKM16, Gat07]. **disaggregation** [MMP09]. **Discontinuous** [EDG<sup>+</sup>15, Pry14, HLNT18, JS08, LDB13a, LDB13b, SMS<sup>+</sup>19, TW16]. **discrepancy** [VCL08]. **Discrete** [Bre04, Che99, DGH14, FKK10, LO13, AL09, BL06, Bor09, CR15, Faß96, Lor99, Pry14, STO08, VB95]. **Discretization** [Kin13, BHRT03, DE06, GS07, GS16, GLMT21, HL20, LMS97, Lis08, LMR15, Mar11, PSC97, Tu07, Wac13, WLR02]. **discretizations** [EDG<sup>+</sup>15, KM07, LMS09, Mar07, TW16, Woh00]. **discretized** [ELST18]. **discretizing** [Che94]. **disordered** [BFK<sup>+</sup>10]. **dispersion** [Kle08]. **Displacement** [CNP94, LM20]. **distance** [BBKL15, MS14, NPR08, Smi10]. **distributed** [AH03, FMR15b, Kol12]. **Distribution** [Pri06, Dam02, LMSY14, SK06, SK08]. **distributions** [Nar18, TT05]. **divergence** [NC06, Ste02]. **division** [AAS21]. **dLV** [IN11]. **Domain** [CS94, Pav99, AR07, AH12, BBD18, CW16, Dob12, GS16, Haa00, HJV18, HLX14, LO07, MRT03, Mit97, Xu18, Yam06b]. **domain-decomposition** [LO07]. **domain-robust** [Dob12]. **domains** [AR09, CMR12, DK10, EV93, KP13, Kol12, LMN10, SL16]. **Double** [GMT16, CDN09, LP08]. **downdating** [Bar15]. **DP** [Bre03, HKLW20a, HKLW20b, Kim07a, KCW18, KKR18, KKR20, Mar11]. **DR** [MZLG14]. **Dual** [AMRT06, BBK18, CMO18, CCC07, LV14, Par21, SM08]. **dual-mixed** [CMO18]. **Duality** [AK06, LO13]. **duct** [HLC10]. **due** [Bre94]. **dynamic** [ABBS07, BC05, BRS08, DH07, EP07, KZ07]. **dynamical** [LR03, Man08, VCL08]. **dynamics** [OR11].

**Ed** [She06]. **eddy** [AR07, Kol12, NW03]. **Edge** [CKH14, LMR15, KL21, NP19a, NP19b]. **Edge-based** [LMR15]. **Edge-Preserving** [CKH14]. **effects** [APL04, Kan15, Kan19a, Kan19b]. **efficiency** [Gat04]. **Efficient** [BHN13, Ber04, Che94, FG17, GK14, KN03, QvGvW<sup>+</sup>15, SvdVM98, TV07, Van19, BKS15, CKD15, Cha11, HRT08, NN16, PV09, SGB07]. **Eigenfunction** [MYZ18]. **eigenfunctions** [PP06]. **eigenpairs** [CRZT20]. **eigenproblem** [FS08, Pan19]. **eigenproblems** [FMMS08, JG14, OS98, SvdVM98]. **eigenreduction** [Ves96]. **eigensolver** [TC08]. **eigensolvers** [KL21, Kny98]. **eigenstructure** [BFS08, CC00, Ita06]. **eigen triplets** [TC08]. **eigenvalue** [Ahm19, AR09, AH10, BMX99, BFS08, CRS94, CKV04, DDR95, EH15, HS97, HP08, KLS16, Kal20, KN03, KV13, KL18, MW02, NZ14, Sor98, SV10b, SS98, TLL15, TZ17, Var01, Vos99, WSS98, ZC19]. **eigenvalues** [AD04, Ash17, AMVW17, KP13, Lei19, MX15, MACI06, NNR99, VVM09]. **eigenvectors** [HS12]. **elastic** [GLMT21, KMC11]. **elasticity** [BBD18, CMM95, Gat07, Lis08, OR11]. **electric** [SMS<sup>+</sup>19]. **electro** [PV09]. **electro-physiology** [PV09]. **electrocardiology** [GGM12]. **electrochemical** [MM09b]. **electromagnetic** [HR14]. **electronic** [DS11, KJ09]. **electrostatic** [GAM05]. **Electrostatics** [Van07]. **Element** [HLP15, AMRT06, AM06, AL08, AD04,

BPP15, BMS08a, BB01, BRS08, CW96, Che99, DGP99, DHI03, FFK<sup>+</sup>15, GS16, Gat04, Gat07, HK14, HL20, HLP10, HLX14, Kim07b, KL12, KS00, LMN10, LMR15, MC05, Mar07, Mar11, Nei14, NC06, SJ08, SG94, SZ20, Tu07, Woh00, YG96, Zha04]. **elements** [Bun97, Che97, GH99, HK10, NP19a, NP19b, Sch08a]. **elimination** [HLC10, KL21, NU05]. **ellipses** [DDPS20]. **Elliptic** [VA09, AH04, AH10, BRC<sup>+</sup>16, Bog05, CP00, CS94, DG06, GJV13, Hoh06, LH12, LMR15, Mar07, NZ14, Nov05, TW16]. **Emden** [ABBS07]. **empirical** [LHL<sup>+</sup>20]. **endpoint** [Ill03]. **Energy** [GJV13, Pri06, Ran07, SSVS12]. **Enhanced** [ERS17]. **Enhancement** [Lam08b]. **ensemble** [SHH<sup>+</sup>12]. **entire** [Ped07]. **entrance** [SK06, SK08]. **entropies** [BFdP<sup>+</sup>18]. **entropy** [Man08, Raj08]. **equal** [Leo06, Leo09, LRL08]. **Equal-order** [LRL08]. **equally** [Roş09]. **equation** [ÁNACS07, ACS00, AC06, BB00, BP21, BMP09, Bol08, CL03, CQ01, DG06, DB08, DE06, EHJM17, EN08, FFK<sup>+</sup>15, FMR15b, FH13, HJV18, HJ09, KL12, LKF08, MACI06, NND06, Nei14, Pry14, RR07, RV08, SSVS12, ZK17]. **equations** [AHS17, ABJE15, ABBS07, ABM93, AS14, ADW15, Aré09, AM06, AH10, BZ03, BPP15, BBD18, BMS08b, BB14, BKS15, Boc97, BL97, BSS16, Cab07, CMM95, CR96, CCDR08, CDN09, Che94, Cot06, DH07, Die97, Dob12, DHI03, EMS13, EDG<sup>+</sup>15, ET09, EP07, EBJ21, FI20, FL07, GS07, Gan04, GSV12, GJV13, HMRS04, HHP13, HJ16, HL20, JN07, JR02, JR04, JKM14, KS06, KZ07, Kle08, Koe07, Kou97, KM96, KM07, LMS97, LDB13a, LDB13b, LMW20, LC14, LT18, LH12, MYZ18, MSV95, MFMGO05, MS08, MG14, Mok15, Mok16, NB08b, Nas15, Ng97, NRS17, Ore10, PV09, Per00, PGH11, Sch93, Sch05, SY09, SF93, Sta03, Sty08, WD08, YG08]. **equidistributed** [GN14]. **equilibrium** [BDD06, BCDO18]. **equispaced** [GK14]. **equivalence** [SM08]. **Error** [BY98, BB11, DJ06a, DDPS20, HK14, MH01, MPS18, SAA09, YG08, BMM97, CS14, DGP99, Ful03, Gat04, GJV13, KR20, LR16, MACI06, NV19, NC06, Ore10, PGH11, ST02, XS20, YNYF15]. **errors** [SME02]. **estimate** [YG08]. **estimated** [FKSV07]. **Estimates** [FMR15a, BB01, BB11, BMM97, DDPS20, Ful03, HK14, Kha06, MR17, XS20, ZN17]. **Estimating** [CS14, BCDO18]. **estimation** [AH03, BY98, FvdMS14, MACI06, NC06, PGH11, PT13, Psa04, ST02]. **Estimations** [BFM12]. **estimator** [KR20]. **estimators** [DGP99, Gat04, Man03]. **ETNA** [Ano20a]. **Euler** [BFdP<sup>+</sup>18, Khr06]. **European** [PPN13]. **Evaluating** [BDR09, Car11, ST08]. **Evaluation** [SG99, FG17, KS18, KM17, LW06, SJ08]. **even** [AM11]. **evolution** [AS14, Gan04, HOR08, HHP13, HLNT18, MS07]. **evolutionary** [GW19]. **exact** [Kha06]. **examples** [Zho06]. **existence** [AFHM04]. **exotic** [PPN13]. **expansion** [HR14, JN10, LZ07, MYZ18, SvdVM98]. **expansions** [LWH20, LW06, Mas06]. **Experiences** [Boc97]. **experimental** [CT03]. **experiments** [BJM99, Meu01]. **explained** [Gut10]. **Explicit** [BCDI15, APL04, BEG15, HOR08, JS18, MPV13, MPV15, PPN13]. **exploiting** [FJK<sup>+</sup>20]. **exponential** [BKS18, Dam02, FvdMS14, HHO14, KM17, Mas06, PT13, ST08, Sta02]. **exponential-type** [BKS18]. **exponentially** [Mar18]. **exponentials** [Böt04, KLS17, LR04, PMLFT09]. **exponents** [MH01]. **extended** [BEJ<sup>+</sup>18, HJ09, MPV13]. **extension** [CR15, JO14, MPS18, VW13]. **Extensions** [JN07, BCDV06, CS14, MPV15, Sch06]. **exterior** [HRV13, KL12]. **extraction** [HP08]. **extrapolated** [CRZT20].

**extrapolation**

[BFM12, DS11, EMS13, FMOS21, MR17].  
**Extremal** [RS12, Göt06, HC05]. **extreme** [EV93].

**Faber** [EV93, HS97]. **factor** [DSC08].

**factored** [DH07]. **Factorization**

[ÁNACS07, BY99, FXG19, GM04, HNP10, Koe07, LS05, RT05, SAA09, SG06].

**factorization/solver** [VVM08].

**factorizations**

[BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, OB05, SGB07, WL11].

**Factors** [FO03, Kro06]. **Fast**

[Aur15, AMVW15, BCR98, BMP09, JO05, KM17, LW06, Nas15, Ng94, PW13, PK08, TMS97, AC06, BHRT03, BP03, CCDR08, EH15, FGV09, LV08, SG06]. **FDM** [Ade17].

**Fejér** [SL12, ST08, RS12]. **Fekete**

[BL08, SV10a]. **FEM**

[Ade17, FKK10, HR14, Kol12]. **FEM-FDM** [Ade17]. **FETI**

[Bre03, HKLW20a, HKLW20b, Kim07a, KCW18, KKR18, KKR20, Mar11].

**FETI-DP** [Bre03, HKLW20a, HKLW20b, Kim07a, KCW18, KKR18, KKR20, Mar11].

**FFT** [NP96]. **FFT-based** [NP96].

**FGMRES** [AD09]. **fidelities** [BB11]. **field**

[BdPNdP14, HK18, KP13, Opf10, RR07, Tos00]. **Fields** [Hoc11]. **fifty** [Not16]. **Filter**

[DSC08]. **filtering**

[ABHK09, BP03, Bre16, NP96, SHH<sup>+</sup>12].

**Finding** [PV05, BGP04, Jac10]. **Fine**

[Sim06, dJvdPDV17]. **Fine-grain**

[dJvdPDV17]. **Finite**

[HL20, HLX14, AMRT06, AM06, AL08, AD04, BPP15, BMS08a, BB01, BRC<sup>+</sup>16, BRS08, Bun97, CP00, CP03, CW96, Che97, DGP99, FMR15b, GS16, Gat04, Gat07, HK14, HLP10, HK10, Kim07b, KS00, LO13, LMN10, LMR15, LKF08, Mar07, Nei14, NC06, Sch08a, SJ08, Sch16, SZ20, ST02, Tu07, Woh00, WLR02, YG96, HLP15, SK06].

**finite-element** [AM06]. **First** [CMM95, BMM97, BDR09, CL03, LB96, Pav99].

**First-order**

[CMM95, BMM97, CL03, LB96, Pav99].

**fitted** [KS06, KK08, Mar18]. **five** [RV08].

**five-point** [RV08]. **fixed**

[CG18, JKM14, Van07]. **fixed-sized** [CG18].

**flexible** [MZLG14]. **Flip** [FXG19].

**Flip-flop** [FXG19]. **floating**

[DDR95, SME02]. **flop** [FXG19]. **flow**

[AL09, AMRT06, BKO17, Bir12, Dis97, DDS<sup>+</sup>18, HLX14, HLC10, Kan15, Kan19a, Kan19b, PSS99, RFHS08, SK06, SK08, TV07, Tu05, Tu07]. **flows**

[CR09, Ema10, GGCT09, Kan08, LRL08, Mál08, STO08, Ste97a]. **fluid**

[AVV14, AMRT06, CR09, OR11, SV10b, TDLC09, Vos03]. **fluid-solid**

[SV10b, Vos03]. **fluids** [Mál08]. **flux** [HJ16].

**FOM** [Sch16, Soo17]. **footnote** [CS99].

**Forchheimer** [LMS09]. **form**

[CMM95, Drm15, FMR15a, FGV09, HJ16, NC06, Wat06b]. **forms** [AK10, Zha01].

**formula** [BFdP<sup>+</sup>18, Bre94, Ill03, MPS18].

**formulae**

[DDPS20, EMJ16, Not16, OSLS20].

**formulas** [BCDI15, CS14, RGVP99, Roş09].

**formulated** [AR09]. **formulation**

[AR07, BRC<sup>+</sup>16, CCC07, DHI03, HK18, KCW18, Tu05]. **formulations** [HJV18].

**FOSLS** [BMM97]. **four** [RV08]. **four-**

**four-** [RV08]. **Fourier**

[CQ01, HR14, LZ07, Man06, Ste02].

**Fourier-mode** [HR14]. **Fourth**

[Kle08, BFR19, Han06, MYZ18, SSVS12].

**fourth-order**

[BFR19, Han06, MYZ18, SSVS12]. **Fowler** [ABBS07]. **Fractal**

[Nav05, Nal19, VC14, VC15]. **Fractional**

[ZZW20, BSS16, Die97, EBJ21]. **fractions**

[IL06, Khr06, LB96]. **frame**

[BD20, GLMT21]. **framework**

[Bre03, PD17]. **Fréchet** [Car11, Car12].

**Fredholm** [NNR99, YG08]. **free**

[Bol08, BK16, Che09, GM06, Kin11, Kin13, LPS20, LY14, LT18, SV10b]. **frequency**

[DNV05, DdAR17, Gan04]. **Freud** [GAM05]. **Freud-type** [GAM05]. **frog** [LMW20]. **frugal** [HKLW20a, HKLW20b]. **full** [Bor09, Mit97, Nal19, WLHH18]. **full-Newton** [Bor09]. **full-space** [WLHH18]. **fully** [HC06]. **function** [BMFJ<sup>+</sup>06, BEJ<sup>+</sup>18, Dos08, ERS17, LZ08a, LW06, LP08, NV19, Sta02, VK95]. **functional** [LMW20, Mas02, RZ12]. **functionals** [ABH17, CGM10, LMM12]. **functions** [AEEG08, ÁNCQ06, BY98, BR08, Bre04, CFÁN09, DT09, DDPS20, DJ06b, FM02, Fro09, FLS17, GSV12, GRS00, HHP19, Kha06, Koe99, KS18, LWH20, LP17, Man06, MJ11, MPS18, Ost10, Ped07, Pri96, Rap06, RGVP99, RS12, ST08, Sch08b, Sch05, SG99, SG98, Sin95, Tik05, ZZW20, Zho06, Sha12]. **Future** [Ano20a].

**Galerkin** [BPS17, EG06, EDG<sup>+</sup>15, GW10, HHP13, HLNT18, JS08, Mok16, Pry14, SMS<sup>+</sup>19, TW16, Yam06b]. **gas** [DDS<sup>+</sup>18]. **Gauss** [ACR99, Ash17, Bra97, CS14, DRST16, Gau06, LWH20, Not16, Osb08, PR20, PPS18, Sil03]. **Gauss-type** [Gau06]. **Gaussian** [CDN09, DV12, DDPS20, OSLS20, Sin95, VV18]. **Gaussian-type** [DDPS20]. **GCDs** [WA08]. **GCV** [CNO08]. **Gegenbauer** [Kei08]. **Gene** [Gau02, GOR<sup>+</sup>08, Man08]. **General** [Bra00, Sch03, BB11, Dam02, Erh95, KMFO05, LMN10, Pop08, Soo16, Zho06]. **generalised** [FS08]. **generalization** [AEEG08, MJ11, PV09]. **Generalizations** [Hoc05, Bre94, MPS18]. **Generalized** [RÁRP06, AL09, BGSC20b, BGSC20a, BFM20, BD17, DRST16, Kal20, KKR18, KKR20, KL18, LC14, MFMGO05, Nas15, OS15, SvdVM98, Sor98, Sty08]. **GeneRank** [BK13, SEH14]. **generated** [FGV09]. **Generating** [BSDMGFTR09, BKS15]. **generators** [Els05]. **generic** [JJ10]. **geometric** [JVV12, Lóp16]. **George** [Pot05]. **Gerschgorin** [KV95, VK95]. **Gersgorin** [FKSV07, VK99, Var01, VCK08]. **Gersgorin-type** [VK99, Var01]. **Gershgorin** [CKV04]. **Gershgorin-type** [CKV04]. **GEW** [ZK17]. **ghost** [Van07]. **Gilbert** [BPP15]. **Givens** [JO05]. **GK** [WL12]. **global** [BBS19, BEJ<sup>+</sup>18, Gra16, KM96, LDB13a, LDB13b, Ore10]. **global-in-time** [LDB13a, LDB13b]. **globalized** [CR09]. **GMRES** [DGH14, DTM17, EMS09, Erh95, IE17, LZ08b, MZLG14, Meu12, Neu19, Sim10, Soo16, Soo17, TLF07, WE13, Zít08]. **GMRES-Type** [DGH14, Neu19, Soo16]. **Golub** [Gau02, GOR<sup>+</sup>08, Man08, ZX17, ZC19]. **Google** [DN11]. **Google-like** [DN11]. **Gordon** [BKS18, GSV12]. **governing** [SV10b]. **GPU** [JO08, dJvdPDV17]. **GPU-type** [dJvdPDV17]. **graded** [Ste95]. **Gradient** [LMM12, LR03, BBK18, CKD15, Dos08, GJV13, KN03, Lam10, NP96, Pan19, ST02]. **gradients** [Dub01]. **grain** [dJvdPDV17]. **Gram** [Bar15]. **Gramian** [BB08]. **graph** [BFM20, Els05, NN16]. **graphics** [NND06]. **graphs** [BFdP<sup>+</sup>18, BF12, HS12]. **gravity** [MM09b]. **grid** [Bol08, DHK<sup>+</sup>00]. **grids** [ADM07, BSDMGFTR09, Bun97, GN14, LP09, VA09]. **group** [CL03, GK08, Ore10, Roz06]. **grouping** [Auz18]. **growing** [CG18]. **growth** [KM08, SCCJC09]. **Grüss** [MJ11].

**H** [Gau02]. **Hadamard** [KM08]. **Hahn** [Arv06]. **half** [BK06, CBGV05]. **half-line** [BK06, CBGV05]. **Halperin** [Lóp16]. **Hamiltonian** [ADW15, ABA20, BMX99, BFS08, Faß07, MW02, Wat06b]. **Hammerstein** [Mok16]. **hand** [BBS19, BK02, EJS03, JST05, LZ08b, MZLG14]. **Hankel** [Drm15, ER14, Ng94]. **harmful** [Wat06a]. **Harmonic** [Bea98, HP08, DTM17, EDG<sup>+</sup>15, Hoc05, ZC19]. **having**

[Ped07]. **heat**  
 [HJV18, KJ09, LKF08, NB08b]. **Hellan**  
 [KRZ16]. **Helmholtz** [EN08, KL12]. **help**  
 [Ger17]. **Hermite** [Ash17, BCDI15, MM09a,  
 MJM16, She04, Sta02, Sta06, VV18, ZZW20].  
**Hermite-type** [BCDI15]. **Hermitian**  
 [ABH17, CMP01, EH15, Fro09, FSS18,  
 HS97, KL21, KL18, PP08, ZB10].  
**Herrmann** [KRZ16]. **Hessenberg**  
 [AHS17, JO05, TT05, VW13].  
**Hessenberg-upper** [VW13].  
**heterogeneous** [BHRT03, HKLW20a,  
 HKLW20b, KKR18, KKR20]. **HHT** [JN07].  
**HHT-** [JN07]. **Hierarchical**  
 [Bol08, DFV09]. **hierarchy** [DDS<sup>+</sup>18]. **High**  
 [CP00, Mar18, Mok15, Aré09, GK14,  
 Kim07b, Lam08a, NP20, PSC97, Ste97a].  
**high-dimensional** [NP20]. **High-order**  
 [CP00, Mar18, Mok15, GK14, Kim07b,  
 Lam08a]. **higher** [Bun97, Ng97, Sch08a].  
**higher-order** [Ng97]. **highly**  
 [Bra00, BFK<sup>+</sup>10, FLS20, GS06]. **Hilbert**  
 [GHS14, MF06, Sch03, Yam06a].  
**Homogeneous**  
 [HN08a, ČF18, Gat07, Yat06]. **homotopy**  
 [ZY13]. **Householder** [SAA09]. **hull**  
 [TLF07]. **hulls** [Gre04]. **hurricane** [Ful97].  
**Hybrid**  
 [GGCT09, AMRT06, Per00, Tu07, CNO08].  
**hybridizable** [TW16]. **hydrogen** [RR07].  
**hydrogenlike** [ÁNCQ06]. **Hyper**  
 [FFK<sup>+</sup>15]. **Hyper-singular** [FFK<sup>+</sup>15].  
**hyperbolic** [HNS04]. **hypergeometric**  
 [ÁNACS07, CFÁN09, Cot06, DT09, DJ06b,  
 GRS00]. **hypergeometric-type**  
 [ÁNACS07, CFÁN09]. **Hypergraph** [KL21].  
**hypersingular** [DO18]. **hypocycloidal**  
 [EV93].

**ideal** [She10, TLF07]. **identification**  
 [HHP19, KJ09]. **Identifying**  
 [DdAR17, FMSV08, Tif11]. **IDR**  
 [Gut10, Zem17]. **II** [FFK<sup>+</sup>15, FLS20, KV95,  
 Lui11, MX97, Sha12]. **III** [CG18, VK95]. **ill**  
 [CN19, Kin11, Kin13, NR14, Neu19].  
**ill-conditioned** [Kin13]. **ill-posed**  
 [CN19, Kin11, NR14, Neu19]. **ILU**  
 [BJM99, LS05]. **Image** [NO02, BHN13,  
 BBK18, BD20, CCC07, FCA21, HJ08a,  
 JC17, LMSY14, LPS20, ZM13]. **images**  
 [Bar05, NO02]. **imaging** [Bar11, DENP09].  
**imbalance** [NRS17]. **imbedding** [MRT03].  
**Impact** [MM09b]. **implementation** [CT03].  
**Implementing** [JO08]. **Implicit**  
 [APL04, PPN13, AS09, FMR15b, LN10,  
 Mál08, Sch93]. **Implicit-explicit** [PPN13].  
**Implicitly** [BR14, CR09, Bre16, CRS94].  
**Improved** [AS12, BGP04, CKP15, TV18,  
 PPN13, WD08]. **Including**  
 [DGH14, KS18, WR09]. **inclusion**  
 [CKV04, Hoc11, Lei19, Var01]. **Incomplete**  
 [BH20]. **incompressible** [BBD18, LRL08,  
 Mál08, OR11, Per00, RFHS08, STO08].  
**inconsistent** [HH93]. **Incremental**  
 [KLS17]. **indefinite** [SG06]. **independent**  
 [AO10, Kin13]. **index** [Aré09, BKO17].  
**induced** [Nar18]. **inducing** [MH17].  
**inequalities**  
 [Bre04, LO13, MJ11, Mas02, Rap06].  
**inequality** [Gau10, Ger17, KZ07, Yat06].  
**inertia** [KV13]. **Inexact** [DSSS13, WSS98,  
 BBMP06, FS08, HLC10, Yan98]. **inf**  
 [LRL08]. **inf-sup** [LRL08]. **infants** [LKF08].  
**infinite** [BEN94, MX15]. **influence**  
 [Els05, Xu18]. **Information** [DGH14].  
**initial** [Aré09, BK16, GN14, HJ08b, Lam05,  
 Sch16, SZ20]. **initial-boundary**  
 [BK16, HJ08b, Lam05].  
**initial-boundary-value** [GN14].  
**initialization** [BGP04]. **inner**  
 [BEN94, BMSR06, Mee98, VB95].  
**inner-outer** [BEN94]. **input**  
 [CC00, MX96, MX97]. **integrable** [MJ11].  
**integral** [CCDR08, CDN09, Che94, DJ06b,  
 FFK<sup>+</sup>15, FLS20, HLP10, JR02, JR04,  
 JKM14, MG14, Mok15, Mok16, Nas15, Ng97,  
 PGH11, Sus07, YG08]. **integral-algebraic**  
 [PGH11]. **integrals**

[Car12, DO18, FLMT05, LP08, Nov05, ST08]. **integrands** [Atk04, Ill03]. **Integrating** [Sha12]. **integration** [DO18, Fra21, GK14, KL18]. **integration-based** [KL18]. **integrator** [HHO14]. **integrators** [BKS18, ST08]. **Interaction** [RFHS08, JS18]. **Interconnecting** [HLP15]. **interest** [HHP19]. **interface** [Ade17]. **intergrid** [Che97]. **interior** [BOS08, BGS10, BW12, BPS17, JO08]. **interlacing** [DJJ11]. **internal** [Ema10]. **Interlarity** [DRST16]. **interplay** [Gau02]. **interpolation** [BB14, BCDI15, BCDV06, Bre94, Dam02, Del02, EMJ16, GM06, GCPP99, Gla08, GPT11, GK08, KS18, Lén06, Lén10, LRL08, MM09a, Opf15, PMLFT09, She04, SV10a, Van07, VC14, ZZW20, vBHS14]. **interpolatory** [HNS04, RS12]. **interpretation** [GAM05, GJV13]. **interval** [BCGAM08, JR02, JR04]. **intervals** [BDD06]. **introduction** [FLMT05]. **invariance** [AO10]. **invariant** [KQT13, SS08]. **invariants** [KM96]. **Inverse** [BLM06, DGH14, BdPNdP14, CGM10, CFM<sup>+</sup>10, CN19, FS08, Göt06, LN10, LY14, PMLFT09]. **inverse-free** [LY14]. **inverses** [BFM20, FSS18, PCP06]. **Inversion** [ER14, DdAR17, LR04, MPV13, MPV15, RKvdDA14]. **invert** [Mee98]. **involved** [FO03]. **involving** [DT09, SF93]. **irreducible** [NPR08]. **irregular** [BSDMGFTR09, Cal15]. **Isogeometric** [CPS18, XS20, HLNT18]. **Isotropic** [NC06]. **issues** [MMP09]. **iterated** [BD17]. **iteration** [BMS08b, BDG04, Bre16, BEN94, CN19, Dub99, Fat98, FS08, Kür19, Lam08b, MS06, MSS15, NZ14, VVM09, WR09, Yan98]. **iterations** [CNP94, HJ08a, NP96, Pan19, Sch16, SME02, ZN17]. **Iterative** [CCC07, LNG15, NND06, Bar11, Bog05, BW12, Che94, DN11, DSC08, JG14, KRR16, MSV95, MMP09, NNR99, Ng94, PW13, Sty08, ZB10].

**J** [ABA20]. **J-Lanczos** [ABA20]. **Jacobi** [SS98, DJJ11, Gau10, HK17, HN08a, KMFO05, SvdVM98]. **Jacobian** [NU05]. **Johnson** [KRZ16]. **Joint** [LO07, DdSV20]. **Jordan** [Gre04, TLF07]. **jump** [LH12].

**Kaczmarz** [Pop08]. **Kahan** [ZX17, ZC19]. **Kalman** [ABHK09, SHH<sup>+</sup>12]. **Kantorovich** [AFHM04]. **kernel** [Ita06, Nas15, LT94]. **kind** [Mok16, NNR99]. **kinetic** [HL20]. **Klein** [BKS18, GSV12]. **Korteweg** [Kle08]. **Kronecker** [BBD<sup>+</sup>08]. **Kronrod** [ACR99, MPS18, Not16]. **Krylov** [KNS19, BBS19, BSS09, BFS08, Cha11, DSSS13, EN08, FP01, FLS17, FJK<sup>+</sup>20, GS15, GNR15, GHS14, Gut12, Lam05, Lam08b, LY14, MPV13, MPV15, MS06, Meu17, VVV19, WLHH18, WO97, Wei94, ZN17]. **Kutta** [AS14, Bir12, GS94, LT18].

**L** [Peñ04]. **lacunary** [Lén10]. **Lagrange** [MRT03, WLHH18]. **Lagrangian** [DG06]. **Laguerre** [CC97, Mas02, MMN18, SSS10]. **Lamé** [MFMGO05]. **Laminar** [Kan15, Kan19a, Kan19b, Kan08]. **Laminar-turbulent** [Kan15, Kan19a, Kan19b, Kan08]. **Lanczos** [ABA20, BY98, BEJ<sup>+</sup>18, Bre16, CRS94, CHR02, CNO08, Fro09, HRT08, Lam08b, Mee98, PPS18, TZ17, TC08, ZX17, ZC19]. **Lanczos-hybrid** [CNO08]. **Landau** [BPP15]. **Langenhop** [KZ07]. **Laplace** [LP08]. **Laplacian** [BFM20, EN08, NN16]. **Large** [ABHK09, LV14, NW03, ABJE15, AS09, AS12, ABH17, BMS08b, BFS08, BKS15, Böt04, CRS94, Cha11, HS97, HJ09, LY14, LR03, OS98, SG98, Sor98, WSS98]. **Large-eddy** [NW03]. **Large-scale** [ABHK09, LV14, ABJE15, BMS08b, BFS08, HJ09, LR03]. **larger** [Kre05]. **Larsen** [PV09]. **laser** [JS18]. **latitudinal** [Roş09].

**lattice** [ÁNACS07, Che09]. **lattices** [NP20]. **Laurent** [CGM10, CBGV05, Pri96]. **Laurent-type** [Pri96]. **Lavrentiev** [Neu16]. **law** [HS12, KV13, Mál08]. **layer** [KS06, KMC11, MM09b]. **layers** [Auz18]. **laying** [Sil03]. **LBB** [WD08]. **LDU** [Peñ04]. **Leap** [LMW20]. **Leap-frog** [LMW20]. **Least** [HJ16, Aco06, BMM97, BY99, Boc97, Bor09, CMM95, CNP94, CL03, Faß96, GPT11, KS00, LV08, LV14, MS08, Ng94, Osb08, Pav99, VB95, WNK18, ZM13]. **least-square** [Boc97]. **least-squares** [CL03, Faß96, GPT11, KS00, WNK18, ZM13]. **Left** [LZ07]. **Left-definite** [LZ07]. **Legendre** [BK16, LWH20, PGH11, SG99]. **Lehmann** [Bea98]. **Lehmer** [COSV93]. **Leja** [BCR98]. **lemma** [CGT05]. **lemniscatic** [SL16]. **level** [BBD18, Cal15, Han06, HLC10, Kin11, Kin13, KLRW19, LMS97, NP19a, TV18]. **level-free** [Kin11, Kin13]. **Levenberg** [CN19]. **Levinson** [GH94, VMV07]. **Levinson-** [GH94]. **Levinson-like** [VMV07]. **Lie** [Ore10]. **Lifshitz** [BPP15]. **like** [BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, BGP04, BMP09, DN11, DDR95, HH93, HMRS04, LP09, Mál08, MVV09, Ng97, VMV07]. **limited** [ABHK09, SHH<sup>+</sup>12]. **line** [BK06, CBGV05, VA09]. **linear** [Aco06, Ade17, AS12, AS05a, BPP15, Ber04, CMM95, CGM10, CC00, CFM<sup>+</sup>10, Che94, DENP09, ER01, EJS03, Ema10, FMR15a, FJK<sup>+</sup>20, Gat07, Gau02, GSW08, GS06, HH93, HHP13, JST05, JO08, KQT13, Kin11, KM96, LB96, MSV95, MJ11, MZLG14, Meu17, MS08, Neu19, OR11, Oos03, Ore10, Par21, Pop08, SGG15, SF93, SHZF08, Soo16, SME02, Sta03, TLL15, TZ17, VMV07, ZB10, ZM13, ZC19]. **linearities** [NU05]. **linearly** [Sch93]. **link** [BF12]. **liquid** [BKO17]. **LMS** [NP96]. **Local** [BMM97, KM96, LRL08, Man03, APL04, BEG15, EV93, Fat98, MST08]. **Locality** [RT05]. **Localized** [Fer05, BGyS21]. **Locally** [HS12, BGSC20b, BGSC20a, KN03]. **location** [Meu15]. **logistic** [FTRH20]. **long** [Ste97b]. **Look** [GH94]. **Look-ahead** [GH94]. **loop** [BC05]. **Lothar** [RS14]. **Low** [BSS16, Sty08, BKK<sup>+</sup>18, GO10, HP20, Kle08, Kür19, LM20, SGB07, TDLC09, WA08]. **low-order** [HP20]. **Low-rank** [BSS16, Sty08, BKK<sup>+</sup>18, GO10, Kür19, LM20]. **lower** [AD04, Cab07, COSV93]. **LSQR** [BR14]. **LU** [BY99, SGB07]. **LU-factorizations** [SGB07]. **lumpings** [Jac10]. **Lyapunov** [BKS15, FH13, MH01, Sch05, Sty08]. **Lyapunov-type** [Sch05]. **Lyndon** [KS18]. **machines** [JOT08]. **Maclaurin** [BFdP<sup>+</sup>18]. **magnetic** [BHRT03, DdAR17, RR07]. **magnetostatic** [AG19]. **Majorization** [PP08]. **Man** [Sad15]. **manifold** [ER01]. **many** [Man06, RKvdDA14]. **Mapping** [CEHT10, CMR12, LT94, Lui11]. **mappings** [AH12, FP01]. **Maps** [Gra16, DK10, Rom07, SL16]. **Markov** [BBD<sup>+</sup>08, BU07, BKK<sup>+</sup>18, CR15, FMSV08, HMRS04, Jac10, Tif11, Tif13]. **Marquardt** [CN19]. **mass** [BKO17, WR09]. **massive** [BFH<sup>+</sup>15, TV18]. **matching** [GS07]. **Mathematical** [Mál08]. **Matlab** [Sha12]. **Matrices** [AR14, AAS21, ABA20, ABH17, Aur15, AMVW17, BSS09, BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, BU07, BR08, BDG04, BMP09, BDH15, Böt04, BEN94, CMP01, DN11, Dm15, ELT21, EH15, Erh95, Faß07, FGV09, Fro09, FLS17, FSS18, HS12, HS02, HN08b, JO05, Kei08, KV95, KM08, LM20, LS05, LY14, LT05, LT14, LR04, MPV15, MSS15, MVV09, Opf10, PP08, She10, SG98, Sim10, SF93, Smi10, Ste95, Ste97b, VVM09, VVM08, VK95, XBC19]. **matricial** [GRS00]. **Matrix** [LM20, LB96, LR04, RY15, AHS17, AEEG08, ABJE15, AM11, ABH17, AK10, BJR<sup>+</sup>09, BEJ<sup>+</sup>18, BM05, BK16, CP03, Car11, Car12, CGT05, Dub99, EKPR19, EST06, ERS17, FI20, Fro09, FH13, GW10,

GMT16, HNP10, HMRS04, Hoc11, JVV12, KLS17, LZ08a, MS14, MY02, MACI06, NPR08, Pan19, PV05, Psa04, QvGvW<sup>+</sup>15, ST08, SS08, Sin95, TMS97, TT05, TC08, VCK08, Vos99, WR09, Wat06b, WA08]. **matrix-free** [BK16]. **matrix-vector** [BM05]. **Max** [LT14]. **Max-min** [LT14]. **maximum** [FKK10, OS15]. **maximum/minimum** [OS15]. **Maxwell** [BPP15, EDG<sup>+</sup>15]. **MC** [FCA21]. **MC-based** [FCA21]. **MCMC** [BHN13]. **MCMC-based** [BHN13]. **mdLVs** [IN11]. **mean** [JVV12]. **meander** [LP09]. **meander-like** [LP09]. **means** [BDR09]. **measure** [BDD06, SL12]. **measurements** [RKvdDA14]. **measures** [BCGAM08, EST06, HC05, Man06]. **mechanics** [JN07]. **media** [AMRT06, Tu05, Tu07]. **Meixner** [dMPPR99]. **Mellin** [JKM14]. **membrane** [PV09]. **memory** [ABHK09, SHH<sup>+</sup>12]. **meromorphic** [BLM06]. **mesh** [ELST18, KS06, NV19]. **meshes** [BC09, CS94, DGP99, LO13, MC05, OR11]. **meta** [Jac10, Tif11]. **meta-stable** [Tif11]. **metastable** [FMSV08]. **method** [AEEG08, ABJE15, AS05a, ABA20, AH03, Ash17, ACS00, AH10, ABHK09, BZ03, Bar11, BMS08a, BFS08, BBK18, BEJ<sup>+</sup>18, BBMP06, BL97, BOS08, BGS10, BW12, BPS17, BGyS21, BK16, BD20, Cab07, CRS94, Cal15, CFÁN09, CKD15, CW96, CR09, CQ01, Che09, CNO08, CG18, DdSV20, DGP99, DSC08, Dub01, ELST18, ELT21, EKPR19, EH15, EL05, EG06, EHJM17, EN08, FCA21, Gat07, GJV13, HOR08, HS08b, HJ16, HK14, HS97, Hip97, HLP10, Jac10, JO07, JS18, JG14, JN07, JO08, JR02, JS08, KS06, KK08, Kim07b, KR20, KL12, KN03, KRZ16, LMS97, LMW20, LMN10, LY14, LP08, Lóp16, LP17, LKF08, LR03, MYZ18, Mar07, Mar11, Mee98, MZLG14, Meu17, Mit97, MACI06, MG14, Mok15, MP08, NND06, NN16]. **method** [NNR99, NC06, Not10, OS98, Par21, PV09, Per00, PR20, PGH11, Sad15, SMS<sup>+</sup>19, SSVS12, SvdVM98, STO08, ST02, TZ17, Woh00, Wu03, Yam06b, YG08, ZK17, ZY13, ZM13, Zit08]. **methodology** [CL03]. **Methods** [DGH14, AMRT06, AM06, AD04, BEG15, BBS19, BB00, BSS09, BB14, BKS15, BFM20, BRS08, Boc97, Bog05, BDH15, BKK<sup>+</sup>18, BFH<sup>+</sup>15, BMPS95, CCDR08, CDN09, CMP01, CCC07, Che97, CRZT20, DN11, DSSS13, EDG<sup>+</sup>15, EMS09, EBJ21, FFK<sup>+</sup>15, FP01, FSS97, FLS17, FJK<sup>+</sup>20, Ful97, FMP96, Gan08, GS16, Gat04, GS15, GN13, GNR15, GW10, GSV12, GS94, GN16, GLMT21, GHS14, Gut12, HNP10, Han06, HK17, HKKR18, Hoh06, HLC10, JST05, JR04, Khr06, Kim07a, KKR18, KLRW19, KKR20, KS00, KL18, Lam05, Lam08a, Lam08b, LNG15, LT18, LM00, LMR15, MSV95, MMP09, MR93, MN08, NW03, NP19a, Nei14, Neu19, Ng94, Ore10, Pav99, PSS99, PPN13, Pry14, RT05, SG06, Sch05, SdS06, SGG15, Soo16, Sor98, SS98, SZ20, Sty08, TV07, TV18, Tos00]. **methods** [Val19, VVV19, VW97, Wei94, Xu18, ZB10, Zha04, HLP15, KNS19]. **MHD** [LMS97]. **Micchelli** [MPS18]. **microscopy** [EKPR19]. **microwave** [DENP09]. **mid** [Sch93]. **mid-point** [Sch93]. **Mimetic** [BC09, BRC<sup>+</sup>16]. **min** [LT14]. **min-max** [LT14]. **Minimal** [Gla08, KV95, VK95, ABJE15, PR20, VCK08]. **minimal-norm** [PR20]. **minimax** [BCDO18]. **Minimization** [HS08a, Wei94, Kin11, Par21, RZ12, SHZF08]. **minimization-based** [Kin11]. **minimizing** [Kür19]. **minimum** [Del02, Kan08, OS15, Vos99]. **minors** [KM08]. **MinRes** [Kol12]. **Miranda** [AFHM04]. **mixed** [AMRT06, AM06, AL08, AD09, Bra06, CMO18, Gat04, Gat07, HS08a, Han06, HJV18, HK10, JS08, LMN10, MST08, NC06, Tu05, YG96]. **mixed-hybrid** [AMRT06]. **mode** [HK14, HR14]. **Model** [Auz18, BB08, BF12, Cha11, DDS<sup>+</sup>18,

DHI03, EL05, HK18, LMS09, MJ11, PK08]. **Modeling** [GLMT21, DE06, Raj08]. **modelling** [NB08a]. **models** [BDR09, JC17, SCCJC09]. **modes** [KMC11]. **modification** [SL12]. **modifications** [GO10, KL21, SGB07]. **Modified** [SG94, DT09, Lam08a, Mok15, Rap06]. **moduli** [HRV13]. **Moment** [EST06]. **moments** [BFM12, Lam08a]. **Monge** [DG06, Nei14]. **monic** [Psa04]. **monomial** [FvdMS14]. **monomial-exponential** [FvdMS14]. **Monotone** [Fro09, VC15, Bog05, MP08]. **monotonicity** [CR15, VK95]. **Morley** [Mar07, Zha04]. **mortar** [CW96, GS07, Kim07a, Mar07, Mar11, Woh00]. **mortaring** [HJ08b]. **motion** [VCL08]. **moving** [BEG15, HLX14, RFHS08]. **MR** [LT05]. **MSC** [TMS97]. **MSC/NASTRAN** [TMS97]. **Mühlbach** [Bre94]. **Multi** [CQ01, GN13, CC00, CL03, DdAR17, FL07, MX97]. **multi-frequency** [DdAR17]. **multi-group** [CL03]. **multi-input** [CC00, MX97]. **Multi-parameter** [GN13]. **Multi-symplectic** [CQ01]. **multi-term** [FL07]. **Multidimensional** [HNS04, BGSC20a]. **multifrontal** [EL05]. **Multigrid** [AVV14, BKK<sup>+</sup>18, Dis97, FMOS21, Hip97, HS02, LT94, AO10, AH03, BZ03, BDH15, BL97, BFK<sup>+</sup>10, BD20, Bun97, CS94, CL03, Che97, Den97, DHK<sup>+</sup>00, Ful03, GW10, JC06, KLRW19, KN03, Kou97, LH12, LM00, Man03, Mit97, NW03, NN16, NP19a, NP19b, Not10, Oos03, PSC97, Per00, PSS99, Pop08, SSVS12, Ste97a, WO97, Woh00, Zha04]. **multiharmonic** [Kol12]. **Multilevel** [KNS19, KS00, LK21, MRT03, BBKL15, BFH<sup>+</sup>15, DSC08, EN08, Ful97, JC17, LW06, MN08, Meu01, QvGvW<sup>+</sup>15, Spr02, TMS97, VW97]. **multinomial** [FTRH20]. **multiparameter** [BF12, HP08]. **multipatch** [HLNT18]. **Multiple** [VV18, BBS19, EJS03, JST05, LZ08b, MYZ18, MZLG14]. **multiplication** [BM05]. **multiplicative** [ELST18, ELT21]. **multipliers** [MRT03]. **multiply** [CMR12, DK10, SL16]. **multiresolution** [MB06]. **Multiscale** [HKKR18, Bra97, FM02, MR18]. **multishift** [ABM93]. **multisplitting** [BMPS95, FMP96]. **multivariate** [BP07, EKPR19, Kro06, PT13, Zho06, vBHS14]. **Müntz** [Mok16, Nal19]. **Nash** [BCDO18]. **Nash-equilibrium** [BCDO18]. **NASTRAN** [TMS97]. **nature** [BC05]. **Navier** [Boc97, ET09, Mav97, Per00]. **near** [Van07]. **nearly** [BFK<sup>+</sup>10, Smi10, Tif13, VA09]. **negative** [Boc97, Ped07]. **network** [AM06]. **networks** [BKO17, CEHT10, DDS<sup>+</sup>18]. **Neumann** [Lóp16, BHN13, BFdP<sup>+</sup>18, Che09, GKM16, KL12, Nas15, Tos00]. **Newbery** [Faß96]. **Newman** [COSV93]. **Newton** [BMS08b, WLHH18, BBMP06, Bor09, Bre94, HLC10, JO07, Kal20, NP96, Osb08, PR20, WE13, WSS98, ZY13]. **Newton-ADI** [BMS08b]. **Nikiforov** [CFÁN09]. **Nikol'ski** [Tik05]. **Nitsche** [HJ08b]. **nodal** [SJ08]. **nodes** [Roş09]. **Noise** [HJ08a, Kin11, Kin13]. **Non** [FSS18, FMP96, GS07, dMPPR99, ACR99, AVV14, BC09, BKS18, CMO18, CN19, Dis97, Gat07, Haa00, HS97, HHO14, HLP10, Jac10, JJ10, MN08, Mok15, RZ12, Sim10, Sta03, XBC19, ZZW20, ZB10]. **non-aligned** [Dis97]. **non-autonomous** [HHO14]. **non-convex** [RZ12]. **non-generic** [JJ10]. **non-homogeneous** [Gat07]. **non-linear** [Sta03]. **Non-matching** [GS07]. **non-overlapping** [Haa00]. **non-positive** [ACR99]. **non-regularized** [AVV14]. **non-relativistic** [BKS18]. **non-reversible** [Jac10]. **non-selfadjoint** [XBC19]. **non-smooth** [CN19, Mok15, ZZW20]. **non-stagnation** [Sim10]. **Non-standard** [dMPPR99, CMO18, HLP10].

**Non-stationary** [FMP96]. **non-symmetric** [MN08]. **Non-Toeplitz** [FSS18]. **non-uniform** [BC09]. **Noncommutative** [Sch06]. **nonconforming** [AD04, Che97]. **nondivision** [Opf15]. **nonharmonic** [For02]. **nonlinear** [Ahm19, AS09, AG19, Bor09, CQ01, Che09, DENP09, DB08, FKK10, FK08, HP20, HLC10, JG14, Kle08, KS00, KV13, MP08, WO97]. **nonlinearity** [MYZ18]. **nonlocal** [APL04]. **nonnegative** [HNP10]. **nonnegatively** [Bar05, Bar11]. **nonnegativity** [CLRS04]. **nonoverlapping** [PV05]. **nonsmooth** [Sch08b]. **nonstandard** [BB01]. **nonsymmetric** [BP21, CFM<sup>+</sup>10, FS08, LZ08b, MSV95, NB08a]. **Nonuniform** [AR14]. **norm** [ABJE15, Boc97, CGT05, Del02, HS08a, PR20, SG98]. **normal** [BSS09, LT14, SK06, SK08, Smi10]. **normality** [NPR08, TT05]. **normally** [FKSV07]. **norms** [EH15, Kro06]. **note** [Aré09, BMX99, Faß96, Gat04, GW19, GHS14, Neu16, SS09, Ves96, Yat06, ZY13]. **null** [MVV09]. **number** [AK10, BP07, Els05, JO17, Kan08, Kan15, Kan19a, Kan19b, Ste97a, TDLC09]. **numbers** [KS18, MS06]. **Numerical** [ACS00, BBD18, BJM99, BFR19, CMO18, DENP09, KS18, MR93, Meu01, MACI06, NB08b, SY09, SK06, SK08, STO08, TDLC09, WD08, Zha01, ÁNCQ06, ABM93, AH04, BMX99, CCCR08, Che09, DG06, DB08, Die97, FM02, FJK<sup>+</sup>20, Gau02, GN14, GJV13, Gre04, GLMT21, LMS09, LMM12, Psa04, Rap06, Sch03, Sch05, TLF07]. **numerically** [Aré09]. **numerics** [FL07].

**O** [BR08]. **Oblique** [JST05, Lam10]. **observer** [EHJM17]. **obstacle** [BRS08]. **obtain** [AD09]. **Obtaining** [CGT05]. **occasion** [GOR<sup>+</sup>08, RS14]. **occluded** [AC06]. **ocean** [DHI03]. **odd** [AM11]. **ODEs** [AS09, AS12]. **off** [SG99]. **old** [OSLS20]. **once** [GW19]. **one** [AL09, EH15, Ill03, JO14, MS08, RV08, She06, Yam06b]. **one-dimensional** [RV08]. **one-sided** [JO14]. **onto** [AS05a, CMR12, SL16]. **Open** [BMFJ<sup>+</sup>06, HS08b]. **Operational** [Mok16, MG14]. **operator** [BD17, HS08a, JG14, KK08, Koe07, Lam10, NZ14]. **operator-dependent** [BD17]. **operators** [Aco06, ABH17, BFM12, Che97, FG17, HOR08, HLP10, Lor99, NNR99, NC06, RY09, Sus07]. **Optimal** [ADM07, Lis08, Ade17, Auz18, BMS08a, DSSS13, FFK<sup>+</sup>15, JST18, KN03, Kol12, Meu17, Neu16, SAA09, Wac13, vBHS14]. **Optimality** [NU05]. **Optimality-preserving** [NU05]. **optimization** [BSS09, DHK<sup>+</sup>00, JC17, LR03, QvGvW<sup>+</sup>15, WLHH18]. **optimization-based** [JC17]. **Optimized** [YHL<sup>+</sup>20, EDG<sup>+</sup>15, LDB13a, LDB13b, Xu18]. **Optimizing** [Bir12]. **optimum** [Dub99]. **option** [KLS17]. **options** [Oos03, PPN13]. **order** [ABBS07, BMM97, BFR19, BMSR06, Bun97, CMM95, CP00, Cha11, CL03, Die97, EH15, FMR15b, GK14, Han06, HHP13, HP20, Kim07b, Kle08, Lam08a, LB96, MYZ18, Mar07, Mar11, Mar18, Mok15, Ng97, NC06, PSC97, Pav99, PK08, Sch08a, Sch08b, SSVS12, TW16, Zho06, LRL08]. **orderings** [BJM99]. **ordinary** [MYZ18, Ore10, Sch05]. **Orthogonal** [Aco06, CBGV05, Gau99, IL06, Koe07, LP09, AK06, BGyS21, Che06, Cot06, FLMT05, GCPP99, GAM05, Koe99, Lor99, MM99, Nar18, RÁRP06, Roz06, SL12, Sch02, Sim06]. **Orthogonality** [KMFO05, dMPPR99]. **Orthonormal** [VB95, MY02, Mas06]. **orthonormalization** [Zem17]. **Oscillation** [ABBS07, DH07]. **oscillators** [ÁNCQ06]. **oscillatory** [FLS20, Sha12]. **Ostrowski** [MJ11]. **other** [JO14, Sch05]. **outer** [BEN94, LNG15]. **ovals** [VK99]. **over-penalized** [BOS08, BGS10]. **overlapping**

[Cal15, Haa00, HKKR18, MP08]. **oversmoothing** [HP20]. **overview** [BFH<sup>+</sup>15]. **oxymoron** [Kny98].

**Padé** [BY98, GH94, Sta02, Sta06, Zho06]. **page** [Ano09b, Ano10c, Ano13b, Ano14d, Ano15c, Ano15e, Ano17d, Ano17e, Ano18d, Ano19b, Ano20d]. **pair** [COSV93]. **pairs** [GMT16, Pan19]. **palindromic** [Ahm19]. **pantograph** [BB00]. **parabolic** [Ade17, AS14, Bog05, DB08, DSSS13, FKK10, GKM16, GN14, HJ08b, HHO14, HLNT18, MP08, SG99]. **Parallel** [BMPS95, HC06, BZ03, BJM99, BM05, CMP01, CG18, DDR95, Erh95, FMP96, GW19, Haa00, HRT08, Mit97, SK06, SME02, VVM08, dJvdPDV17]. **Parallelism** [WE13]. **Parameter** [FvdMS14, HK18, KS06, KK08, PT13, AH03, BCDO18, BMS08b, BFR19, BD04, GN13, HOR08, HHP19, Kin11, Kin13, Kno08, LPS20, Pea15, Wu03]. **parameter-dependent** [HOR08]. **parameter-free** [LPS20]. **Parameter-robust** [HK18, Pea15]. **Parameter-uniform** [KS06, KK08]. **parameterizations** [YHL<sup>+</sup>20]. **parameterized** [SY09]. **parameters** [BKS15, ENH10, KMFO05, Kür19]. **parametric** [Ber04, MJ11]. **parametrized** [Faß07]. **Parareal** [DSSS13]. **Parareal-in-time** [DSSS13]. **Part** [CG18, FFK<sup>+</sup>15, LDB13a, LDB13b]. **partial** [GJV13, VCL08, Zem17]. **particular** [JKM14]. **partition** [Leo06, Mit97, VK95]. **partitioned** [KV95, TLL15, VK95]. **partitioning** [Els05, MH17]. **partitions** [Leo09]. **Past** [Ano20a]. **path** [Dos08, JJ10]. **PDE** [Lam08a, QvGvW<sup>+</sup>15, RKvdDA14]. **PDE-constrained** [QvGvW<sup>+</sup>15]. **PDEs** [GW19, Hoh06]. **penalized** [BOS08, BGS10]. **penalty** [BOS08, BGS10, BW12, BPS17, HP20]. **pencil** [EKPR19, VW13]. **pencils** [BMX07, Hoc11, MX15]. **Performance** [BFM20, FO03, Xu18]. **perilous** [Lau08]. **period** [DV12]. **Periodic** [Rom07, Cab07, FL07, Hen94]. **permeability** [DdAR17]. **perspective** [Pry14]. **perspectives** [HS08b]. **Perturbation** [AM11, Ahm19, AAS21, CC00, SME02, TLL15, CKP15]. **perturbations** [CGM10]. **perturbed** [Bog05, Bra06, BFR19, ELST18, EG06, GN14, KS06, KK08, LR16, LK21, Mar18, XS20]. **PET** [Bar11]. **phase** [AL09, KL21, LP17]. **photosynthetic** [SCCJC09]. **physical** [BFK<sup>+</sup>10]. **physiology** [PV09]. **Pick** [Ped07]. **pictures** [Sim06]. **Piecewise** [ER01, Kim07b, Bre04, HR06]. **piecewise-constant** [HR06]. **pinch** [BHRT03]. **pipe** [Kan08, Kan15, SK08]. **pivoting** [LS05, SG06]. **placement** [MX96, MX97]. **plane** [LM00]. **plasma** [JS18]. **plate** [SG94]. **plates** [SK06]. **Play** [CKH14]. **Plug** [CKH14]. **Plug-and-Play** [CKH14]. **plus** [ER14, Ng94, VVM09]. **PML** [Lis08]. **POD** [HHP13]. **Poincaré** [Bre04, LO13]. **point** [BBS19, BL06, DDR95, GS06, GO10, HC06, JO08, KK08, Kou97, LO07, LN10, Mar18, NB08a, RV08, Sch93, SdS06, Sim10, SME02, Woh00, dJvdPDV17, vBHS14]. **points** [AK06, BCR98, BCDV06, BL08, EV93, GS16, JJ10, JO14, MS14, Rom07, SV10a]. **Poisson** [BB01, Bol08, Yam06b]. **polar** [Dub99, SSVS12]. **pole** [MX96, MX97, Van07]. **poles** [Van07]. **Pollaczeck** [MMN18]. **Pollaczeck-Laguerre** [MMN18]. **pollution** [LHL<sup>+</sup>20]. **polygonal** [LMN10]. **polygons** [For02]. **Polynomial** [Mas02, MMN18, MW02, Opf15, Ran07, SEH14, BGP04, Bre04, BFH<sup>+</sup>15, CGM10, FMMS08, Fer05, FP01, Gre04, HMRS04, JR02, MYZ18, MFMGO05, MV15, Nar18, SV10a, TV18, TLF07, VB95, vBHS14]. **Polynomials**

[Opf10, AM11, Arv06, AK06, BH20, BP07, Che06, Cot06, CBGV05, DJJ11, EV93, Faß96, FLMT05, GCPP99, GAM05, Gau99, Gau10, GM18, GN16, GRS00, HC05, IL06, JO14, JO17, Kei08, Koe99, Koe07, Kro06, KS18, KMFO05, Lor99, MS14, MM99, MY02, MF06, Ost10, Psa04, RÁRP06, Roz06, SL12, Sch02, SSS10, Sim06, Sta02, Sta06, VV18, VC15, WA08, Yat06, Zha01, dMPPR99].

**porous** [AMRT06, Tu05, Tu07]. **posed** [CN19, Kin11, NR14, Neu19]. **positive** [ACR99, BFM12, CMP01, FSS18, LT05, ZB10]. **Positivity** [IN11]. **possible** [DTM17, Sch16]. **posteriori** [DGP99, Gat04, HJV18, LR16, NC06, PGH11]. **potential** [AR07, AMRT06]. **power** [CRZT20, HS12, KS18, Mál08]. **power-law** [HS12]. **power-law-like** [Mál08]. **powers** [Böt04, BFM12]. **practice** [MMP09]. **precision** [AD09, Lau08, ST02]. **Preconditioned** [BBS19, GS15, Kny98, Pan19, CR09, EN08, LY14, NZ14]. **preconditioner** [BPS17, CW96, CNP94, DHI03, GGM12, Kim07a, LN10, LH12, Mar11]. **Preconditioners** [BY99, DK13, GS06, AK10, BBD18, BJM99, BU07, BBMP06, Bre03, BGyS21, CP00, CFM<sup>+</sup>10, Che99, CT03, CPS18, Dob12, ET09, GO10, GHS14, Han06, HC06, HLC10, KLRW19, KN03, LO07, LK21, MRT03, Meu01, Ng97, Pea15, QvGvW<sup>+</sup>15, SM08]. **Preconditioning** [CP03, HN08b, KLRW19, NB08a, SEH14, AVV14, Ber04, CMP01, GW19, HS02, Kim07b, Soo16, WR09, WSS98, Zha00]. **prediction** [Ful97]. **predictor** [AS12, PPN13]. **predictor-corrector** [PPN13]. **Preface** [Ano10a, Ano15a, Ano14a, Ano14b, Ano17a, Ano18a, Ano18b, Ano20b, GOR<sup>+</sup>08]. **premature** [LKF08]. **prescribed** [XBC19]. **Present** [Ano20a]. **Preserving** [CKH14, BFS08, LC14, MX15, NU05].

**pressure** [CMM95, SK06, SK08]. **pricing** [KLS17, PPN13]. **primal** [BBK18, CW16, KCW18, SM08]. **primal-dual** [BBK18]. **primes** [Pri06]. **principle** [LPS20]. **principles** [FKK10, Sel02]. **Prior** [DGH14]. **Probability** [BCDO18, BP07]. **Probing** [SdS06]. **Problem** [SEH14, AR07, Ade17, AG19, AL09, AVV14, AMRT06, AH10, BLM06, BdPNdP14, BMS08b, Bra06, BGS10, CMO18, CGM10, Che09, CPS18, CKP15, CN19, DG06, EG06, HP08, KLRW19, KL12, KM08, Mar07, Mar11, MX96, MX97, PMLFT09, Pri06, QvGvW<sup>+</sup>15, RR07, RS12, SV10b, TZ17, Vos03, WLR02, Yam06b, Zha04, ZC19]. **Problems** [DGH14, Ahm19, AR09, AL08, AH03, Ash17, ADM07, AH04, BBS19, BMFJ<sup>+</sup>06, BB01, BMX99, BFS08, Bir12, BY99, BRC<sup>+</sup>16, BRS08, BL06, Bog05, Bor09, BBKL15, BFR19, BK16, CRS94, CP00, CS94, DSSS13, ELST18, FCA21, FKK10, FK08, FMR15a, GKMI6, GS15, Göt06, GN14, GHS14, HKLW20a, HKLW20b, HJ08b, HS97, HHO14, HLNT18, HC06, KK08, KLS16, Kal20, KJ09, Kin11, Kin13, KKR18, KKR20, KN03, Kol12, KV13, KL18, KRZ16, Lam05, LV08, LO07, LN10, LMN10, LT14, LR16, Lis08, LMR15, Lub06, LR03, MR18, MM04, Mar18, MST08, Mav97, MW02, MS07, MP08, NR14, Neu19, NZ14, NB08a, Ng94, NRS17, Oos03, PW13, Pea15, PSS99, RKvdDA14, SdS06, Sor98, SZ20, TV07, TLL15, TMS97, Tos00, TW16, VK99]. **problems** [Wac13, WLHH18, WR09, Woh00, WSS98, XS20, ZM13, dJvdPDV17]. **process** [AHS17, BY98, Meu15]. **processes** [Raj08, Sch03]. **processors** [JC06, dJvdPDV17]. **producing** [Raj08]. **product** [ABH17, DO18, Drm15, LNG15, Ste97b, VB95]. **products** [BDR09, BEN94, BMSR06, GW10, GHS14, Mee98, Ste95, Ste97b]. **programming** [AM06]. **programs** [JO08]. **projected**

[Dos08, HNP10, Sty08]. **projected-gradient** [Dos08]. **projecting** [AS05a]. **projection** [DJ06a, GNR15, JST05, KS00, Lam10, Lóp16, LRL08, MST08, Osb08, STO08]. **projectors** [She10]. **Proof** [Zei99]. **propagation** [HJ08a, PK08]. **properties** [EMS09, FJK<sup>+</sup>20, KM07, Mál08, MY02, Ram08, Rap06, SMS<sup>+</sup>19, Wei94]. **property** [Pop08]. **proximal** [FG17, Val19]. **Pseudo** [Par21, Zho06]. **Pseudo-linear** [Par21]. **pseudo-multivariate** [Zho06]. **Pseudospectral** [Lui11, CQ01, EBJ21]. **pumps** [BKO17]. **pyramids** [GH99].

**Q** [Meu17]. **Q-OR** [Meu17]. **QR** [BGP04, BDC04, Kre05, MH01, OB05, Ste95, VVM08]. **QR-factorization** [VVM08]. **QR-factorization/solver** [VVM08]. **QR-like** [BGP04]. **Quadratic** [ČF18, BFS08, Dos08, Fat98, FJK<sup>+</sup>20, MS14, MV15, Sta02, Sta06]. **quadratically** [HMRS04]. **Quadrature** [Atk04, AS05b, GM06, RGVP99, ACR99, BCGAM08, CS14, DV12, DNV05, DDPS20, ER01, Gau99, Gau06, Ill03, JST18, MJ11, MJM16, MPS18, Ng97, Not16, PPS18, Roş09, Sin95, VV18, CDN09]. **Quadrature-free** [GM06]. **quadratures** [Che06, CBGV05]. **quadrilateral** [HK10]. **quadrilaterals** [HRV13]. **quality** [BSDMGFTR09]. **Quantum** [Arv06, Man08, Roz06]. **Quasi** [BBMP06, FFK<sup>+</sup>15, GM06, HK17, NR14, SHZF08, WLHH18]. **quasi-cyclic** [HK17]. **quasi-interpolation** [GM06]. **quasi-Lagrange** [WLHH18]. **Quasi-Newton** [BBMP06]. **Quasi-optimal** [FFK<sup>+</sup>15]. **quasi-residual** [SHZF08]. **quasi-solutions** [NR14]. **quasilinear** [MS07]. **quasiseparable** [EH15, VVM08]. **quaternion** [AAS21, CS99, JO05]. **quaternionic** [JO07]. **quaternions** [Opf10]. **question** [She06]. **questions** [HS08b]. **quotient** [Fat98, Hen94, OS98]. **QZ** [MS06, Sor98].

**radial** [ÁNCQ06, GSV12, LW06]. **radiation** [Sta03]. **radii** [KQT13]. **radiosity** [ACS00, AC06, NND06]. **Ramanujan** [IL06, Sch06]. **Random** [SCCJC09, BP07, Els05]. **Randomized** [SGG15, EKPR19]. **range** [FJK<sup>+</sup>20, Psa04]. **rank** [BKK<sup>+</sup>18, BSS16, DS11, GO10, GM04, KL21, Kür19, LM20, MS08, NP20, SGG15, SGB07, Sty08, WA08]. **rank-** [NP20]. **rank-1** [KL21]. **rank-deficient** [SGG15]. **rank-one** [MS08]. **rate** [HHP19]. **rates** [EBJ21, FFK<sup>+</sup>15, Ger17, HP20, Kin13, NR14, Neu16, RR10]. **Rational** [BB14, Bar06, Bor09, FI20, Gla08, GPT11, GK14, Ill03, MPV15, Pri96, RGVP99, SL12, VVV19, Van07, VC14, Vos03]. **rationality** [FGV09]. **Raviart** [LMR15, YG96]. **Ray** [Pri96, BL97]. **Rayleigh** [Fat98, Hoc05, HP08, OS98]. **RCWA** [HS08b]. **reaction** [DE06, EG06, LR16, LK21]. **reaction-diffusion** [DE06, EG06, LK21]. **real** [BDD06, CBGV05, KM17, Mas02, MMN18, NPR08, TC08, XBC19]. **reconstructor** [RS21a, RS21b]. **Recovery** [AR14, DdSV20, Lam10]. **rectangles** [Hoh06]. **rectangular** [MC05, Pop08, SGB07]. **recurrence** [ÁNCQ06, CFÁN09, Koe07, LB96]. **recurrences** [GH94, Wei94]. **Recursive** [Nov05, Soo16]. **Recycling** [GS15]. **Reduced** [DS11, HOR08]. **Reducibility** [GS94]. **reduction** [Auz18, BB08, BFK<sup>+</sup>10, Cha11, FMOS21, FGV09, JOT08, PK08, Ran07, Wat06b]. **reduction-based** [BFK<sup>+</sup>10]. **reductions** [JO05]. **reference** [RT05]. **refined** [Hoc05, OR11, TC08]. **refinement** [BMM97, DDS<sup>+</sup>18]. **reflectors** [SS09]. **regimes** [BKS18]. **region** [Bar05, FLS20, LHL<sup>+</sup>20]. **regions** [BSDMGFTR09, Hoc11, LP09, Leo06].

**regression** [FTRH20]. **regular** [ZB10].  
**Regularization** [BL06, CKH14, Ram08, BD17, CLRS04, CNO08, DJ06a, GNR15, Ger17, HHP19, HP20, Kin13, Neu16, RR10, RY09, RY15, VW97, Wac13, Wu03].  
**regularized** [AVV14, LV08, LV14, PR20, WNK18, ZM13].  
**regularizers** [DdSV20]. **regularizing** [DSC08, HJ08a]. **Reichel** [RS14]. **related** [FMMS08, Gau06, Göt06, JO17, LB96, Ped07, RR07, RVO6, TT05]. **relation** [GN16, KM96, ZY13]. **relations** [ÁNCQ06, CFÁN09, Mál08]. **relationship** [Soo17, VCL08]. **relativistic** [BKS18, GGCT09]. **relaxation** [ENH10, Gan04, GKM16, LM00, Pop08].  
**remark** [Bar06]. **Remarks** [PP06, YG96, Zít08]. **Remez** [Yat06].  
**Remez-type** [Yat06]. **Renyi** [BFdP<sup>+</sup>18].  
**representation** [DFV09, DJ06b].  
**represented** [ABH17]. **research** [Bra97, Not16]. **Residual** [LPS20, ABJE15, CR09, Gat04, Kür19, LMSY14, SHZF08].  
**residual-based** [Gat04].  
**residual-minimizing** [Kür19]. **resolvent** [SG98]. **response** [TLL15, TZ17, ZC19].  
**restarted** [Bre16, CRS94, HRT08, Sch16, ZN17, Zít08].  
**Restarting** [SS98, BR14, WE13, ZC19].  
**restoration** [Bar05, CCC07, LPS20, NO02, ZM13].  
**restricted** [OB05]. **restriction** [PP06].  
**result** [KRZ16]. **resultant** [WA08]. **results** [BCDV06, BBKL15, DDPS20, EP07, GK08, Gre04, HP20, MN08, PQRT06]. **retards** [LR03]. **Retooling** [Dub01]. **revealing** [FXG19, GM04]. **reversible** [Jac10, Tif13].  
**revisited** [Arv06, LT14, LT18, Sad15, Sel02].  
**Revisiting** [BdPNdP14, MV15, NP19b].  
**Reynolds** [Kan08, Kan15, Kan19a, Kan19b, Ste97a, TDLC09]. **Riccati** [ABM93, BMS08b, BP21, BMP09, EMS13, HJ09, LC14]. **Richardson** [FMOS21, MP08]. **Riemann** [MF06]. **right** [BBS19, BK02, EJS03, JST05, LZ08b, MZLG14]. **right-hand** [BBS19, BK02, EJS03, JST05, LZ08b, MZLG14]. **Ritz** [Bea98, DTM17, Hoc05, HP08, Meu15, PP08, ZN17]. **Rivlin** [MPS18]. **Robbins** [Zei99].  
**Robust** [GPT11, LR16, BZ03, BGP04, BHRT03, Dob12, GN14, HRT08, HK18, Jac10, Kol12, Pea15]. **robustness** [WE13].  
**role** [Sch08a]. **root** [BGP04, Car11, Car12].  
**root-finding** [BGP04]. **roots** [Gra16, JO07, MV15]. **rotated** [MC05].  
**rotating** [STO08]. **rotation** [GK08].  
**rotations** [OB05]. **Roundoff** [YNYF15].  
**row** [AS05a]. **RQ** [Yan98]. **RQ-iteration** [Yan98]. **RRB** [dJvdPDV17]. **RRB-solver** [dJvdPDV17]. **rule** [DO18, LWH20, Sch93].  
**rules** [ACR99, Bar11, BCGAM08, DRST16, Gau06, JST18, Kin11, Kin13, LMM12, MJM16, Ng97, OSL20, Van19]. **Runge** [AS14, Bir12, GS94, LT18]. **Rush** [PV09].  
**saddle** [BBS19, BL06, GS06, GO10, HC06, LO07, LN10, NB08a, SdS06, Sim10, Woh00].  
**saddle-point** [BL06, SdS06]. **Saff** [She06].  
**sampling** [Ash17, BP07]. **satisfying** [ČF18].  
**Scalable** [JC06, MR18]. **scalar** [GHS14].  
**scale** [ABJE15, ABHK09, BMS08b, BFS08, Cha11, HJ09, LV14, LR03, Sor98]. **scaled** [FG17]. **scales** [EP07]. **scattered** [GK08].  
**scattering** [CL03, GSW08, HR14].  
**scheduling** [BC05]. **scheme** [BPP15, Bra06, GGCT09, GN14, SSVS12].  
**schemes** [AS09, AS12, ADW15, BC09, BEN94, CP00, HOR08, Mar18, MS07, WO97]. **Schmidt** [Bar15]. **Schrödinger** [BKS18, CQ01, GSV12, Kle08]. **Schur** [GH94, KLS16, Kal20, Wat06b, Zha00].  
**Schur-type** [GH94]. **Schwarz** [Bre03, BGyS21, Cal15, CPS18, CG18, DK10, DHI03, ELST18, ELT21, EDG<sup>+</sup>15, FSS97, Gan08, Han06, HKKR18, HC06, LDB13a, LDB13b, LMR15, LK21, Mar07, MR18, MP08, Par21, Xu18]. **scientific**

[BC05, BDR09, Bra97]. **second** [ABBS07, HHP13, LP08, Mok16, NNR99, NC06, Sch08b, TW16]. **second-order** [Sch08b, TW16]. **sections** [JN10]. **sector** [LZ08a]. **segmentation** [JC17]. **Seidel** [Sil03]. **selection** [BMS08b]. **Self** [BKS15, BFM12, EST06, GS15, GHS14, KK08]. **self-adjoint** [BFM12, GS15, GHS14, KK08]. **Self-generating** [BKS15]. **self-similar** [EST06]. **selfadjoint** [XBC19]. **Semi** [ENH10, LC14, WR09]. **Semi-convergence** [ENH10]. **semi-iteration** [WR09]. **semi-stabilizing** [LC14]. **semiaxis** [Mas02, MMN18]. **Semicoarsening** [Den97]. **semiconductor** [SMS<sup>+</sup>19]. **semiiteration** [HH93]. **semilinear** [AH04, Bog05, DB08, Gan04, HL20, NB08b]. **seminorms** [BD17]. **semiseparable** [Kei08, QvGvW<sup>+</sup>15, VVM09]. **sense** [JST18, MS08]. **sensitivities** [SJ08]. **sensivity** [BD04]. **Separable** [Osb08, Bor09, SY09]. **separation** [Gra16]. **sequences** [BGSC20b, BGSC20a, Ber04, CP03, DJJ11, Pri96]. **sequentially** [QvGvW<sup>+</sup>15]. **series** [DT09, For02, GRS00, KS18, LWH20, Ste02]. **set** [CKV04, DTM17, JST18, Lei19, OB05, VCK08]. **sets** [AO10, AK06, FKSV07, KV95, VK95]. **shallow** [DHI03]. **shape** [MH17]. **Sharp** [ZN17, Gau10]. **sharpness** [Var01, Yat06, VK95]. **shift** [BKS15, Kür19, Mee98]. **shift-invert** [Mee98]. **Shifted** [CRZT20, BDG04, EN08, SHZF08, Soo16]. **Shishkin** [ELST18]. **shocked** [HLC10]. **short** [ČF18, Wei94]. **sided** [JO14]. **sides** [BBS19, BK02, EJS03, JST05, LZ08b, MZLG14]. **signal** [For02]. **Signorini** [BB01]. **similar** [EST06]. **Simple** [RY09]. **Simpler** [LZ08b]. **simplex** [Xu06]. **simplification** [LP08, LP17]. **simplified** [KR20]. **simulation** [DDS<sup>+</sup>18, GLMT21, NW03]. **simulations** [BHRT03, Ema10, JS18, SMS<sup>+</sup>19]. **Simultaneous** [HHP19, VV18]. **sinc** [Hoh06, NND06, Yam06a, YG08, EG06, Yam06b]. **sinc-convolution** [NND06]. **single** [MX96]. **single-input** [MX96]. **Singular** [FKSV07, Atk04, BFK<sup>+</sup>10, Che94, FFK<sup>+</sup>15, FXG19, GS06, Hen94, Hoh06, IN11, JO14, JR02, JR04, JKM14, LY14, MS14, Man06, MM04, MR93, OS15]. **singularities** [JKM14]. **singularity** [Ill03]. **singularly** [Bog05, Bra06, BFR19, ELST18, EG06, GN14, KS06, KK08, LR16, LK21, Mar18, XS20]. **singularly-perturbed** [EG06]. **SIRT** [ENH10]. **sixtieth** [RS14]. **size** [LMM12]. **sized** [CG18]. **sizes** [Sch05]. **skew** [AM11, BMX99, BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, BMX07]. **skew-Hamiltonian** [BMX99]. **skew-symmetric** [BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, BMX07]. **skew-symmetric/symmetric** [BMX07]. **slices** [BLM06]. **Slit** [DK10, CMR12]. **slope** [Sch08b]. **small** [FL07, Leo06]. **smooth** [CN19, LW06, Mok15, ZZW20]. **smoothed** [BDH15]. **smoother** [Sil03, Ste97a]. **smoothers** [Bir12, LM00]. **smoothing** [BFH<sup>+</sup>15, GN16, HNS04, Mav97, Pop08, RY09, TV18]. **Sobolev** [Bre04, BMSR06, GCPP99, PQRT06, RÁRP06]. **Softmax** [FTRH20]. **Software** [Koe99]. **solid** [SV10b, Vos03]. **Solution** [Hoh06, NRS17, ABM93, AL09, AH04, AC06, BMX99, BP21, BMP09, Bol08, CR96, Che94, DG06, Die97, EHJM17, FKK10, FMR15b, GJV13, Kal20, KN03, KL18, Nas15, Neu19, Sta03, TMS97]. **solutions** [Aco06, BEG15, Cab07, DB08, FL07, HJ09, LC14, MYZ18, MFMGO05, Mok15, NB08b, NR14]. **solvability** [BKO17, MM09a]. **solver** [HRT08, Kol12, PLM03, VMV07, VVM08, dJvdPDV17]. **solvers** [BHRT03, BSS16, Gut12, PW13, Sta03]. **Solving** [BFS08, VMV07, ZM13, AM06, BBS19, CCC07, CL03, CR09, EG06, EDG<sup>+</sup>15,

GGCT09, HMRS04, KL12, LV08, Meu17, MS08, NND06, Ng94, Pea15, PV09, SHZF08].

**Some** [BB01, Gre04, She10, Zít08, AH04, BSS09, DDR95, DJ06b, FKK10, Gat04, MS14, NB08b, PR20, Rom07, Sch08b, OSLS20].

**sonic** [Dis97]. **SOR** [HS08a]. **sorted** [AO10].

**source** [BLM06, MM04, Neu16]. **Space** [BRS08, AS14, Bol08, GHS14, Gut12, HJV18, HKKR18, HKLW20a, HKLW20b, HLNT18, MVV09, PCP06, Sch03, SZ20, WLHH18].

**space-time** [AS14, HJV18, HLNT18, SZ20].

**spaced** [Roş09]. **spaces** [CMO18, HKKR18, KRR16, KKR20, MS06, MR18, Mas02, PQRT06, RÁRP06].

**spacing** [VA09]. **Sparse** [AR14, BB08, BR08, BM05, Bun97, CFM<sup>+</sup>10, Che99, DdSV20, Erh95, GW10, LS05, PV05, PCP06, RT05, SG06, TMS97].

**Sparsity** [MH17, LMM12, Ram08, RR10, RZ12].

**Sparsity-inducing** [MH17]. **spatially** [JG14, LDB13a, LDB13b, Val19].

**Specht** [SG94]. **Special** [BJR<sup>+</sup>09, RS14, BK02, ELT21, HK14, Koe99, KS18, GOR<sup>+</sup>08].

**SPECT** [Bar11]. **spectra** [XBC19].

**Spectral** [AR09, GGM12, Gut12, KLS16, AH10, Aur15, BK16, DHI03, HS08a, HJ16, Jac10, Kal20, KV95, Lam05, Lam08a, Lam08b, Mee98, PPN13, Vos03].

**spectrum** [FXG19, SF93]. **spectrum-revealing** [FXG19].

**sphere** [AS05b, BP03, Fer05, GM06, Leo06, Leo09, TDLC09, Yat06].

**Spherical** [Roş09, FM02, SSVS12].

**spheroidal** [MACI06]. **spin** [KM07].

**spin-stabilized** [KM07]. **spline** [ČF18, KK08, Kha06, LR16].

**splines** [VC14, VC15, ZK17]. **split** [DdSV20].

**splitting** [CGT05, JS18, ZB10]. **square** [Boc97, RY09, VCK08].

**squares** [Aco06, BMM97, BY99, Bor09, CMM95, CNP94, CL03, Faß96, GPT11, HJ16, KS00, LV08, LV14, MS08, Ng94, Osb08, Pav99, VB95, WNK18, ZM13].

**SR** [Faß07, SAA09].

**Stability** [BD04, CCCR08, GK08, KM07, Sch05, AS14, AD09, BFM20, FH13, HK18, Kou97, MV15, Ste97b].

**stabilizability** [KQT13].

**Stabilization** [MST08, BL06, LRL08, Sch08a].

**stabilized** [KM07].

**stabilizing** [LC14, RV08].

**Stable** [MB06, APL04, AMVW15, Jac10, LRL08, PSC97, Tif11].

**stage** [BMPS95, CMP01].

**Stagnation** [Soo17, Meu12, Sim10].

**staircase** [BMX07].

**standard** [Bre03, CMO18, HLP10, KL18, SvdVM98, dMPPR99].

**standing** [BL97].

**state** [DN11, Per00].

**states** [FMSV08, Jac10, Tif11].

**stationary** [FMP96, LMS97, LP17, RV08].

**statistically** [Bar11].

**Steady** [DN11, CR09, Per00].

**Steady-state** [DN11, Per00].

**steepest** [AEEG08, NZ14].

**stencil** [dJvdPDV17].

**step** [AL09, IE17, LMM12, MSV95, Sch05].

**stepped** [FJMS06].

**stepping** [Kle08].

**Stieltjes** [DJJ11].

**still** [Lub06].

**stochastic** [ADW15, BB00, BC05, DN11, LMW20, RKvdDA14, Sch03, Sch05].

**Stokes** [AL09, BBD18, Boc97, CMM95, Dob12, ET09, GS07, HJ16, Mav97, Pea15, Per00, WD08].

**Stopping** [AL08, Bar11, HJV18].

**story** [Lau08].

**strain** [Ran07].

**strangeness** [LT18].

**strangeness-free** [LT18].

**strategies** [Bre16, CP03, DDS<sup>+</sup>18, Spr02].

**strategy** [PSC97, SHZF08].

**stratified** [TDLC09].

**streaming** [GW10].

**Strong** [GM04, DK13, RR07].

**strongly** [TDLC09].

**Structural** [CFÁN09].

**Structure** [MX15, BFS08, DS11, ELT21, LC14, MW02, QvGvW<sup>+</sup>15, Sim06].

**structure-preserving** [BFS08, LC14].

**Structured** [FMMS08, WA08, BBD<sup>+</sup>08, BSDMGFTR09, BC09, BKK<sup>+</sup>18, BMX07, DHK<sup>+</sup>00, LT18, MM04, MX15, NPR08, Smi10].

**structures** [FJMS06, GLMT21, HR14, SV10b].

**study** [ÁNCQ06, AC06, CT03, HS08b, LHL<sup>+</sup>20, SK06, SK08, STO08, TDLC09].

**style** [Oos03, PPN13].

**subdomains** [Cal15, CG18].

**Subgaussian** [AR14].

**subgraphs** [DK13]. **subimages** [NO02].  
**subintervals** [DV12]. **subject** [SGB07].  
**subspace** [BBS19, BSS09, BFS08, DdSV20, DSSS13, FP01, FLS17, GS15, GHS14, Lam05, Lam08b, LY14, MSS15, Meu17, SS08, VVV19, WO97, Wei94, ZN17].  
**subspace-accelerated** [DdSV20].  
**subspaces** [AS05a, MPV13, MPV15, SvdVM98].  
**Substitution** [FI20]. **substructures** [PV05]. **substructuring** [BW12, KRR16, SM08]. **suitable** [dJvdPDV17]. **sum** [OS15, PMLFT09].  
**summation** [Sch06]. **sums** [FvdMS14, KM17, PT13, VCL08]. **sup** [LRL08]. **Superlinear** [BK02].  
**superresolution** [EKPR19]. **SUPG** [Kno08]. **support** [BDD06, ĀF18, JOT08].  
**supported** [HS12]. **surface** [MB06, YHL<sup>+</sup>20]. **surfaces** [Atk04]. **survey** [DDPS20, JVV12, MMN18, Not16, RÁRP06].  
**SVD** [Cha11, Dm15, FMSV08, HRT08, JJ10, Ste97b, Tif11, WL12]. **SVD-based** [Tif11]. **SVD/Krylov** [Cha11]. **swallowtail** [FLS20]. **Sylvester** [ABJE15, BB14, BKS15, EHJM17, KV13, WA08].  
**Sylvester-observer** [EHJM17]. **symbolic** [KL21]. **symmetric** [AM11, AMVW17, BBF<sup>+</sup>00a, BBF<sup>+</sup>00b, BB14, Ber04, BOS08, BGS10, BPS17, BMX07, CRS94, FGV09, KLS16, Kal20, KN03, LS05, LNG15, LT05, LK21, MPV15, MN08, SG06, SHZF08, SS98, Ves96, Vos99, WSS98].  
**symmetric/symmetric** [BMX07].  
**symmetrized** [BMSR06]. **symplectic** [ADW15, CQ01, GS94, MSS15, SS09, SAA09].  
**synchronous** [BMPS95]. **synthesis** [HK14].  
**system** [BMM97, CMM95, CL03, GGM12, JO08, Pav99]. **Systems** [Cot06, AS09, AS12, BKS18, BB08, Ber04, BFK<sup>+</sup>10, CR96, CC00, CFM<sup>+</sup>10, Cha11, Che94, Che99, CS99, Den97, EJS03, Ema10, FMMS08, Fra21, FJK<sup>+</sup>20, GSW08, GS06, GO10, HH93, JST05, KQT13, LB96, LZ08b, LK21, MSV95, MZLG14, MN08, Meu17, MS08, NN16, NB08a, Pop08, SG06, SGG15, SHZF08, Soo16, VMV07, ZB10]. **Szego** [DNV05, DRST16, LT94, MF06].  
**T** [BP21]. **T-Riccati** [BP21]. **Table** [Ano09a, Ano10b, Ano13a, Ano14c, Ano15b, Ano15d, Ano16, Ano17b, Ano17c, Ano18c, Ano19a, Ano20c, GH94]. **tale** [Sim06]. **Tau** [MG14, Mok15]. **Taylor** [Sta06]. **Tearing** [HLP15]. **technique** [CKD15, KM08, NV19]. **techniques** [KLS16, SS98, WSS98]. **technology** [PLM03]. **Tensor** [BRC<sup>+</sup>16, BKK<sup>+</sup>18, CRZT20, Lei19, LNG15, OS15]. **tensor-structured** [BKK<sup>+</sup>18]. **tensors** [WNK18]. **term** [FL07, HP20]. **th** [ÁNCQ06, Car11, Car12]. **their** [CS14, DRST16, EMJ16, FL07, GM18, GN16, GRS00, KM96, Man06, She10, Var01].  
**theorem** [CR15, Gau06, LZ07, Lui11, PQRT06, CC97].  
**theorems** [AFHM04, Gau06, GMT16, Nal19, Sch03, Var01]. **theoretical** [Gre04, Mee98]. **Theory** [FL07, LMM12, BMFJ<sup>+</sup>06, BGSC20b, BGSC20a, BSS09, EMS13, FM02, FS08, Gut12, MMP09, VCL08]. **thermal** [KJ09].  
**Thick** [ZC19]. **thin** [MM09b]. **thin-layer** [MM09b]. **Three** [TT05, Hip97, HK18, Kim07a, KLRW19, KL12, Nei14, XBC19].  
**three-field** [HK18]. **three-level** [KLRW19].  
**Tianjin** [LHL<sup>+</sup>20]. **tidbits** [She10].  
**Tikhonov** [BD17, CLRS04, GN13, GNR15, HP20, LMM12, Ram08, RZ12, RY15, Wu03].  
**Time** [DE06, HLNT18, AS14, AL09, CKP15, EDG<sup>+</sup>15, EP07, FMOS21, FMMS08, FMR15b, Fra21, Gan08, HJV18, HJ09, KQT13, Kle08, Lam08a, LDB13a, LDB13b, SZ20, DSSS13]. **time-delay** [FMMS08].  
**time-dependent** [Lam08a].  
**Time-discretization** [DE06].  
**time-harmonic** [EDG<sup>+</sup>15]. **time-invariant** [KQT13]. **Time-multipatch** [HLNT18].  
**time-step** [AL09]. **time-stepping** [Kle08].

**Title** [Ano09b, Ano10c, Ano13b, Ano14d, Ano15c, Ano15e, Ano17d, Ano17e, Ano18d, Ano19b, Ano20d]. **Toeplitz** [BGSC20b, BGSC20a, BDH15, Böt04, CP00, CNP94, ER14, FGV09, FSS18, HS02, HN08b, LT05, MVV09, Ng94, Vos99]. **Toeplitz-like** [MVV09]. **Toeplitz-plus-Hankel** [Ng94, ER14]. **tomography** [Auz18, RS21a, RS21b]. **Topological** [AG19, BKO17]. **torsional** [KMC11]. **total** [BBK18, LV08, LV14, Par21, VW97]. **trace** [BFM12]. **track** [Ful97]. **training** [JOT08]. **trajectory** [WLHH18]. **transboundary** [LHL<sup>+</sup>20]. **Transfer** [SG98, BY98, Che97, LKF08]. **transform** [KJ09, Yam06a]. **transformation** [AMVW17, BD04, JO05, KKR18, KKR20, Mee98, YG08]. **transformation-of-basis** [KKR20]. **transformations** [SAA09, WL11]. **Transformed** [NP20]. **Transforming** [DFV09]. **transforms** [Che99]. **Transient** [Böt04]. **transition** [Kan08, Kan15, Kan19a, Kan19b]. **transmission** [LMN10]. **transmission/mixed** [LMN10]. **transport** [EMS13, Sta03]. **treatment** [BFR19]. **tree** [EL05]. **tree-based** [EL05]. **trends** [MY02]. **triangles** [MB06]. **triangular** [BU07, GGM12, KLS17, VW13]. **tribute** [Gau02]. **tridiagonal** [AMVW17, CS99, FGV09, FSS18, LT05, NPR08, XBC19]. **Trigonometric** [DV12, BP07, Faß96, Nav05]. **Truncated** [Sor98, DSSS13, MS06, Yan98]. **truncation** [Ful03, NV19, Xu18]. **truncations** [DRST16]. **trust** [Bar05]. **tuples** [Sch08b]. **Turán** [CS14]. **turbulent** [Auz18, Kan08, Kan15, Kan19a, Kan19b]. **Two** [Cha11, Han06, HLC10, Soo16, AL09, BBD18, BFR19, Bre03, BMPS95, Cal15, CMP01, CGT05, DG06, HK14, HHP19, KK08, KRR16, LMS97, Mar18, NP19a, Sim06, TV18]. **two-dimensional** [Bre03, HK14]. **Two-level** [Han06, HLC10, BBD18, Cal15, LMS97, NP19a, TV18]. **two-parameter** [BFR19, HHP19]. **two-point** [KK08, Mar18]. **two-stage** [BMPS95, CMP01]. **Type** [DGH14, ÁNACS07, BKS18, BCDI15, Bra06, CFÁN09, Cot06, CKV04, DdSV20, DDPS20, Fra21, FJK<sup>+</sup>20, GAM05, Gau06, GM18, GH94, Ill03, JKM14, KS18, Lei19, Lén06, LWH20, MJ11, MST08, MG14, Neu19, NV19, Nov05, Pri96, RS12, Sch02, Sch05, Soo16, VK99, Var01, WL11, Yam06b, Yat06, dJvdPDV17]. **types** [Bog05].

**U** [Peñ04]. **unbounded** [Kol12]. **Uncertainty** [Sel02]. **unconditionally** [APL04]. **uncoupled** [Tif13]. **unidimensional** [BGSC20b]. **unified** [Nei14, PD17]. **Uniform** [Bog05, Del02, ÁNACS07, BC09, KS06, KK08, VA09]. **Uniformly** [Bra06, WLR02]. **unilateral** [JO17]. **unimodular** [Gla08]. **union** [Hoh06]. **Unique** [MM09a]. **uniqueness** [Bar06]. **unit** [BDD06, CBGV05, Gla08, Leo06, Leo09, MS14, SL12, Sin95, Xu06]. **unitary** [AMVW15, DFV09]. **unitary-weight** [DFV09]. **univariate** [BL08]. **unknown** [Bar05]. **unsteady** [Bir12]. **unstructured** [CS94, DHK<sup>+</sup>00]. **unsymmetric** [EL05, SF93, SV10b, TC08]. **unweighted** [HS12]. **update** [SGB07]. **updating** [MS08]. **upper** [Cab07, VW13]. **use** [KJ09, Kre05, Yam06a]. **Using** [AD09, Ash17, ACS00, ABHK09, BEG15, BFdP<sup>+</sup>18, BFS08, CL03, CS14, DDS<sup>+</sup>18, For02, FH13, HNS04, Hoh06, KN03, Lam08a, Mit97, NP96, OB05, PMLFT09, PSC97, SHH<sup>+</sup>12, TMS97, Zha04]. **Uvarov** [CFÁN09].

**Vaidya** [CT03]. **validation** [BDR09]. **value** [Ash17, BK16, Che09, DTM17, FXG19, FKSV07, GN14, HJ08b, Hen94, KK08, Lam05, LMN10, MM04, Mar18, MR93, SZ20, ZN17]. **valued** [JO05, Sin95]. **values**

- [Aré09, BdPNdP14, Hoc11, IN11, LY14, Meu15, OS15, PP08]. **Vandermonde** [Drm15, LR04, Opf10, Sch02]. **vanilla** [PPN13]. **Variable** [Lau08, AMRT06, Lam05, LDB13a, LDB13b, Osb08, Sch05]. **variable-coefficient** [Lam05]. **Variable-precision** [Lau08]. **variables** [Lor99]. **Variants** [Zem17, PR20]. **variation** [BBK18, Par21, VW97]. **variation-based** [BBK18]. **Variational** [LMSY14, SHH<sup>+</sup>12, BL06, Ger17, JC17, MH17, Pry14]. **variationally** [AR09]. **variations** [LZ07]. **various** [AK10]. **Varying** [IE17, HC05].
- Vector** [EMS13, MR17, BM05, JOT08, Tos00]. **vectors** [VB95]. **velocity** [CMM95, HJ16]. **velocity-flux** [HJ16]. **velocity-vorticity-pressure** [CMM95]. **Verified** [FH13]. **version** [EJS03, Erh<sup>+</sup>5]. **versions** [LS05]. **versus** [Neu19]. **vertex** [KLRW19]. **vertex-based** [KLRW19]. **very** [ABH17, MM99]. **via** [AMVW17, BY98, BC05, BSS09, CHR02, FP01, LT94, MR17, SAA09, ST08, Yam06a]. **vibration** [FJMS06, Vos03]. **vibrations** [SV10b]. **view** [MF06]. **virtual** [YHL<sup>+</sup>20]. **viscoelastic** [HLX14, NB08a]. **volatility** [HHP19]. **Volterra** [CCDR08, CDN09, MG14, PGH11, YG08]. **volume** [BJR<sup>+</sup>09, GOR<sup>+</sup>08, LO13, LMR15, LKF08, RS14, WLR02]. **vorticity** [CMM95]. **Vries** [Kle08]. **vs** [LRL08].
- wall** [Kan15, Kan19a, Kan19b]. **water** [DHI03]. **Wave** [BL97, ÁNCQ06, HL20, LMW20, MACI06, PK08]. **Wave-ray** [BL97]. **waveform** [Gan04, GKM16]. **wavelet** [BP03, Che99, ER01, RS21a, RS21b]. **wavelets** [ČF18, HNS04, HR06]. **Weak** [ADW15]. **weakly** [BOS08, BGS10]. **Weber** [LP17]. **Weierstrass** [PQRT06]. **weight** [DFV09, OSLS20, RS12]. **Weighted** [BK06, MJM16, ZX17, CNO08, FSS97, Lén06, Lén10, Lub06, PQRT06, Pri06, RÁRP06, SHZF08, SV10a, ZC19]. **weighted-GCV** [CNO08]. **weights** [ACR99, Dam02, DRST16, Mas06, Mas02, MMN18]. **well** [Peñ04]. **WENO** [GGCT09]. **where** [Wat06a]. **while** [LMSY14]. **whiteness** [LPS20]. **Whitney** [GH99]. **window** [MF06]. **without** [BD04, Ger17, MPV13, MPV15]. **words** [KS18]. **work** [Koe99]. **works** [ST02]. **worst** [LT05, TLF07]. **worst-case** [LT05, TLF07].
- Xu** [BCDV06].
- years** [Ano20a, Not16]. **Yuen** [Zei99].
- Zeros** [EV93, JO14, JN10, CR15, COSV93, DJJ11, GAM05, GM18, JO17, Ped07, Sim06, VCL08]. **zonal** [GRS00].

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