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$(0, 1)$ [BH96]. $(1 + \sqrt{2})$ [RS18, CP17]. $(1, L_r, L_r)$ [DD20]. (A, B, C, D) [CMT09]. $(AR - LB, DR - LE) = (C, F)$ [Kåg94]. $(L_r, L_r, 1)$ [De 11, GED22]. $(L_r, n, L_r, n, 1)$ [SD15a, SDD15]. (λ, μ) [JKM11]. (R, S) [Tre05]. (r_1, r_2, r_3) [ES09]. 0 [Ho90]. 1 [BLW15, BV00, BH96, Har99, HT00, Ho90, KR02, NW14, Uhl20]. 2 [BZ98, BK89, CG15a, EK96, FFH+19, FKLR13, Hal20, HR14, LT09, Pai09, SYJ00, TT14]. $2^d \times 2^d$ [Ose10]. 2×2 [ABL94, HLW05, SSR20]. 3 [BBM02a, CO12, EK96]. 3×3 [BL91, GKL18]. $4n^2$ [HY00]. ^{2} [ABM21]. A [VV89, Car94, WZ91]. $A(k)$ [Art96]. $A + \mu B$ [JKM11]. $A = UPD$ [Eir00]. $A^k b$ [Gri88]. $A^m - A^n = IJ$ [Ho90]. $A^T X \pm X^T A = B$ [Bra98]. α [LW20b]. $A\overline{X} - XB = C$ [BHH88]. $AX = B$ [yPWjP12]. $Ax = \lambda Bx$ [WZ91]. $AX \approx B$ [HPS+11, HPS13, VV89]. $AXB + CYD = E$ [LBL05, Özg91]. $AXB^* + CYD^* = E$ [SC03]. AZ [CHMW20]. B [Ste10b, WZ91]. β [LGI21]. BML [BMV18]. BR [GHW99]. $BXA^T = T$ [DHZ03]. C^p [FP98]. $\mathcal{G}$ [JMW96]. $\mathcal{H}_2$ [BB12]. χ^2 [MH13a]. cp [SMBJS13, BSU15]. CUR [DMM08]. D [KMS01, KMS03, GSCS15]. ϵ [JC22b]. G [LT89, NSCS10]. H [AYLR04, AH07, KL98b, LG06]. H_+ [HLT12]. H_∞ [GGO13, FSV14]. HR [Sle09]. $I \otimes A$ [Gre05]. $I \times J \times 2$ [SD09]. K [Car94, Yas03, BT06, CSEP21, GGL04, KM16, Kon00, Pro13, Sor92]. L

[Stu91, Sta22]. λ [CLS88, JKM11]. LDL^T [Tům02]. LDU [CKRU08]. LR [Gem98, Sle09, Xu98]. LTI [Ver96]. LU [AP02, BFM03, BT02, DD97, DM05, EMC17, FH21, GL93, GDX11, HHP21, HT17, KDGG13, LEMCD19, Ogi10, RJ14, Ste93a, Tol97, Zha01, ZFW07, vdSBvdV93, SYJ00, DY90, JOvdD89]. M [BY88, KN89, KN91, MSZ03, SB01, Zha04, Bor09, DMS09, DMS12, DMS13, Guo01b, Hel95, HHH12, JS07, KN98, LZ97, MNST96, SWYM96, Wan98b, gWcWL12, Xue96, YL00, ZQZ14]. $\mathbf{C}^n$ [EHvP04]. $\mathbf{D}$ [OP05]. $\mathbf{Q_p}$ [GSCS15]. $\mathbf{R}$ [Cho10, EHvP04]. $\mathcal{C}_\Gamma^\setminus$ [BDD14]. $\mathcal{H}^\in$ [XHC21]. $\mathcal{H}_\in$ [BGG18, ASvG17, FG15, GAB08, MZ19, VGA10]. $\mathcal{H}_\infty$ [ABMV20, MG10]. $\mathcal{L}_\infty$ [ABM+17]. $\mathbf{MR}^3$ [WL12]. $m \times n \times 2$ [SZH22]. μ [Kar11a]. N [JH88, Mar91, Hel95, LB02, FMSS21, Pai09, Ste10a]. $n \equiv -1 \pmod 4$ [NW02]. $n \times n$ [TW03]. $O(N)$ [LB02, Dhi98]. $O(n^2)$ [AG91b]. P [RR96, Cao00a, Cao00b, GG13, Ian06, Peñ01, Wan98b, Bar00b, GH06, HO10, Ian09, Mor22, Nou96, Smi03, ZR95]. P_0 [PYHK93, Ven93]. P_1 [MNT99]. $\Phi^t(A) = \frac{1}{n}J_n$ [Che01b, XZC99]. $p \neq 1, 2, \infty$ [HO10]. $p \times q \times 2$ [Ste08]. q [DP15]. $Q0$ [MP95b]. qd [BBD11, WL12, Zhl12]. QL [CW96]. QR [AG92, Ari00, ANT09, BFG23, BEGG07, BHP03, BBM02a, BBM02b, CR21, CI95a, CPS97, DW06, DV92a, De 94b, DD98, DV08a, DV92b, DGGX15, Fos03, GP93, GIMT95, GO95, GW92, Gul95, HJOvdD93, HIW15, Kre08, Lag91, LS06, MV14, Mas94, MV18, MP91, NP96, Ogi10, PL93, PL97, Rei91, RS94, SB92, SB05, Ste93a, Sun95a, Van10, Van11, VW12, Wat95, Wat98, Xu98, Xu20, Zha93a, vdG93, Kon00]. QRT [SB05]. QZ [CMV19, SCMV21, Wat00]. R [He99]. $r(\mathbf{A})\mathbf{r}(\mathbf{AD})$ [Alt13]. $r(\mathbf{A^2D})$ [Alt13]. R_1 [DDV00b]. R_2 [DDV00b]. R_N [DDV00b]. s [CD14, CD15, Car18]. S^+ [SYJ00]. sep^{-1} [KP92]. Sep_λ [GO06]. $sL - M$ [SL94]. $\sum A^i X D_i = C$ [Wim92]. T [BFS21]. $TA - FT = LC$ [Tsu93]. $\tan\Theta$ [AMS07]. θ [Che92]. $\text{tr}(f(A))$ [UCS17]. U [NQB14]. ULV [CGP06, Ste93b]. URV [SV00]. UTV [Fos03]. φ [GG14, KO14]. W [FHI15]. X [Cap00, DHZ03]. $Y(k) = A(k)Y(k-1)$ [Art96]. Z [BG19b, CNG23, MN97]. ZME [Stu88, Stu89].

-Accurate [JC22b]. **-Algorithm** [Van11]. **-Arnoldi** [Ste10b]. **-based** [JMW96, DV08a, SB05]. **-Bernstein** [DP15]. **-by-** [EK96, FFH+19]. **-Circulant** [LW20b]. **-Circulants** [NSCS10]. **-Conjugate** [Tre05]. **-cube** [JH88]. **-Cyclic** [Nou96]. **-Decompositions** [GED22]. **-Divergences** [LGI21]. **-Eigenpairs** [CNG23]. **-Eigenvalues** [NQB14]. **-Eigenvectors** [BG19b]. **-Even** [BFS21]. **-flow** [Lag91]. **-Functions** [GG14]. **-Group** [BT06]. **-invariant** [LT89]. **-Like** [AG92, GIMT95]. **-Linear** [EHvP04]. **-Matrices** [MSZ03, Stu91, SB01, Zha04, BY88, BH96, KN89, RR96, Stu89, AH07, BMV18, Bor09, DMS09, DMS12, DMS13, Guo01b, HHH12, LZ97, MNST96, MN97, MP95b, Peñ01, SWYM96, YL00, Yas03, JS07, Stu88]. **-Matricity** [GG13]. **-Matrix** [KN91, CLS88, HLT12, KN98, PYHK93, Sta22, Ven93, gWcWL12, Xue96, LG06]. **-Model** [BB12]. **-Norm** [BZ98, FKLR13, Hal20, HT00, LT09, Pai09, TT14, ABMV20, FSV14]. **-Norms** [HO10, ABM+17]. **-Optimal** [KMS01, KMS03, ASvG17, VGA10]. **-Parameter** [Uhl20]. **-Person** [Mar91]. **-Primitive** [Pro13]. **-Product** [ZR95]. **-Quasi-Optimal** [BGG18]. **-Radius** [Mor22]. **-Rank** [BSU15, KM16, SMBJS13]. **-Regular** [Cao00a, Cao00b]. **-Relative** [Bar00b]. **-Selfadjoint** [KL98b]. **-Similarity** [CG15a]. **-Skew** [Tre05]. **-Spectral** [CP17, RS18]. **-Stability** [OP05].

-Step [CD14, CD15, Car18, Sor92]. **-Symmetric** [Tre05]. **-Tensors** [CO12, ZQZ14]. **-Toeplitz** [NSCS10]. **-Type** [BBD11, WL12]. **-Unitary** [AYLR04, KL98b]. **-Values** [Kar11a]. **-variate** [GSCS15]. **-Vectors** [Pai09]. **-widths** [FMSS21].

1-Type [LLZ23]. **10** [HC89b]. **13** [CH93a]. **15** [Zha95]. **15023** [GI97]. **15th** [Mol92]. **17** [GI97, Ikr97].

27 [WW08]. **2D** [FV98].

32 [Ano11].

70th [GKRV90].

90a [HC89b]. **93a** [CH93a]. **95d** [Zha95]. **96m** [GI97]. **97g** [Ikr97].

Aberth [BGT05b]. **ABLE** [BDY99]. **Abscissa** [BM19, FL99, GO11, HGC00, KV14, LV17]. **Absolute** [CO99, EI98, Hla23, MSZ21]. **Absorption** [SdJL$^+$18]. **Accelerate** [RCH08]. **Accelerated** [AGQS22, LGC$^+$14, TP14]. **Accelerating** [BJM05, WZ17]. **Acceleration** [BRZ06, DH22, ENV92, KLV18, PS08, SK16, AdHN88]. **Accuracy** [CD14, CD15, CHKL01, CYA$^+$18, DMM03, GKX94, GJTP12, Gre97, GS00b, Hal22, JR08, LM18, Mat09, Pai19, Par05, HL06]. **Accurate** [AGL98, Bar02, BPE94, BV01, CGCDM13, DP15, DK88, DV92b, Dem99, DK05, DM04, DK06, DJ00, Drm00a, DV08c, DV08d, EKNX93, HB12, Hey95, Hua21, Ips06, Ips09, JC22b, Koe05, Koe07, Mas94, Mat95a, Ogi10, PM06, Ral09, SCBC21, SGX14, STT17]. **Accurately** [Fer98]. **Acquired** [OS10]. **Active** [HIS18, KP08]. **Acyclic** [CP20]. **Adaptive** [BDY99, Bar08, Car18, Dan91, DSZ14, DWWY20, GMMN21, HMWY18, KM14, Lu10, LE02, PJM23, PP92, SB92, ZPW18, Cri88]. **Adaptivity** [HS23]. **Addendum** [GI97, Ste02]. **Addition** [BT13]. **Additive** [BPS05, BW93, FS97, Zab91]. **Additivity** [BPR20, HS98]. **ADI** [CR96]. **Adjacency** [FST$^+$13]. **Adjacency-Spectral** [FST$^+$13]. **Adjoint** [Cao09, LP01, Lie08, MSZ20, Rod05, ZAK13, BP21, vdMS05]. **Adjustment** [BX05]. **Adjustments** [BG19a]. **Admissible** [KS20]. **AE}** [Pop12]. **Affine** [AGQS22, BW95, CS96c, Fay95, Gow90, Gow96, LWY19]. **Affine-Scaling** [Fay95]. **After** [BR22, Far16]. **Again** [Mac95]. **Agents** [DS23]. **Agglomerative** [IO16]. **Aggregation** [DWWY20, Not06, Pul13, SST05, HJ89]. **Aggregation-Based** [Not06, SST05]. **Aggressive** [BBM02b, KK07, Kre08, NAY12, SCMV21]. **Aggressively** [SGX14]. **Ahead** [GR00, SK95, CH92, CH93a]. **AIMD** [WSSL06]. **Algebra** [BDHS11, BSvdD95, BF93, BFP95, BCGG10, CFL17, De 06, DD98, DD99, MG92, MMW18, NV94, Rau02a, Rau02b, PS22]. **Algebraic** [BIP08, Bol90, BM02, BW99, CL17, CCB$^+$20, CKO$^+$22, CT08, DYH06, DG91b, DG91c, DLMT13, EZ95, EK17, FL02, FT14, FV98, FS97, GHR21, GGV05, dMGF14, Guo98, GL00b, GL00a, Guo01b, GH07b, GIM08, Hoo17, JL98, JOAKt10, Kap90, KP99, KM96, LwCKL13, LS17, LgS02, LX12, Lu05, MOR16, Neu00, Not06, Not16, PAP00, PS05, Pul13, SKP11, Sim16, gS98b, Sun04, VF00, VZ06, gWcWL12, XLS16, Zim17, CRR93, San88, Sch95a]. **Algebraically** [RW01]. **Algebras** [BD95, CO99, Di 09, Di 00, KHH04, MMT08, Tam99]. **Algorithm** [ALAK94, AA94, AMMS08, AMH10, ADD96, AM23, Arg15, AB01, BOCL97, BES05, BLW15, BEG$^+$09, BFS21, BP92, Bor14,

BBM02a, BBM02b, BG06b, BMU94, BKK18, CM93, CCB+20, CKO+22, Cav94, CI95a, CS96b, CGS98, CGGS99, Cha00, CGS+08, CH98, CCG+09, COV14, CG15a, CHMW20, CB00, DBW15, DW06, DH03, DDN20, Day97, DV07, DGL99, DMM03, DV08c, DV08d, EEK99, FHI15, FH19, FLM10, FLM12, FM93b, Fuh07, GVK20, GNS18, GHW99, GNP94, GHHW90, GDX11, GPS90, GLS94, GE94, GE95a, GGbCC03, GO06, GOS15, Guo02, Guo03, GIM08, GHT10, GL10, HN90, HO94, HB12, HW98, HMR01, HR95, HT00, HL11, HL13, HL21, HG14, IM13, IK06, IAV13, IM16, IO16, JR99, JS94, KK07, Kau93, KKSZ22, KL98a, KHH04, Kni08, KRU14, Kre08, KW94, LH22].
Algorithm [LHC16, LGC+14, LH05, LZ10, MM11, MM23, Mar11b, MLV00, MTV10, Mel01, MM09, MVV92, NRT92b, OW96, OYBV19, OYV22, OA23, PYHK93, Par99, PCK22, PO03, QXX14, RD95, RST10, RS08, SK95, Sen98, SdJL+18, Sha23a, SB05, Sle09, Smi03, ST01, Spe98, Ste01, Ste02, Ste05, Ste06, Tas15a, Tur03, Usc12, VZ91, Van11, VW12, Ven93, WZ91, gWcWL12, Wat95, Wat00, WL12, XBC22, XK94, Xu20, YP98, Yal00, ZS14, Zha17, ZBJ15, Zhl12, ZZ98b, ZS07, Zim17, Bar89, CJL96b, CH92, CH93a, CM89, CM92b, DY90, Fuh88, GIMT95, GE95b, MT89, Qia88]. **Algorithmic** [BG19a, BBGL92, EL08, GG13].
Algorithms [ADGH18, AMHL22, AG91b, AH16, AG92, AD98, Auc91, Bar19, BM00, BBV19, BM19, Bér09, BEGG07, BJMS17, BG13, CE02, CG03b, CDG+05, CD13, CZ02, CB90, DN08, DHST05, DGGG22, DM04, Drm00a, DK99, DK01, EAS98, FH18, Gem98, GK15, GKX94, GQ14, GR17b, GPTPV16, Gu98b, Gu98c, GCC18, GO11, Gup02, Gut92, Gut94, HM89, HR04, Hig90b, HLQ09, JH88, KW92, LUC18, LUC23, LWY19, LX06, Lu95, LV17, MV14, Meh04, Meh08, MP12, MP91, MSKC21, MMH94, Nec19, NS94, NY95, Ost10, PM06, PL18, PTC13, PGVR98, RG05, RT20, Saa06, SKP11, SDD15, ST14, Swe93, TYUC17, Vav94, VS14, WE91, Wat93, WE94, Wat98, Wat92a, WZL21, XX16, Xia12, Xu98, Yan98, YGL18, ZZS02, ZFW07, ZLN10, ZGP10, BBDS95, BDV89, KP92, Pan91, Pea88].
algorithms [SB88]. **All-at-Once** [LW20b, WZZ22]. **Allow** [KOSvdD07]. **Almost** [GP06, Yal00, HD97]. **almost-diagonal** [HD97]. **Along** [Ste21]. **Alternating** [BST16, CLL20, DN08, De 18, GHHW90, HXY11, KP08, STT17, Usc12, gWcWL12, WC14, WCY15, Yan20, ZN21, CSEP21]. **Alternating-directional** [gWcWL12]. **Alternative** [BES05, BE10]. **AMG** [HV19]. **Among** [BHH+08, Mat05, GPTPV16]. **Anal** [Ano11, CH93a, GI97, HC89b, WW08, Zha95]. **Anal.** [Ikr97]. **Analog** [HM90]. **analogue** [CH88]. **Analyses** [CPS97, CP98, PGVR98]. **Analysis** [Afs08, AA19, AB01, AKP08, AMR+18, BD22, Bar93a, Bar19, BH90, BH93, BGSC07, BvdG11, BDFF22, BC10, BCW12, CKL21, CG03a, CI95a, CGP09, Che01a, CL09, CLN12, CD17, CCG+09, CGH11, CS10b, CH23b, DHT01, DH22, DGR23, DSSC11, DJR+18, DMW23, EZ95, EK17, FT14, Fie96, FC01, FSS21, GSCS15, GP97, GA18, Gil13, GS06, GGV05, GS10b, GED22, Gow96, GHN18, Gul95, Guo02, HHRV99, HJOvdD93, He21, HL23, Hig90b, HHC03, HC15, HK12, HKBM08, IK06, IZ20, IS07, IO16, JJ03, Jia22b, Kåg94, KS03, KN09, KPC94, KMP01, KMN11, LVV16, Lew96, Lew99, LgS02, LX06, LSB16, LS95, LT94b, MOR16, MT15, MF20, MM09, MS03, Nap13, NOZ11, NZ16, Not03, Not14, PP05a, PP05b, PAH17, Pet21, Pul13, QCT16, RRR06, RST10, Saa97, Saa16].
Analysis [SS19, Sai19, SST06, Sim16, SH23, Ste05, Ste06, Ste11b, Sun95a, Sun96, Sun04, VV88, VV89, Wat92a, Wei92, Wel11, WL12, WZZ22, XE10, YC97, YLA97, Zha93a, ZZ01, ZZS02, ZLN10, CM89, CM92b, DB88,

HC89a, HC89b]. **Analytic** [AHH01, CR10, He99, LMZ03, LLZ23, Wil08]. **Analytical** [WCB22, XZ22, YXY20]. **Analyticity** [QCT15, QCT16]. **Analyzing** [CYA+18, DS23]. **Anderson** [DH22]. **Ando** [Zha04]. **angle** [Sal88]. **Angles** [BL91, CS96a, Drm00b, KA07, MSZ21, Sai19, ZQ10]. **Anisotropic** [BGK+18]. **Anti** [FMRR13, Ver96]. **Anti-Causal** [Ver96]. **Anti-Gauss** [FMRR13]. **antiferromagnetic** [CRR93]. **Antinorms** [GZ15]. **Antireflective** [BDSC11]. **Antisymmetric** [KK17]. **Antitriangular** [CLN12, MV13, PW14b]. **Any** [AKP08, BGK+18, CT99, GPS96, Pai09, TM12]. **Apart** [Rum15]. **Apocalypse** [OA23]. **Apocalypse-Free** [OA23]. **Appearing** [LW05]. **Appl** [Ano11, CH93a, GI97, HC89b, Ikr97, WW08, Zha95]. **Application** [AGQS22, AMH09, AH14, BG15, Bez12, BM01, CR96, CS01, CS10b, FMRR13, GPM03, GS06, GP16, HM04a, HR00, HT00, HIS18, HHLW13, Ian09, KS03, KMS01, KMS03, Li99, LF02b, LY03, LV10, LK95, Mai99, Mat97a, MS10, MSS19, PAP00, PL14, RBB90, Rie92, STvDD17, SWYM96, Sid95, SEM13, SS17, Sor92, SD19, TFL11, WA07, JN89, MP88]. **Applications** [AJRS13, Alt13, AG88b, Arg15, AD21, ANT19, AL98a, AB13, BO96, Bar93b, BBTT06, BSZ20, BKS08, BLO03, BBM21, BCGG10, Cap00, CCJ+00, Che98, CCZ97, CDH12, DCM08, DG91a, DJ09, EGK91, EJK09, FPST13, FFH+19, FNS08, GLS12, GMN18, GL21, GHN18, HN90, IUM14, JJ03, JW11, JKN11, KBHH13, Kni08, KA10, KH13, KS12, LLZ09, LZ05a, Lim07, LLZ23, Mat93b, Mat96, NP99, Peñ01, PGVR98, RN18, RE13, Saa06, SZ07, SA22, SB01, TL06, TH01, Tsu93, WCW10, WZL21, XPL+18, ZQZ14, ZZLY02, ZR95, ZPW18, Fuh88, GBCW89, KN94]. **Applied** [DFT92, EN08, MR97, RSS09, Wal03]. **Applying** [DS23]. **Approach** [BE07, BL94, Bor09, Bos21, BET02, BEGM05, CSX15, CL17, CG03a, CH06, Cle00, CF00, Dax08, DG91b, DG91c, DEG+99, DRV21, EEK97, EEK99, EJ23, FL18, Fri05, GL99, GHR21, GRT07, GT02, HPZ23, IUM14, IM16, KO05, KB90, KN09, Mal04, Mim00, Moa05, MS18, NNT17, Neu00, PAP00, Pil94, PR12, PS22, PJB10, SD19, TETA05, VF00, VGV09, VV10, WE90, WZ23, vdWM95, BV88]. **Approaches** [MHG17]. **Approximability** [HHSW97]. **Approximants** [BL94, CM93, Hig01, Bas89]. **Approximate** [ADD96, Beb06, BM02, BS02a, BS02b, BAMC20, Che01a, Dav08, FMFJ18, GRK17, GHL03, HO10, HM97, IKSG10, JC22b, JT98, Joh08, LC16, LUC23, LBL05, MS03, Pha01, SEM13, Ste23, gS96, Tan99, TW00, TP14, XG10, vD99, KY93]. **Approximately** [GN13]. **Approximates** [BHS23]. **Approximating** [CHKL01, DPP13, GGMO17, PS08, VV15]. **Approximation** [AKU20, Arg15, AK90, AR93, Asw16, Bai05, BG15, BRZ06, BV95, CNX22, Cap98, CS09, CRY+21, CGMM22, CGMM23, Chu91, CG98b, CP03c, CDLP05, CK20, DDV00b, DGR23, DP00, DHM19, DIKMI18, DK98, DWWY20, DL17b, ES09, ES11, ED22, ED23, FZ16, FSS21, GMN18, GG11, GG14, GCC18, GC19, GO11, GGO13, GN16, HK08, Hal22, HPS13, HPZ23, HI15, HGL05, HT17, HV19, IAVD11, IAV13, IUM14, JK15, KN00, KS15, KL07, KL10, KR02, Kol03, KO15, KJH16, KK17, Lás94, LNSU18, LFW13, LV10, Lu98b, LRSV13, Mac99, MU13, Mat93a, Mor22, MBM08, NP23, NS11, Ose10, OSS14, PK23, Qi11, Rei91, Reu02, RHE14, RS21, SD16, SS10, SDN21, Ste08, SH93, Tan94, TYUC17, Usc12, WC14, WCY15, WS12, Yan20, YGL18, ZMK02, ZG01, ZLQ12, ZXL14, Zie95]. **Approximation** [dSL08, vdV96]. **Approximations** [BYDW18, BN05, BD09, CCB+20, CG03a, CWY20, Dax08, DMR09,

DI19, FMSS21, FT07, FKLR13, GR93, GLV10, GHR95, GS23, HS23, HB12, HST19, JKN11, KS22b, LT09, MHG15, NNP04, NW14, Nie17, NST15, RP10, Sid95, Ste13, STT17, XC18, ZZS02, ZZS04]. **Arbitrarily** [Rum15, Rum91]. **Arbitrary** [AMHL22, BMOvdD04, DQV22a, FH19, FGK+22, LH22, Mas95, MBO97, PK93, PK94, SZH22]. **Arc** [GHT10]. **architectures** [JH88, JP94]. **Arising** [BM96, BMM20, BM06, CGS94, DS16, ES08, GMPS92, GTI11, GV99, GdlI08, GKL12, HV05, HLQ09, HKBM08, lLNS17, LX12, Lu05, MP11, Vog99, FGS96]. **Arithmetic** [AS93, BD93, CR16, DJ00, HK95, JR13, JMPR19, LEMCD19, Tis01a]. **Arithmetic-Geometric** [BD93]. **ARkNLS** [CSEP21]. **ARMA** [SH91b]. **Arnoldi** [AM23, BS05, BR08, BMV18, CKR05, CZ02, EG20, Emb09, FS10, FGS14b, HKV05, Huc94, JMM14, KO14, KS20, LS96, Leh01, LSB16, MR97, Mee09, Mor00, Nov11, RST01, Sor92, Ste10b, TM12, XE12, ZH17]. **Array** [MVV93, Rau02a, Rau02b, YB91]. **Arrays** [Cho10, GMBS12, LRA93, OST08, Ste08, SD09]. **Arrival** [Par94]. **Arrow** [AG92]. **Arrowhead** [BESS22]. **Aspect** [ZZTA02]. **Aspects** [Bos21, EL08, LPT10]. **Assignment** [AD98, BMU94, FP98, GP97, Mim00, NK01, Sun96, Zab91, CM89, CM92b, Zab89]. **Associated** [BD95, CFG98, DMS13, JZ99, Kir95, Li93, MMT08, CRR93, Tre88b, WE89]. **Astronomical** [BN06a]. **Asymptotic** [DH22, HDSC23, MP21, Meh08, MT00, Naj98, NSCS10, OYBV19, Ser98, SM16, Sta22]. **Asymptotically** [Li06]. **Asymptotics** [BSU15]. **Asynchronous** [ADLK01, ADV05, DGL99, SB01]. **Attainable** [CD14, CYA+18, Gre97, JR08, KS20, Lás94]. **Attempt** [OA23]. **Attention** [IS08]. **Augmentation** [SHZ12]. **Augmented** [CFT16, EG00, GGLN13, Gut14, LW20a, Mas16, Mor95, PAP00, Pai10, Saa97, WZ17, Wri97]. **Augmenting** [Rie92]. **Autocovariance** [Elt92]. **Automata** [GGJ18, GDF01]. **Automated** [EV06]. **Automorphisms** [IZ04]. **Available** [Lee96]. **Average** [TS90]. **Average-Case** [TS90]. **Averaging** [Moa02]. **Avoid** [SD09]. **Avoiding** [BBD+14, DGGX15, KDGG13, PMT23]. **Aware** [CH23a]. **axis** [Sch95a].

Back [IT06]. **Backtrack** [AHN21]. **Backtrack-Downweighted** [AHN21]. **Backward** [AA09, Ari00, AB01, AMVW15, AMR+18, Bor10, BKMS14, BKMS15, BX08, CGP09, CL09, CB00, CM89, CM92b, CH99, DM04, EGTP17, GNS18, GA18, GJTP12, Gu98a, Gul95, HG18, HH92, HH98, HLT08, JTP10, KZ10, LC15a, LVV16, MV21, NH12, PRS06, RJ14, Rum15, gSS97, gS98a, gS00a, Sun04, Tis03, Var94, XW07, ZS14, ADD89]. **Bad** [Pan16]. **Balance** [NW02]. **Balanced** [AK90, BMMT10, CFL07, DRV21, HMP94, HPTH19, PR88]. **Balancing** [EN08, KKS97, LV06]. **Band** [AG91b, BGKS99, CD98, HPS15, Nab99, NV02, ZZTA02]. **Banded** [BS15, BM99, CG03b, CKM22, DK08a, GLS12, HB94, IT06, JP93, Kau93, KS17, TS99]. **Bandwidth** [RS06]. **Banks** [CMPX03, HM04a, Jia01]. **Barabanov** [GZ15, Mor12]. **Bareiss** [BBDS95]. **Barycentric** [Law13]. **Based** [AT07, AG19, ABC+23, AR93, Bar08, BBV19, BB12, Bér09, BDG15, BDFF22, BK95, Bor09, BCMM95, BKK18, CKR05, CCJ+00, CGMM22, CH98, DV08a, DRV21, FGS14b, GIG22, GCC18, GR00, GZ13, HNRS22, HT17, HJP03, IAVD11, KO05, KS22a, KP08, LK22, Li16, LUC23, MMD08, MJM11, Mit21, Not06, Pul13, RSH21, SZ99, Sai16, SST05, SKP11, Sch23, SB05, TMNV10, ZYSY20, HK12, JMW96, MF20, PS22]. **Bases** [ABM21, BDD14, BdTD11, EM10,

LP17, MP12, NS94, RVV17, SV93, vdMS05]. **Basic** [DG91b, DD13a, Fer97, LF02b, MLV00, ZZS02]. **Basis** [BFP95, EZ95, EMC17, Le 19, SS17, SB95, WLD18, WLMD19]. **Basis-Kernel** [SB95]. **Bauer** [wC03]. **Bayesian** [BDR12]. **be** [Hu92, Rum15]. **Behavior** [BK15, BLO07, KS20, Naj98, Rog05, Tam97, TM12, GS92, Sun89]. **Behaviour** [Drm96]. **Being** [Mas94]. **Bellman** [AB19b]. **Benford** [BHKR11]. **Bernstein** [AK20, AK21, DP10, DP15]. **Best** [AKU20, DDV00b, DHM19, ES09, ES11, ED22, ED23, Fei94, FMSS21, GH92, GCC18, HST19, IAVD11, IAV13, JK15, KR02, Lás94, Lee96, LNSU18, LBL05, LT09, NW14, Qi11, RHE14, SS10, ZLQ12, dSL08]. **Beta** [DK08b]. **Between** [CHLW23, CG96, FNV08, KA07, Peñ98, Xu98, ANT19, BS02b, CG92, CF02, De 06, Drm00b, FN04, Lim13, PP05b, RST18, TP23, XPL$^+$18, YL16]. **Beyond** [CG19]. **Bézier** [Bez12, Fie95]. **Bezoutian** [HH93]. **BiCG** [ASvG17, Gut14, Sim97]. **BiCircle** [GW07]. **Bidiagonal** [Bar02, Fer98, GL05, GE95a, JOvdD01, JOvdD04, LGC$^+$14, Par05, WLV06]. **Bidiagonalization** [Ari13, Bjö14, BB07, CGHR07, Hal22, HPS15, JN03, JL23, Sut12]. **Bidirectional** [Wat93]. **Bifurcation** [Bea01]. **Bifurcations** [MS10]. **Bilinear** [BB12, BGG18, Cao09, Cor93, FG15, LSM22, RODS15]. **BiLQ** [MO20]. **BILUTM** [SZ99]. **Binary** [MP11]. **Biorthogonal** [Sta02]. **Bipartite** [FL02]. **Biproportion** [de 94a]. **Birkhoff** [CLN14]. **Birth** [Cla10, DQ02, GdlI08, Guo02, Guo03, HMR01]. **Birthday** [GKRV90, Mol92]. **Bisection** [AL98a, Ji92]. **Bits** [INRZ21]. **Bivariate** [MR22, NNT17]. **Björck** [BEG$^+$09]. **Black** [AV91, MH95]. **Blind** [De 11, GL21, GED22, PO03]. **Block** [AGJ14, AIM22, ABM21, AL95, BDY99, Bar19, BBT05, BEBT07, BOS16, BD98b, BDFF22, Bom00, BB07, BCN95, CSX15, CL17, CLR21, CE02, CNW08, CGS94, CD98, De 08a, De 08b, DN08, Dem23, DRSZ07, DK15, DIKMI18, Drm10, DJR$^+$18, EP94, EG20, EG15, FMRR13, FH17, FFH$^+$19, FP98, FST$^+$13, FLS20, GLS12, Gar90, GL03, GJX22, GGV05, Gov91a, GV99, GLS94, GHL03, Hal22, Har07, HLW05, HT00, HG14, HO92, HK12, HC89a, HC89b, IIM94, JMPR19, JV16, KN00, KMP01, KS20, LM02, LUC23, LW20b, MM11, MVP05, MR22, Mas16, Meu92, MT00, MN97, Nec19, NY95, Not14, OW96, OYBV19, OYV22, PJM23, Pea88, Pes14, RV12, Rog05, SZ99, SK95, Ser98, SHZ12, Sim97, SSR20, Ste12, TW03, VKDD21, Wan98b, WLMD19, Wel11, ZŠ94, KP92, SS89]. **Block** [ES92, KC94]. **Block-Circulant** [BDFF22]. **Block-Diagonal** [BOS16]. **Block-Diagonalization** [MM11]. **Block-GTH** [OW96]. **Block-Iterative** [CE02]. **Block-Jacobi** [Dem23, OYBV19, OYV22]. **Block-LU** [ES92]. **Block-Monotone** [Mas16]. **Block-Oriented** [Har07]. **Block-Parallel** [ZŠ94]. **Block-Schur** [KMP01]. **Block-sequential** [Pea88]. **Block-Similarity** [FP98]. **Block-Toeplitz** [BDFF22, CNW08, JV16, MVP05, KC94]. **Block-Toeplitz/Hankel** [MVP05]. **Block-Triangularizations** [IIM94]. **Block-Tridiagonal** [HO92]. **Block-Tridiagonality** [Bom00]. **Blocking** [PFRR17]. **Blocks** [BV90, CDGS10, CNW08, GS10b, JV16, RST18, SŠ91]. **Blockwise** [XG98]. **BLR** [ABM21]. **Blurring** [RHE14]. **Boolean** [DD99, Jia98, JH88]. **Bootstrap** [BC22]. **Border** [BDD14, CGMZ21]. **Bordered** [Gov91a]. **Bordering** [BMRZ94]. **Bottom** [PS94, RE98]. **Bottom-Up** [PS94, RE98]. **Bound** [BT92, DDY14a, DT11, EV06, FG94, Gow96, GW22, HIS18, KK14, Lás94, Lat95b, Lee95, Li99, LW05, Mat97a, RST18, SST05, Vec03, WLB05, PS88]. **Boundary**

[ASA04, ABN09, BDSC11, BL10, Che01a, JLS01, LY91, MMN22, MS99, NNP04, Vav92, VH16, JN89]. **Boundary-Layer** [MMN22]. **Bounded** [ABK+11, BE07, CGGS98, CGGS99, CGSS01, Cor93, De 18, DDD20, GGMO17, GR97, KO18, Kni00, Wat01, Yan93]. **Bounded-Input** [Cor93]. **Bounded-Input/Bounded-State** [Cor93]. **Bounded-Rank** [KO18]. **Bounded-Realness** [ABK+11]. **Bounded-State** [Cor93]. **Bounding** [DS97, FB95, Hig90a]. **Bounds** [AMPV97, AKPP08, AR93, Axe92, AW05, BT10a, Bar93b, BS15, BMF05, BH90, BSU15, CS10a, COP20, CGMM22, DS20a, DH93, DH97, EI98, EOS19a, FKLR13, GTP18, Gu98a, Hal20, HS16, HDT10, HI15, IR08, IN09, JR13, JN93, Kit95, KA10, Kre05, KW94, Lee96, Li93, Li95, LS03, Li05, Li06, LS07, Li16, Lie00, LZ05b, Liu12, LR99, LPT10, MSZ20, Mas16, Mat93c, Mat97b, Mat98, Mel99, Mön11, Nab00, RBB90, RK95, Rum97, Rum12, RJ14, Rum22, Sch23, SWYM96, Sou19, Ste91b, Sun95b, gS96, gSS97, gS98a, TVW15, Tru06, Wal03, WY17, WD00, Ye09, ZAK13, ZK17, vDHvdV00]. **Box** [AV91, MH95]. **BP** [Hua21]. **Bramble** [FAT16, SW08]. **Breakdown** [RY05]. **Breakdown-free** [RY05]. **Breakdowns** [AGJ14]. **Bregman** [DT08]. **Brent** [YB91]. **Bruhat** [OOvdD98]. **Brunovsky** [FGP00]. **Bulge** [WE94, Wat98]. **Bulge-Chasing** [WE94]. **Bulges** [Van11]. **Bunch** [DT11, JP93]. **Bures** [TP23]. **Butterfly** [PMT23]. **Byers** [CT15, KZ10].

C [Joh96, Zha95, LW05]. **C-Numerical** [LW05]. **Calculating** [FSV14]. **Calculation** [CGV03, Mön11]. **Calculations** [MMH94, SY98]. **Calculus** [DK13, EDK16, Rau02a, Rau02b]. **Calibrating** [GS10a]. **CALU** [GDX11]. **Can** [Emb09, Fos94, HGC00, HSC04, Rum15]. **CANDECOMP** [GMBS12, PTC13, dMGF14, Ste08, SD09, Ste12]. **CANDECOMP/PARAFAC** [GMBS12, PTC13, dMGF14, Ste08, SD09, Ste12]. **Canonical** [BDD14, DDV04, De 06, DJK17, DD13a, DD13b, DD14, DL15, DS18, ED22, EVD22, GZ15, HMT10, IT11, Sai19, SC05, SDC+12, SD15a, SDD15, SD15b, SD19, Ste11a, SL12, Ste13, Ste16a, Usc12, VD21, WCW10, ZQ10, Zim17, de 90, Hon89, WW08]. **Capizzano** [WW08]. **Carlo** [HIS23]. **Carlson** [CF00]. **Cartan** [Tam99]. **Cartesian** [HR95]. **cascade** [GKR89]. **Case** [CCG+09, DS19, FLT13, FFH+19, KK93a, LMZ03, NK01, SCBG05, Sta02, TS90, CM92b, MH95, Tis93]. **Cases** [BJ16, Fei94, So92, Zha04, BHH88]. **Cauchy** [HM90, Kil99, Rod06]. **Cauchy-Like** [Rod06, Kil99]. **Causal** [Ver96]. **Cayley** [LM98a]. **Center** [BE07]. **Centered** [GKL18]. **Centering** [Rie92]. **Central** [BD15]. **Centrality** [ABC+23, BK15, DS23, GHN18, PAH17]. **Centro** [HBW90a]. **Centro-Hermitian** [HBW90a]. **Centroid** [CF02]. **Centrosymmetric** [Bai05, TY02, Yas03]. **Certain** [ADC04, BD95, Dan93, HKG09, HLT91, IZ04, KS08, MP21, OS10, Wil08]. **Certificates** [EMC17, Mit21]. **CG** [EOS19a, NY95]. **Chain** [Bar00a, BF11, ES08, Hey95, HO98, Mat96, Mey94, OW96, ST01]. **Chain-Random** [ES08]. **Chained** [AB19b]. **Chains** [Bar93b, BHKR11, Bor09, BPS05, Buc00, BrD07, DS97, DA05, DR93, DWWY20, EHW10, IM94, Kir02, LM06a, Liu12, LLZ23, Mas16, O'C02, TVW15, XG98, Zha93b, CRR93]. **Chan** [JWX03, KO05]. **Change** [BR22, BI99, DD16]. **Change-of-Variables** [BI99]. **Changes** [AKPP08, KA07]. **Channels** [BBM21]. **Characteristic** [BDF17, FIS01, GPPT23, IR08, RI11, Xu15].

Characteristics [BR22, PJB10]. **Characterization** [BG19a, BZ00, CGH11, FV98, GG13, LF02a, MG10, TY02, Tre05, Wei96]. **Characterizations** [CGRVC08, CT08, CHW10, CH94, GP06, Yas03]. **Characterizing** [CPTP09a, JLZ16]. **Chart** [BGBM92, Tis03]. **Chasing** [Van11, WE91, Wat93, WE94, Xu20]. **Chebyshev** [AKU20, BE07, CR21, FLT10, GRT07, Koh99, LP17, Lu98a, MV88, NP16, TT98, ZS07]. **Checkable** [LQ16]. **Checking** [JR99]. **Cheeger** [BSS13, Wal03]. **Cheeger-Type** [Wal03]. **Chemical** [KS15]. **Choice** [MH13a]. **Choleski** [BCMM95]. **Cholesky** [AM09, BOCL97, BK89, Bér09, CP98, CH98, DHT01, DH99, DH01, DH05, DK00, DN11, DOV94, GNP94, GSS96, GMRS00, LGWX12, LC05, Lin19, LMC22, LN14, Nap13, NR99, RODS15, RJ14, Ste93a, Sun95a, XG10]. **Cholesky-Like** [RODS15]. **Choosing** [Dan93, KO01, MX98]. **Chordal** [XPL+18]. **Circle** [Guo98]. **Circuit** [CKO+22, SWYM96]. **Circulant** [AG91a, BBT05, BEBT07, BDFF22, CT99, Cha89, CNP94, CCZ97, CP03c, dMGF14, Huc92, LW20b, Mat93b, Tyr92]. **Circulant-Like** [CT99]. **Circulants** [NSCS10]. **Circular** [PSW22, Yal00]. **Circulative** [Che92]. **Class** [AG19, AM23, AKP08, Bor10, BG06a, BrD07, CGRVC08, DMS13, DS16, ESR01, EL91, FP98, Fie95, GL00b, HHSW97, HLM23, LX09, LM90, LMPT20, Loe90, LW94, MSZ03, Peñ01, Pil94, WCB22, YGM09, IM95, PR88, Rum91]. **Classes** [HMT93, Hla23, JOvdD03, Kar11a, HS88]. **Classical** [CLR21, HPS+11, Tam99]. **Classification** [GKK99, HPS+11, Pro13]. **Classifications** [HRS88]. **Classified** [KNX04]. **Close** [AD98, HGC00]. **Closed** [Guo98, RW01]. **Closed-Loop** [Guo98]. **Closest** [CP20, GP18, NP20]. **Closure** [DK14]. **Cluster** [SCBG05]. **Clustered** [BDGY20, HJP03, SD16, Wül05]. **Clustering** [MW12, OS10, Van08]. **CMV** [BDG15]. **CMV-Based** [BDG15]. **Co** [JN89]. **Co-square** [JN89]. **Coalescing** [DP09, DPP13, Uhl20]. **Coarse** [AG19, HV19]. **Coarsening** [BHS23]. **Coefficient** [Art03, BZ00, SEM13]. **Coefficients** [AG00, BES15, Beb06, CR10, Elt92, GKX94, Gre99, IS11, JV04, LS95, Mal06, Mat05, MMW22, Meu17]. **Coherence** [IW14]. **Coherent** [LW05]. **Collection** [CCS05]. **Collinearity** [FB94]. **Collocation** [DP10, DP15, HHRV99, LHHR95]. **Coloring** [MSZ15]. **Column** [CK20, DGGX15, DS10, GNP94, GG03, MM00, RSS94, ZZ01]. **Column-Partitioned** [ZZ01]. **Columns** [IW14, JNP21, VV89]. **Columnwise** [SDC+12, XBC22]. **Combination** [SW08, All89]. **Combinational** [NS94]. **Combinations** [KO14]. **Combinatorial** [ACST09, IS07]. **Combinatorics** [DS10]. **Combined** [LS07]. **Combining** [GRT07]. **Come** [HGC00]. **Comments** [Guo03, Ikr97, WW08, Zha95]. **Common** [LŠ10, NV23]. **Communicability** [AB16b, Sch23]. **Communication** [BDHS11, BBD+14, DGGX15, GDX11, GMN16, KDGG13, WSSL06]. **Communication-Avoiding** [BBD+14]. **Community** [FKZ23]. **Commutation** [GP03]. **Commutators** [BK97, LŠ10]. **commute** [Stu88]. **Commuting** [Per91]. **Commutors** [CM03]. **Comon** [GOV19, ZHQ16]. **Compact** [Ble21, HK12, KHH04, VMM15]. **Companion** [AMR+18, BDG15, BB98, DDM10, Kit95, Law13]. **Comparison** [DD21, GS21, MS02, TMNV10]. **Compartmental** [BH93, LW02a]. **Complement** [CNW08, ET10, HS95b, KS22a, LZ05b, ZXS21]. **Complement-Based** [KS22a].

Complementarity [Bai99, CH93c, CHLS00, Gow90, GS94, GS02, HLT12, Kan96, MP95a, MN97, MPS98, MM00, MPS00, PYHK93, QL99, Ven93, Pan91, WBP89]. **Complementation** [DV06b, Sen98]. **Complements** [ABN09, CDGS10, FR23]. **Complete** [DD12, FXG18, Fie96, Gou91, GDF01, HV97, Tsa98]. **Completed** [Gut92, Gut94]. **Completely** [Auj00, DS97, LQ16, QXX14, SMBJS13, TDV15]. **Completing** [HMP19]. **Completion** [Asw16, BJL98, BDR12, CSK95, DS10, DS19, DGGG22, Fri02, JR88, Lau00, Næv93, SC10, SD19, ZF14, BJ95]. **Completions** [CD98, Dan93, FR23]. **Complex** [BLAK91, BMV20, CHH$^+$15, COV14, CW96, DZ01, GITT96, GWZ05, GZ09, Har19, Hig92, HG21, HLM94, HV05, JLZ16, JP09, Koh99, LX12, Mar11a, MV07b, RVA05, Tam98, TT99, VNVM14, WD94, YL08, CH88, CM92b, Hon89]. **Complex-Shifted** [HG21]. **Complex-Symmetric** [HV05]. **Complexity** [DYH06, JMPR19, KKS97, LH05, PL18, PTC13, Xia12]. **Complimentarity** [CC92]. **Component** [GED22, MYA19, RST10, Yan98]. **Components** [AR93, BLO04, CI95b, JS04, MTV10, Ste08, SD09, Ste12]. **Componentwise** [CC09, Dem92, EGTP17, GK93, Pet21, RK95, Rum97, Rum03b, Rum15, Zha93a]. **Compositions** [BM01]. **Compressed** [BDG20, HS14, JKN11]. **Compressibility** [ST21]. **Compressible** [BIS12]. **Compression** [BFG23, BB20, CKO$^+$22, Spe98, YXY20]. **Compressions** [FHGJ06, MA99]. **Computable** [GI96, Jia22a, Lie00, GI97]. **Computation** [ASVM04, AMMS08, ABM$^+$17, AT98, ABF16, AMVW15, AMR$^+$18, AABK19, BL13, Bar93b, Bar00a, BL94, BL00, BKS08, BBMX02, BNP22, Bez12, BN10, BL91, BRZ06, BHM97, CJL96a, CJL96b, CR16, CWY20, CDD00, DDV04, Dhi98, DD20, DD21, DJ00, Eff13, EVD22, FH10, GL17, GT08, GC19, HP09, Hey95, HIW15, HI15, Hua21, Ian09, IS08, KS17, KL18, LC16, LB96, Mal06, Mar91, MR97, Mel04, MG10, Ost10, PLM94, RDC93, SC05, SGX14, Sut12, WZ17, WZZH21, Zen16, Fuh88, GBCW89, O'L90, WW08]. **Computational** [DMP96, KBHH13, LPT10, Mei04, Sch23]. **Computationally** [BN05, BMP20, TP22]. **Computations** [DP15, EKNX93, Gil94, GZ13, Hig93, JL23, Koe07, LNP93, LE02, Mat95a, Vog99, WY17, YB91, GS92]. **Compute** [BD98a, Cif21, GNP94, GO06, HMP94, LH22]. **Computed** [Gre97]. **Computers** [BMSV92, NY95]. **Computing** [ABL94, Ain17, AMH09, AMHL22, AH14, BO96, Bar02, BF11, BYDW18, BM19, BG19b, BHR10, BGN12, CI95a, CHZ16, CW96, DH03, DA05, DHW92, ES09, EW13, EM15, EHW10, FI18, FH18, FHL23, Fer97, FH20, GNS18, Gem98, GHHW90, GKX94, GSV00, GL13, GKL14, GOS15, Han03, HY01, Har05, HM20, HW98, HO98, HMMT04, HL21, JWN18, JKM11, JMM14, JS94, JN03, JCG14, KL98a, KM11, KM14, KV14, LW97, LP13, LV17, MV08, Mar11b, MOR04, MV17, MZ19, Mit20, Mit21, NBG10, NH12, NS11, NP20, NS94, PW90, QS06, QACT13, RI11, RK95, RST01, SdJL$^+$18, Smi03, SAGS21, VV10, Wat92b, WD95, WLV06, Xu05, Xue96, Zha17, ZH22, vDHvdV00]. **comrade** [NP16]. **Con** [HB12]. **Con-Eigenvalue** [HB12]. **Concave** [Fou18]. **Concavity** [Gro98, KN94]. **Concentration** [DG19, GVK20, Yse22]. **Concept** [Han94]. **Concerning** [Kir02, Wei95]. **Condensed** [Meh99]. **Condition** [AMH09, AW10, ABG07, ANT19, AW05, BDMS10, BDMS12, BGT14, Bis90, BLP90, BD10, Bor10, BK19, BV18, BK06, CT93, CD05, CC09, CES22, DBW15, DMC13, Dhi98, Drm96, ES05, FH21, GI00, GK93, GKX94, Grc10, GV07, Har05, HH92, HH98,

HR14, HQ16, KKT06, Kar10, KL89, KLR98, Kir02, KPM09, KW94, LX09, Li06, LS11, LW94, LP11, LT94b, Mat95b, Mor12, PP92, RVA05, SST06, SB92, gS00a, Tan94, TT14, Tur97, VT98, ZMW17, Ede88]. **Conditional** [CK00, RR08]. **Conditioned** [AB19a, KRS19, MX98, NV02, PAP00, Zen19, FGS96, Rum91]. **Conditioning** [BG11, BDGY20, Baz00, DP10, DP00, GTPI13, HMT06, HIW15, Mal03, Nap13, SS19, TCTM00]. **Conditions** [BDSC11, BM00, Cor93, DL15, ES11, GMBS12, JLS01, LŠ10, LN22, Mas16, NNP04, Pin19, RR98, ST08, SD15b, Sou19, SdA10, SL12, VH16, ZWF05, Gad88, OW88]. **Cone** [BW95, NW98, SW91]. **Cones** [GL23, Pil94, VF00]. **configured** [JH88]. **Confluent** [Hig90b, Lu94, Lu95, Lu96, Lu98a, ZZ98b]. **Congruence** [BMV20, FJ06, LN22, PR91, Hon89]. **Conic** [PJB10, See11]. **Conical** [BP21]. **Conjecture** [BTV03, CG15b, GKL18, JP09, ZHQ16, FF93]. **Conjugate** [AV91, BM00, BES98, BG06b, CFT16, Car18, CGLV11, CYA+18, DFT92, DQV22b, EG00, FAT16, GRT07, GTPTI14, GMN16, Hal20, HS10, JX20, KL08, LW20a, LH05, Saa06, SH23, Tre05, YBZC16, Zha10b, GS92]. **Conjugate-Gradient** [CFT16]. **Connection** [BSS13, GKR89]. **Connections** [FN04, MBN17, Sid95, SX11]. **Conquer** [AA94, BNP23, CK91, CKM22, FLM12, GE95a, GGbCC03, LGC+14, Sut13, XQ08, GE95b]. **Consecutive** [DD99, EG00]. **Conservation** [CG03a]. **Conservative** [OP05]. **Considerations** [DHW92]. **consimilarity** [CH88]. **Consistency** [Han94, KN89, Peñ95]. **Consistent** [BLL22, BHS23, CKL21, CPTP09a, FST+13, LWWY14, Uhl18, YGM09]. **Consistently** [Har93]. **Constant** [ABC+23, BK19, GHL03, Mit20]. **Constantly** [LW20a]. **Constants** [BT10a, Cro16, Mit21]. **Constrained** [ALP07, AE97, AEGL19, Aru92, BN06a, BMO92, Bar98, BBTT06, BOS16, BKK07, CG10, CJ21, CH99, DS16, FM93a, FT07, GW92, Gul95, Jam92, KP08, LY03, Mar11a, PSW12, SZ07, SS13, SdA10, WD00, ZHY16, FGS96, GL96]. **Constraint** [Bai05, BNW09, Cao02, Dol07, KGW00, Log17, yPWjP12, ZH03]. **Constraint-Style** [Dol07]. **Constraints** [AW00, CG98b, EAS98, GS10a, HS10, LGI21, LMPT20, LJW22, See11, VBW98]. **Constructed** [AG19, Cap98]. **Constructing** [Chu95, DHST05, KU13, LP17]. **Construction** [AG91b, CS10b, GZ15, LHC16, Mae98, Tur03, VF00, XHC21]. **Constructive** [AR93, BLW15]. **containment** [BF89]. **Continuation** [BT10b, CH93c, Kan96, Ple00]. **Continuity** [de 90]. **Continuous** [BET02, BZ00, CH94, WBP89]. **Contour** [LXSdH20, YXC+17]. **Contour-Integral** [YXC+17]. **Contractibility** [AhS98]. **Contraction** [BRR00, CG15a, MV23]. **Contractions** [Næv93, JR88]. **Contribution** [BG11, SC05, WW08]. **Control** [BSZ20, BB12, BOS16, BGG18, BM06, DS16, GPM03, HL23, HS10, HDSC23, LS95, TFL11, Yan93, Cri88, DK88, Meh88]. **Control-Constrained** [DS16]. **Controllability** [Car94, EJK09, JMO93, Tsa98, Wim88b]. **Controlled** [MM11]. **Controlling** [FGM91, HN09]. **Controls** [BF06]. **Convection** [BWQ06, BGSC07, Ern00, LG06, MMN22, RP10, de 92]. **Convection-Diffusion** [BWQ06, BGSC07, Ern00, RP10, de 92]. **Convection-Dominated** [LG06]. **Convenient** [TP22]. **Convergence** [AMMS08, Ano11, ADC04, Bai99, BMfY03, BLL22, BJM05, BER04, BGV10, Ble21, Bor09, BrD07, CKL21, Cao00a, Cao08,

CPZ11, CD17, CLL20, CCG+09, CG15b, DGMR00, DH22, DR93, DIKMI18, Drm10, Elt92, FNS08, FGS14a, GH92, GJX22, GPS96, Guo01a, Guo02, GR97, GP04, Har07, Har19, HKV05, HMT93, IK06, Jia95, JZ99, Kni08, KN09, Kre08, KS20, LWXZ06, LUC23, Lie00, LS04, LX06, LWWY14, MNR15, MS02, Mas95, Meh08, MH15, NOZ11, NZ16, Not03, Not16, Not19, OYBV19, OYV22, RT20, RS08, SS19, SST05, SWZ11, SEM13, Sim00, SH91a, Sou19, SU94, SB01, Usc12, WC14, WCY15, WZ17, Wu17, Wül05, XZ22, XE10, Yan98, YGM09, Yan20, Bas89, KN89, SS89]. **Convergent** [ASVM04, Auc91, CRS99, CRS01, GR17b, LUC18, MV23, QS06, ZZ98a, AdHN88]. **Converges** [Ste21]. **Convex** [BL21, Cif21, FJBd15, FS01, HM04b, Lew96, LP11, Lu20, Pin19, PPLG20]. **Convexity** [BDMS10, BDMS12, BLO07, HS00, KN94, KNX04, LP00, LS11]. **Cooley** [SKP11]. **Coordinate** [BDE+20, LUC23]. **Coordinates** [Mac99]. **Copositivity** [Bom00]. **Coprime** [OV99]. **Core** [Bér09, HPS13, HPS15, HPS16, HPZ23, PS05, Xu20]. **Core-Chasing** [Xu20]. **Correction** [JWN18, LS17, Sta02, ZXS21]. **Corrections** [PL14, XLS16]. **Corrector** [HS23]. **Correlated** [Par94, WA07]. **Correlation** [BHR10, CdS90, HS16, Hol91, LP96, LT94a, QS06, SCPW12, TP22, FF93, GP88]. **Corresponding** [AT98, GR93, QACT13, QCT15]. **Corrupted** [HNRS22]. **Coseparable** [PN23]. **Cosine** [AMHL22, CDD00]. **Cosine-Sine** [CDD00]. **Cost** [RT93]. **Counterexample** [BTV03, HS00, Kol03]. **Counterexamples** [JP09]. **Counting** [DLT15, Fer98]. **Counts** [COP20, GNP94]. **Coupled** [CH97, DK15, LJS19, SŠ91, SD15a, SDD15]. **Coupling** [DS97, FNV08]. **Covariance** [BMfY03, BN06a, BKK07, BX05, CS10b, Fuh07, Lu10, MSM21, RD95, SCA12, Ste91a, TP23, VP93, dBG08]. **Covariance-Preconditioned** [BN06a]. **CP** [BBK18, FZ16, ZN21, ZF14]. **CP-Matrix** [ZF14, FZ16]. **Cramer** [DTGVL05]. **Crawford** [KLV18]. **Crayons** [FGK+22]. **Cream** [SW91]. **Criss** [BM19, LV17]. **Criss-Cross** [BM19, LV17]. **Criteria** [AM09, ADR92, Ari13, AM05, AB16b, CPTP09b, COV17, EL91, BF89]. **Criterion** [AH07, FM93b, Li02, SNC02]. **Critical** [AAB10, BJL98, CCG+09, DLT15, O'N05]. **Cross** [AIM22, BM19, LV17, GBCW89]. **Cross-Interactive** [AIM22]. **cross-validation** [GBCW89]. **Crossing** [Uhl20]. **Crouzeix** [CGL18, CG15b, GKL18, RS18]. **Crystals** [HHLW13]. **CS** [GNS18, Ste16a, Sut12, Sut13]. **Cubature** [Sch95b, Xu15]. **cube** [JH88]. **Cubes** [NS09]. **Cubic** [JLSZ22]. **Cubically** [ASVM04, ZZ98a]. **CUR** [HH21, MMD08]. **Curl** [CHH+15, CZ03, HHLW13]. **Curl-Related** [CZ03]. **Curve** [GPS96, KS12]. **Curves** [Bez12]. **Cutpoint** [KN99]. **Cuts** [GN13]. **Cycle** [Gri88, ADC04]. **Cyclic** [BG94, Drm10, GH92, Ger92, Guo03, Har07, HMR01, Mar91, Nou96, RT99, SS89]. **Cyclically** [GV99].

D [Zha95, SYJ00]. **D.** [Ikr97]. **DAE** [BL02]. **Damped** [Lan07, PTC13, Tas15b, ZL23]. **Damper** [TV09]. **Damping** [Tas15a]. **Dangerous** [HN22]. **Dangling** [IS08]. **Darcy** [FAT16]. **Data** [ADGH18, AM09, AG91b, ADHM19, AKP08, BKKL91, CGGS98, CGP09, CDLP05, EL97, EGK91, GG11, HJP03, IO16, MMD08, MU13, MW12, RK95, SNC02, Wat01, fX96]. **Datasets** [CNX22]. **Davidson** [HP02, HKP05, HN09, Not05, SvdV96, Sta02, SX11, ZS07]. **DCT** [PL18]. **Death** [Cla10, DQ02, GdlI08, Guo02, Guo03, HMR01]. **Deblurring**

[BDSC11, BBTK08, GL21]. **Decay** [BES15, BS15, FSZ14, MNT10, Nab99]. **Decaying** [FSS21]. **Decision** [AGQS22, LP89]. **Decisions** [Ste16c]. **Decomposability** [GDF01, SL94]. **Decomposable** [DS97, Li91, MHG15]. **Decompose** [FT16]. **Decomposing** [BLW15]. **Decomposition** [AG88b, AL98a, BB08, BOCL97, Bar02, BDD14, BBK18, BOS13, BBV19, BD95, BX08, CS01, CM92a, CG92, CGP06, CL09, CLN12, CLL20, CFG97, CDD00, CF02, CK00, DDV00a, DDV04, De 06, De 11, DG91a, DD98, DD12, DD13a, DD13b, DD14, DL15, DD20, DGGG22, Drm00a, Eir00, EVD22, Fri05, GMN18, GL17, GNS18, GI96, dMGF14, Gra10, GE95c, GOS15, GW92, HMP94, Hem95, HMMT04, HMT10, HIW15, HV97, HJP03, JS94, JN03, JW11, Kap90, KGD23, KL92, KZ10, Kol03, Kon00, LK22, LRA93, LF02b, LS17, Lin19, MV07b, Mat93c, Mat95b, MVV92, MHG17, NBG10, NH12, O'N05, OOvdD98, Ose10, PS94, PE95, PP05a, Pet21, QCBZ21, Rei91, Rob16, RS94, Sai16, SST05, SS06, SK20, SDC$^+$12, SD15b, SD19, Ste10a, Ste11a, Ste12, Ste93b]. **Decomposition** [SV00, Sun95b, gS00a, SV15, Sut12, Sut13, Tol97, Tům02, Van10, VD21, VKDD21, VNVM14, WE94, WCW10, WCB22, XC20, Xu05, YB91, YL08, ZN21, Zha91, Zha93a, ZHQ16, vdSBvdV93, CS89, CG90, GI97, IM95, WE89]. **Decompositions** [BES05, BNP22, BG15, BvdMR$^+$97, BL10, BV18, BMP20, CGCDM13, CD00, CHH$^+$15, CD13, CF02, De 08a, De 08b, DN08, DCM08, DV92a, De 94b, Dem99, Di 00, DE99, DD21, DIS15, DMM08, FB95, Fie96, GP06, GED22, HH21, HY01, Her90, Her96, KS22b, Kol01, LC16, LS07, MMD08, MV08, NY19, NY20, SCPW12, SŠ91, SCBC21, SD15a, SDD15, SdA10, SL12, Ste16c, VD21, VKDD21, ZMK02, ZŠ94, vdMRR01, Gad88]. **Deconvolution** [MLV00, PO03, Yal00]. **Decouple** [CNG23]. **Decoupling** [CH06, CMT09, DIS15, KN99, vdWM95]. **Decreasing** [Pan93]. **Dedication** [Bru88, GKRV90, Mol92]. **Deduce** [SCBG05]. **Defective** [Zen16]. **Defectivity** [BGMN15]. **Deferred** [vdG93]. **Deficiency** [Ste18]. **Deficient** [Cif21, EG15, Fos03, HS13, KGD23, Men12, MH15]. **Defined** [IS11, Kar11a, PT18, Tam97]. **Definite** [ADGH18, AFPA07, BGN03, BW95, BJL98, BDR12, BD05, BS16, Cha00, CG98b, DHT01, EG00, ED23, FMFJ18, GI00, GIK00, Gru06, GLV10, GHT10, HO94, HMT09, HP02, Hu92, JH02, Joh08, JSG15, KN91, LNTX11, LNTX13, LS11, Lin19, Lu98b, MV97, Mat92, Mat97b, Mel04, Moa05, Nie10, NY95, NV02, OR93, Pha01, Ple00, Reu02, SAGS21, VGV09, WZ91, Whi90, XG10, XHC21, Ye09, ZWF05, Zha17, Zha10b, AG88a, FM88]. **Definiteness** [CCL09, Roh94, XC18]. **Definitions** [De 08b]. **Deflated** [AGJ14, CGLV11, EEG11, GGLN13, Gut14, RN18]. **Deflating** [BBMX02]. **Deflation** [BESS22, BBM02b, Dax08, EN08, KK07, Kre08, LS96, NAY12, PR12, RKN20, SEM13, SCMV21, TMNV10]. **Deflations** [MV14]. **Deformations** [EEK97, GPM03]. **Deformed** [GHN18]. **Degeneracies** [BP21, DPP22]. **Degeneracy** [CC92]. **Degenerate** [CGSS01, DSSC11, Mat05]. **Degree** [ADD96, BS90, HM04b, Lie08, Mor94, Mur98, OV99, Che92]. **Delay** [AM23, DLMT13, MG10, MBN17, MZ19, Yan93, MJM11, MF20]. **Delocalization** [KMS15]. **Demmel** [DMC13]. **denominator** [Nov11]. **Dense** [CGHR07, For03]. **Density** [BKS08, LWWY14]. **Departure** [Lee95, Lee96]. **Dependent** [BLL22, BK15, CZBL18, GMBS12, MMW17, PSW12, SK16, SS17, SdA10, SL12]. **Depending** [DPP22]. **Derivation** [BLd93]. **Derivative** [AMH09, AMHL22, BGMN92, CCH98, GL17, HL21, Koh99, KLX04, Nof17]. **Derivative-Free** [HL21]. **Derivatives**

[ACL93, AT98, BE03, HL13, HR14, OW95, QACT13, Seb96, Sen06]. **Derived** [KC94]. **Descent** [KL08, LUC23, Pan91]. **Described** [KLX07]. **Description** [De 18, FV98, Hla08, Krä19, Pop12, Ste16b]. **Descriptions** [SZK95]. **Descriptor** [BGMN92, CT91, CH06, CFL07, CT08, KLX04, MMW18, MV21, Mim15, RE13]. **Design** [BIS12, DDN20, DK99, GL99, GMS92, Kau06, KB90, RD95, SNC02]. **Designs** [KMS01, KMS03, LP13, NW02]. **Desingularization** [KO18]. **Detecting** [GHT09, GHT10]. **Detection** [BV92, Bom00, DD12, FKZ23, MS10]. **Determinant** [ASA04, BLdP97, BM01, CT88, FSV14, HKG09, JOvdD03, Reu02, VBW98, MP88]. **Determinantal** [LZ05b]. **Determinants** [FH93, IR08, Stu91, MV88, MOvdDW89]. **Determine** [LM18]. **Determines** [Par05]. **Deterministic** [BIS12, CNX22, DGR23, Sha23a]. **Development** [PGVR98]. **DG** [BGK+18]. **Diagonal** [ALN07, BV90, BESS22, BOS16, Bor14, CDGS10, CNW08, Chu95, DHST05, DQV22a, DK99, DK01, GGV05, Gre92, HIS23, Har05, Hig97, KB93, KKSZ22, SCPW12, Tho94, Tis04, Uhl18, Wal95, ZFW07, HD97, HRS88, MV88]. **Diagonal-Plus-Rank-One** [BESS22]. **Diagonal-Plus-Semiseparable** [Har05]. **Diagonalisation** [Bin90]. **Diagonalizable** [FJ06, LM06b]. **Diagonalization** [Afs08, BAMC20, BGBM93, BMV20, CSX15, CL17, CS96a, Dav08, De 06, DK15, ELN22, Joh08, LN22, LUC18, LUC23, MM11, MR22, Pha01]. **Diagonalizing** [BS96, Dan91]. **Diagonally** [AB19b, CE02, CESC20, DDY14a, DDY14b, For96, Hu92, Li02, LZ05b, Mat09, NV94, SWYM96, Sle09, ST14, Ye09]. **Diagonals** [HHC03]. **Dichotomy** [MS97]. **Difference** [BDE+20, Bor03, GKK99, GT99, LNT18, MT15, SCA12]. **Differenced** [VP93]. **Differences** [AMPV97, CP03b, CT93, SvdVM00, Zha00]. **Different** [TP23, YL16, Whi89]. **Differentiable** [ANT19, LS01]. **Differential** [AEGL19, BGMN15, DLMT13, EK17, GHR21, Gre92, HHRV99, KM96, Moa05, PPLG20, RE13, Zhl12, JN89]. **Differential-Algebraic** [DLMT13, EK17, GHR21, KM96]. **Differentiating** [GTPTI14]. **Diffusion** [BWQ06, BGK+18, BGSC07, ES18, Ern00, KNW20, lLNS17, MMN22, RP10, de 92]. **Digital** [SWYM96, DB88]. **Digraph** [Sev03]. **Digraphs** [AB16b, COP20, MOvdDW89]. **Dilations** [GCL16, MA99]. **Dimension** [BGK+18, HJP03, Ost10, Yse22]. **Dimensional** [BvdMR+97, CNX22, CHH+15, GV99, Gre99, HHLW13, Ji92, JLS01, Kil99, LXSdH20, OST08, RHE14, Sch95b]. **Dimensionality** [NBS10, OST08]. **Dimensions** [WLD18, YL16]. **Diophantine** [BT92]. **Direct** [Bjö14, CKL21, GK06, Hig93, Xia13]. **Directed** [DN11, Fit19, SS23]. **Direction** [GLV10, HXY11, Par94]. **Direction-of-Arrival** [Par94]. **Direction-Preserving** [GLV10]. **directional** [gWcWL12]. **Disc** [LZ05b]. **Discrepancy** [CS10b]. **Discrete** [ASA04, BF06, BF93, Bor03, BD95, CF02, CFL07, CZ03, Cor93, DL17a, DS18, For03, Guo98, HHLW13, JLS01, JOAKt10, KO05, KH13, KLX04, Kuz15, LF02a, LgS02, Lin11, Mas16, RT93, Sun04, TCTM00, Tur97, Van08, ZZS04, LP89, Meh88]. **Discrete-Time** [CFL07, Cor93, JOAKt10, KLX04, LF02a, LgS02, Mas16, Sun04, TCTM00, BF06]. **Discrete-Trigonometric-Transform** [KO05]. **Discretization** [BGK+18, DGMR00]. **Discretizations** [Beb06, Ern00]. **Discretized** [CDGS10].

Discriminant [CGH11, PP05a, PP05b, ZLN10]. **Disjoint** [LGI21]. **Disjunct** [CdS90]. **Disk** [Baz00]. **Disks** [LO20]. **Displacement** [BT17, BJMS17, BD95, CK91, CLG93, CSK95, Di 00, KC94, KO05, Pan93, PW03, RD95, DS95, GKR89]. **Dissection** [BV90, BHL+93, BT02, CCB+20, GTW00, HR95, SV93, Ten97]. **Dissipation** [MMS16]. **Dissipative** [MMW18]. **Distance** [ABK+11, Bar00b, BS16, BLO04, Dem92, DLT15, Fio11, GHHW90, Gu00, GMO+06, HW98, HS16, JSG15, KMS15, Lau00, LOvdD02, Men08, Men18, Mit21, Qi13, Rum97, BJ95, Pow88]. **distance-regular** [Pow88]. **Distances** [KNS97, LM06b, Lim13, PS22, Rum03a, Rum03b, YL16]. **Distinct** [Far16]. **Distributed** [ADLK01, ADV05, IO16, KP92, Vog99]. **Distribution** [AW10, AW05, BF11, DQ02, DD10, DK08a, FFH+19, GN03, Har99, HM20, HDSC23, Mey94, WA07, ZZTA02]. **Distributions** [BMfY03, Cap00, DMC13, DK08b, ES05, KS15, Liu12]. **Disturbance** [vdWM95]. **Div** [CZ03]. **Div-** [CZ03]. **Divergence** [CG03a]. **Divergences** [DT08, LGI21]. **Diverging** [Ste08, SD09, Ste12]. **Divide** [AA94, BNP23, CK91, CKM22, FLM12, GE95a, GGbCC03, LGC+14, Sut13, XQ08, GE95b]. **Divide-and-Conquer** [BNP23, CK91, CKM22, GE95a, LGC+14, XQ08, GE95b]. **Division** [BDD13]. **Divisor** [DB20, NV23]. **Do** [DI19]. **Domain** [CM92a, CG92, Hem95, LS17, MS99, Par99, PGVR98, SZ99, SST05, TT99, Özg91]. **Domain-Based** [SZ99]. **Domains** [GLS12]. **Dominance** [LM98b, Wal95]. **Dominant** [AB19b, CGV03, CESC20, CNG23, DDY14a, DDY14b, DIKMI18, For96, Li02, LZ05b, MTV10, Mat09, NV94, RS08, SWYM96, ST14, Ye09]. **Dominated** [LG06, Mor22]. **Dooren** [ADHM19]. **Double** [BFM03, BB18, HHLW13, JKM11]. **Double-Curl** [HHLW13]. **Doubling** [CCG+09, GIM08, GL10, LwCKL13, LX06, MP12, gWcWL12]. **Doubly** [Fie95, GITT96, Tis03, YBZC16]. **Downdating** [BPE94, CP98, EP94, EGK91, GE95c, LLZ09, LZ05a, PE95, Sun95a]. **Downsizing** [MTV10]. **Downweighted** [AHN21]. **DQDS** [AMMS08, NAY12]. **Drazin** [CCS05, CGRVC08, HLW05, Wei96, WLB05, XSW10]. **Drift** [Mas16]. **Dropping** [Nap13]. **DSTU** [PM06]. **Dual** [GL23, Mal04, Pil94, SB88, Zha01, Per88]. **Duality** [MH95, OW88]. **Dulmage** [AL98a, IM95]. **Dynamic** [ADLK01, AP94, BRR00, LT97, OS09, OYV22, RBB90, Tan94]. **Dynamical** [BG19b, DSZ14, FL18, FL19, GAB08, HS23, HMP94, KL07, KL10, LRSV13]. **Dynamics** [Art96, GL13, SWYM96].

E-optimal [NW02]. **Early** [BBM02b, KK07, Kre08, NAY12, SCMV21]. **Easily** [LQ16]. **Eckart** [VNVM14, Kol03, Lin11]. **Economic** [BMV18]. **Edge** [ABC+23, AB16b, BHS23]. **Effect** [CH93b, CYA+18, IW14, Kre08, Yse22]. **Effective** [BM99, BW99, COV17, Fit19, LRN06, Mar91, SS23, Tan99, XX17]. **Effects** [SvdVM00]. **Efficient** [AG19, Bar98, BNP22, BDG20, BMSV92, BN05, BMP20, CGS98, CGGS99, Cha00, CH97, DW06, Day97, DK05, EMC17, FGS14b, GL03, GNP94, GE94, Gu98c, GOS15, KS22a, KNW20, LHC16, LGWX12, MSKC21, RG05, RDC93, SYJ00, SX11, TV09, TETA05, XHC21, YGL18]. **Efficiently** [EM15]. **Ehrlich** [BGT05b]. **Eidson** [HN90]. **Eigencurves** [Uhl20]. **Eigendecomposition** [HHLW13]. **Eigendecompositions** [AB05, DK06]. **Eigenpair** [WZ17]. **Eigenpairs** [CE94, CNG23, Eff13, FP20, JWN18, KM11, KM14, SAGS21, HL06]. **Eigenpolynomials**

[Men99]. **Eigenproblem** [Bai05, BJ16, CD15, DHT01, DMM03, GE94, GGbCC03, HB94, Pai19, RBB90, gS96, GE95b]. **Eigenproblems** [AGP19, AA19, Auc91, GLS94, GL05, Gui99, HLT08, Jia95, SK16, Ste01, Ste02, Tas15a, ZS07]. **Eigensensitivity** [DS23]. **Eigensolver** [BDG15, BC22, HHLW13, TP14, XXC14, YXC+17]. **Eigensolvers** [KN09, NZ16, Tis01b]. **Eigenspace** [EVD22, Li98b, NS94, XK94]. **Eigenspaces** [CZ03]. **Eigenstructure** [CKL04, DQV22a, Mim00, NK01, TDV15]. **Eigensystem** [Mat95a, MSKC21]. **Eigensystems** [LS07]. **Eigenvalue** [AA94, Ano11, AM23, AHS00, AB19a, AD98, AL95, BDY99, BS05, BL12, BL13, BLL22, BR19, Bar93a, BESS22, BF00, BFS21, BMS06, Bet09, BT10b, BB98, BH13, BD90, BGT05b, BEGG07, BBGF00, Bol90, Bor10, BKMS14, BKMS15, BEGM05, BGBM92, BW93, CZBL18, Cha00, CPZ11, CKL04, CG06, CKP11, DBW15, DW06, DG91c, DD10, DLM04, DW15, DD14, DYY16, DK08a, Eff13, EGGR99, EW13, Emb09, FGL21, FFH+19, Fri92, GHW99, GITT96, GT17, GA18, GKL18, GK06, GT02, GR93, Gru06, GKL97, GHT09, GL10, GZ13, HB12, HH98, HP02, HKP05, HMP19, HGL05, HLQ09, Ips06, Ips09, IM16, JKM11, JMM14, Ji92, Jia22a, JS04, JLS01, KMMM18, KKT06, Kar10, KKM14, Kau93, Kau06, KKSZ22, Kir92, Kni04, KLV18, KW92, KLX07, LZ14, LX09, LC15a, LVV16]. **Eigenvalue** [Li98a, LNTX11, LNTX13, LM03, LKK97, LE02, MV97, Mac95, MMMM06a, MV17, Mat98, Mee09, Meh04, MBN17, Miy14, MMH94, Mor21, NOZ11, NQZ10, Ors06, PM06, Ple00, Ple06, QACT13, QCCT17, RJ21, RSS09, RW01, Saa16, See11, SCBG05, SHY10, Sid95, SvdV96, SY98, SW94, SB11, Tis01a, TH01, Tis03, Tro90, VMM15, VGV09, Voo12, VYH11, WZ95, WE91, Wat93, WE94, WS00, fX96, Xue96, XE12, YGM09, YBZC16, ZS14, Zen16, ZZ98a, ZWF05, Zha10a, ZXL14, ZSYJ18, ZYSY20, ZBJ15, ZL23, ZZTA02, All89, GIMT95, Ove88, San88, Tre88a, Tre89]. **Eigenvalue-Based** [ZYSY20]. **Eigenvalues** [AS93, AAB10, ACL93, AT98, Axe92, BNS13, BS96, BGH07, BS16, Cao09, CFJKS13, CHZ16, Chu95, wC03, CZ03, CGS94, CDN14, CW96, DGMR00, DPP13, DH97, DK08b, Ede88, EI98, Elm97, EW13, EM15, FL02, Far16, Fer98, FG94, GN03, GM00, Guo98, HO94, Har99, HDT10, HN22, HC15, Hua21, HL02, IN09, JH02, KKM14, Koe05, KPM09, KW94, Kui00, LNV92, LGC08, LPS08, LY91, Mal06, MR97, MS10, MV21, Mel99, Mel04, MYK14, MBN17, Miy14, MBO97, Nab00, Naj98, NQB14, NS09, NST15, OW92, OW95, Peñ01, Peñ05, Pes14, QACT13, QCT15, QCT16, RS96, Ral09, Ral11, RVA05, RI11, Roh93, RST18, Rum22, SHJ09, SM16, SMM20, Ste91b, Tru06, Uhl20, Wal03, Wat00, Wil08, Ye09, Zha05, vDHvdV00, Auc89, HM89, Sun89]. **Eigenvector** [BLL22, CZBL18, CJMU22, Del97, EGGR99, Fer97, GR93, Gru06, Har98, JS04, Lat95b, Lu20, Mat97a, Men99, PDF16, Stu89]. **Eigenvector-Dependent** [BLL22, CZBL18]. **Eigenvector-Eigenvalue** [EGGR99]. **Eigenvectors** [AMS07, ACL93, AT98, BG19b, BdTD11, DP04, JK95b, Kuz15, Mor95, MRU22, Pes14, Pow88, QACT13, QCT15, Rum22, PSL90]. **Either** [Ito96, ZvSD20]. **Elasticity** [KNOX02, KNX04, CS89]. **Electrical** [HV05]. **Element** [ACST09, Beb06, HLM23, RW94, RP10, ST08, Ten97]. **Elementary** [BTV03, DB20, JOvdD01, JOvdD04]. **Elements** [BW95, FSZ14, Tam98]. **Elementwise** [ABN09]. **Elimination** [BZ98, BDD13, BS90, CH99, DGL99, EL05, EL08, Fos94, Gar09, GP93, GT04, GL93, GG03, Gou91, Gov91a, GGC09, HP09,

Hig90a, KU13, Liu90, QXX14, TS90, YC97, HH89]. **Ellipses** [EW20]. **Ellipsoid** [CG10, SCPW12]. **Ellipsoid-Constrained** [CG10]. **Ellipsoids** [DN11]. **Elliptic** [ACST09, Beb06, CDGS10, GKL18, Gre92, GV99, Gre99, HHRV99, HL23, MS97, PS04, KCT90]. **elliptical** [LT89]. **Elman** [BGT05a]. **Embedded** [Bry17]. **Embedding** [QCCT17, ZL23, BV88]. **Embeddings** [BKW22, BGH07, GM00, INRZ21]. **Empirical** [DS18]. **EMS** [Lat95a]. **Enclosure** [Miy14]. **Enclosures** [DN11, FH20]. **Endpoint** [Bry17]. **Energy** [HV19]. **Enhanced** [EEK99, RCH08]. **Enhancing** [AB16b]. **Enlarged** [GMN16]. **Enough** [HN22]. **Ensemble** [CES22, KMN11, JH88]. **Entanglement** [NQB14]. **Entries** [Chu95, DK99, DK01, Har99, Zha05, JOvdD89]. **Entropy** [BW95, Le 96]. **Entrywise** [TVW15]. **Envelope** [GP97]. **Environment** [DG91b, DG91c]. **EP** [MR18]. **Episodic** [HN97]. **Epsilon** [SŠ91, Yan20, ZŠ94]. **Epsilon-Alternating** [Yan20]. **Equality** [CH99, FM93a, GS10a, HS88, LGI21, LJW22, So92, ZH03, Zha04]. **Equality-Constrained** [FM93a]. **Equation** [AGL98, BGK+18, BGSC07, BM96, BIP08, Bor03, Che01b, DL92, FP17, Guo01a, GH07b, GIM08, GKL12, HK01, Ho90, Kåg94, KB90, KO15, LŠ10, Li99, LBL05, LgS02, LXSdH20, LLZ23, LB02, Lu05, MOR16, MX09, MP11, OL99, yPWjP12, RN18, SC03, Sta02, Sun04, TV09, Tsu93, Wim92, XZC99, de 92, BHH88, BC88, KP92, Özg91, Sch95a, Tsa94]. **Equations** [AEGL19, AB19b, BWQ06, BD05, BMM20, BK95, BT92, Bra98, BGMN15, CGRV20, CI95b, CS98, CG03b, CGS+08, Che01a, CHH+15, CCG+09, CFL07, CH97, CGI10, CR10, DTGVL05, DK15, DSSC11, DLMT13, EGTP17, ESR01, EK17, Ern00, FAT16, FHS09, Gar90, GHR21, GKK99, GH07a, GV99, Gre99, Gu98c, Guo98, GL00b, GL00a, Guo01b, HNRS22, HHRV99, Han94, Hla23, HS95a, HP92b, HM97, HO92, HDSC23, Jou92, JL98, JOAKt10, KP99, LHHR95, LW02b, LwCKL13, Lim07, LX06, lLNS17, LNT18, LX12, LW20b, LY91, MPR18, MT15, Mor00, Neu00, Pai19, PR12, Pop15, PPLG20, RW94, RRR06, RDC93, Roh03, RP10, Sch95b, SS13, SWZ11, Sim16, SH23, SS17, gS98b, VV10, VD21, VKDD21, Vav92, gWcWL12, Wri95, XCGL10, ZHZ05, von93, BMO92, GL96, Wim88b]. **Equilibria** [WSSL06]. **Equilibrium** [BL02, DD10, DK08a, Mar91, PW90, Vav94]. **Equivalence** [HLT91, HLM94, IIM94, Tho94, HRS88]. **Equivalences** [GPTPV16]. **Equivalent** [Kni00, LN22, WE89]. **Ergodicity** [AG00, Art03, Ger92, IS11]. **Erratum** [Ano11, CH93a, CRS01, EDK16, HC89b, JOvdD04, LNTX13, PU14]. **Error** [Ari00, AB01, AMR+18, Bar93a, Bar93b, BEBT07, Bor10, BCW12, CP03a, CH93b, CL09, CGMM22, CH23b, CYA+18, DH93, DMR09, DMM08, EGTP17, EMC17, EOS19a, EOS19c, EOS19b, FKLR13, Gow96, GJTP12, Gul95, HL08, HG18, Hal20, Hig90a, HH92, HH98, HLT08, IZ20, JR13, JTP10, KA10, KMN11, LW02a, LC15a, LVV16, LEMCD19, LMC22, LPT10, MM11, Mas16, MO20, PP05b, RBB90, RJ14, Rum22, Ste05, Ste06, gS00a, Urs21, Van10, Var94, WY17, ZZS02, ZK17, ADD89, CM89, CM92b, Tsa94, VV89]. **Error-Controlled** [MM11]. **Errors** [AA09, BKMS14, BKMS15, CGGS99, CGSS01, DM04, MV21, Rum15, SvdVM00, gS98a, Tis03, XW07]. **Errors-in-Variables** [CGGS99, CGSS01]. **ESPRIT** [AC18, Par94]. **Essentially** [SGX14]. **Estimate** [BGT05a, CP03a, CH93b, GJTP12, KMN11]. **Estimates** [AL95, BKK07, Bol90, DMR09, FKLR13, Gru06, GKL95, GKL97, Kni04, LW02a,

Lat95a, SHY10, Urs21, Var94, Zul11, KL89]. **Estimating** [Bol90, Del97, Gre97, Gu00, GMO+06, HIS23, JTP10, KW92, LC15b, SK20, SW97, SG21, TV09]. **Estimation** [AMH09, BL21, BLL22, BEBT07, Bis90, BLP90, BKK07, BK21, CS01, CGGS98, CH23a, FSS21, GTP18, HL08, HT00, KLR98, LX09, Mat95b, Men08, MSM21, Par94, PCK22, PP92, PS22, SB92, SES95, Tan94, UCS17, Woź93, XK94, YLA97, Pea88]. **Estimators** [TT14, KP92]. **Euclidean** [BJ95, Bry17, DS17, Drm00b, EOS19a, GHHW90, HN98, Lau00, Par99, Qi13, Xie23]. **Euclidean-Norm** [EOS19a]. **Euler** [BL91]. **Evaluating** [GTJ13, Hig01, MP88]. **Evaluation** [WLMD19, BN88]. **Even** [BFS21, Mel01, Mel04, Yse22, BFS21]. **Even-IRA** [BFS21]. **Even-Mode** [LF02b]. **Even-Odd** [Mel01]. **Events** [EHW10]. **Eventually** [JS07]. **Every** [Ito96]. **Evolution** [Tre90]. **Evolutionary** [WZZ22]. **Evolving** [DL03, FH17, Saa16]. **Exact** [AW10, BGT14, Emb09, GK15, GGC09, HK01, HI15, LEMCD19, OSS14, RK95, ZZLY02]. **Exactly** [LMC22]. **Exactness** [Sch05]. **Exchanges** [Wat98]. **Exclusion** [HL02, Peñ05, SHJ09]. **Executed** [MSZ15]. **Exhibit** [HV19]. **Existence** [BB95, ED22, FMX02, HQ16, Lat95a, ZWF05, Gad88]. **Exit** [GN13]. **Expansion** [BRR00, MV23, Rau02a, Rau02b, Vac94]. **Expansion-Contraction** [BRR00, MV23]. **Expansions** [DM05, HR93, HKG09, Jia22a, SM16]. **Expectation** [Fuh07]. **Expectation-Maximization** [Fuh07]. **Expected** [EHW10]. **Experimental** [LP13]. **Explained** [EM00]. **Explanatory** [CH93b]. **Explicit** [KK12, Kuz15, MX09, MBN17, Pop12, ST01, Ste91a, Wel11, Wim92, XPL+18]. **Exploitation** [HKBM08]. **Exploiting** [EL92]. **Exploring** [FT16]. **Exponent** [Han03, Mor22]. **Exponential** [ASA04, AMH09, AMH10, AH14, BBS15, De 11, Elt92, FH19, FH20, GG14, GN16, Hig05, KL98a, KL18, LNT18, NS11, Nov11, PS08, So92, SW91, SD12, WZZH21, ZMK02]. **Exponentials** [GED22, SGX14, WY17, Ber88]. **Exponents** [DL03]. **Expressed** [LP17]. **Expression** [XPL+18]. **Expressions** [CHW10, TL06]. **Extended** [BM19, CGRV20, DK98, MNR15, MV14, MP95a, QL99, ZF13]. **Extension** [BB96, BvdMR+97, Bom00, Jia01, Kol03, MSS19, Pál11, Tre90, Zhe96, Zhe98]. **Extensions** [CGL18, FR23, HN90, JMW96, Bar89]. **External** [SZK95]. **Extrema** [Nie10]. **Extremal** [GZ09, GL13, GKL14, HLW94, KW94, TL06, Wim88a, Zha05, HPR89]. **Extremality** [GWZ05, JP09]. **Extreme** [BGN12, CHLW23, DK08b, LC15b, LT94a, Mel99, Nie10, ZSYJ18, vDHvdV00]. **Extrinsic** [FL19]. **Eye** [LM06a].

Facial [LP96]. **Factor** [BHR10, CS10b, DD13a, DT11, Gem98, GGL04, Li95, NNF14, SDC+12, SdA10, Wat92a, BK89, Zab89]. **Factored** [BS02a, BS02b]. **Factoring** [CB90, Gil13, JP94]. **Factorisations** [CI94]. **Factorization** [AP02, Ari00, AL95, BBD+14, BF11, BFM03, Bér09, BHP03, BMMT10, CKRU08, CPS97, CH98, CSEP21, Cle00, CH23b, DDY14a, DD97, DH99, DH01, DH05, DGGX15, DPP22, DGSW06, DOV94, DT11, EL92, FH21, FP16, GP93, GH91, GT04, GTW00, GNP94, GSS96, GO95, GK15, GR23, GD22, GMRS00, GDX11, Gul95, Guo01b, Gup02, HY01, HJOvdD93, HHP21, HT17, IUM14, JMM14, JTZ20, JOvdD01, JOvdD04, JP93, KDGG13, KP08, LH22, LRG23, Le 19, LRN06, LGWX12, Liu90, LEMCD19, LN14, MV13, Miz22, NS18, NP96, NR99, OV99, Ogi10, PK93, PK94, PN18, PN23, PM06, PW14b, PL97, PSW22, QXX14, RR94, RODS15, SYJ00, SV97, SV05, VP93,

WLMD19, Woź93, WT11, XXC14, XG10, XX17, XBC22, XQ08, Zha01, ZFW07, BBDS95, CH88, DY90, Liu88, Naz89]. **Factorizations** [ADGH18, ANT09, Bez12, BCMM95, CS10a, CMPX03, CK12, DK00, DN11, DM05, EJ23, EMC17, rFO06, Fos03, JMPR19, KK21, LC05, LMC22, MMT05, MW01, Nap13, Ogi10, RJ14, STvDD17, SMBJS13, SB92, Ste93a, WL12, CF89, JOvdD89, Wri97]. **Factorized** [KY93, MNR18]. **Factors** [GL93, dMGF14, LS03, Li05, LB96, PMT23, PR01, SST06, Woź93, ZZS02, ZZS04, HH89]. **Fail** [Emb09, Fos94]. **Failures** [EM00]. **Falk** [SH91a]. **Families** [GWZ05, GZ09, Mai99]. **Family** [GdlI08, Ian09, KMS01, KMS03, Mae98]. **Fan** [FHLS13, LM98b]. **Far** [Rum15]. **Farenick** [Ikr97]. **Fast** [AP94, AMVW15, AMR+18, BB08, BDSC11, BIS12, BES15, BBD+16, BOCL97, BBTK08, BL94, BEG+09, BEGG07, BIP08, BK95, CNX22, CS98, CG03b, CDG+05, CGP06, CDG+07, CRY+21, Di 09, DV08c, DV08d, FGK+22, GIG22, GR17a, GS03, Gu98b, GMO+06, GO11, GGO13, HB12, HP09, HR00, HR04, HG14, HLQ09, HHLW13, JNP21, JMPR19, KKSZ22, KS17, KL18, LX09, Law13, LHC16, LW20b, Lu94, Lu95, Mar11b, MLV00, MTV10, Mit21, Miy14, Mön11, Mor22, NRT92a, NP02, OST09, PK93, PK94, PP92, PPLG20, Rei91, Rod06, STvDD17, SCBC21, SB03, Ten97, UCS17, VS14, VP93, XXC14, XXCB15, XK94, XE12, YXC+17, ZFW07, ZLN10, ZZ98b]. **Faster** [AB13, ACW17, BJMS17, Nec19, Not05]. **FastMap** [Ost10]. **Fat** [HHC03]. **Fault** [BBGL92]. **Fausett** [Zha95]. **FE** [BGK+18]. **Feasibility** [AM09, CE02, FM93b]. **Feasible** [Krä19, LH22]. **FEAST** [TP14]. **Features** [NSCS10]. **Feedback** [BGMN92, CCH98, CMT09, KLX04, RE13, Yan93, Zab89]. **FEM** [GSCS15, KA10]. **Fenchel** [Zha10b]. **Few** [EW13, GVK20, LC15b, STT17]. **Fewer** [INRZ21]. **Fiber** [Kau06, SD19]. **Fiedler** [AB18, BdTD11, DDM10, NP16]. **Fiedler-comrade** [NP16]. **Field** [BLL22, LWWY14, LM18, RW01, YGM09]. **Fields** [Fay95, LO20, SZH22]. **Fifty** [EJ23]. **Fike** [wC03]. **Fill** [BFM03, HP09, ZFW07]. **Fill-In** [BFM03]. **Filter** [CMPX03, GRT07, GW00, HM04a, KMN11, SCA12, DB88]. **Filtered** [BKS08, Saa06]. **Filtering** [ET10, MBM08, dKV10, KCT90]. **Filters** [Sor92]. **Finding** [BBTT06, BBTK08, Bor14, CG15a, DYY16, FGL21, Fei94, GPS90, GZ09, HLM23, LNP93, LGL16, NQZ10, OW96, Pil94, SD12]. **Finer** [ZZTA02]. **Finite** [ACST09, BF11, BLW15, Beb06, BHKR11, BvdMR+97, CP03b, CD15, CT93, DHST05, GIKT95, HK95, JL23, LF02a, PP11, RW94, Rog05, RP10, ST08, Sil03, Ten97, GS92]. **Finite-Dimensional** [BvdMR+97]. **Finite-Element** [ACST09, ST08]. **Finite-Precision** [PP11]. **Finite-state** [BHKR11]. **Finitely** [GI96, GI97]. **Finiteness** [BTV03]. **First** [DA05, DIS15, Hem95, KN99, Lu10, OA23, SM16, SMM20, WZZ22, dBG08]. **First-Order** [DIS15, Hem95, Lu10, OA23, WZZ22, dBG08]. **Fischer** [Zha04]. **Fisher** [BV07, LH05, VJ07]. **Fitting** [EGK91, SCPW12, Wat01, GBCW89]. **Five** [MV88, TS99]. **Five-diagonal** [MV88]. **Five-Point** [TS99]. **Fixed** [AGQS22, BS10, DH22, DD08, DDD20, Hal22, HNT99, LRG23, MA20, SSR20, YGL18, Zab91]. **Fixed-Accuracy** [Hal22]. **Fixed-Point** [DH22, SSR20]. **Fixed-Precision** [YGL18]. **Fixed-Rank** [MA20]. **Fixing** [Hel00]. **Flat** [BU21]. **Fletcher** [YBZC16]. **Flexible** [CGLV11]. **Flipped** [MP21]. **Floating** [DJ00, JR13, Tis01a, Rum91]. **Floating-Point** [DJ00, JR13, Rum91]. **FLOPs** [LN14]. **Flow** [AL98a, BL02, KN09, Lag91]. **Flows** [DRTW91, KLS16, LX12, Mat05, Uhl20,

WE90, WE89]. **Fluid** [CGS94, DLLT22, LX12]. **Focused** [BBM02a]. **Foley** [ZLN10]. **Following** [LM18]. **FOM** [FLS20, Meu11, Meu17]. **Form** [Bea01, BT12, BT13, BDG20, Gei91, GL03, GK06, IT11, Lu05, Pai09, Par92, SC05, Ste11a, Ste13, VVM05, de 90, Hon89, WW08, LK95, Mur91, Mur93]. **formal** [Tre88b]. **Format** [ABM21, DK13, EDK16, Krä19, LC15b]. **Formats** [MK20]. **Forms** [Ain17, BD93, Cao09, COV17, EM00, GG02, GITT96, KMP01, LS11, Mai99, Meh99, NTTZ18, Nie10, RODS15, SZK95, TMV18, TU91, Zha10b, LT89]. **Formula** [AG91a, BI99, CFG98, MBN17, Nof17, ST01, Tro90, ZZLY02]. **Formulae** [Ste91a]. **Formulas** [Sch95b, Wel11]. **Formulation** [CFG97, DS18, PS04, RPG96, VZ91]. **Formulations** [FH17]. **Forward** [PL93, Wat95]. **Found** [Kui00]. **Four** [BZ00]. **Four-Coefficient** [BZ00]. **Fourier** [BIS12, BDGY20, CM03, DL17a, He21, HHC03, HK12, Kuz15, Pul13]. **Fraction** [BL00]. **Fraction-Free** [BL00]. **Fractional** [BBTT06, HL11, HL13, IM13, KNW20, lLNS17, PPLG20]. **Framelet** [HM04a]. **Frames** [BD22]. **Framework** [ABMV20, CSEP21, GGLN13, Gut14, He21, HPZ23, Jia22b, KBHH13, RVV17, VD21, VKDD21, XZ22]. **Fréchet** [AMH09, AMHL22, GL17, HL13, HR14, KL98a, Nof17]. **Free** [BL00, EMC17, HL21, LEMCD19, LMC22, OA23, RY05]. **Frequency** [BB20, PGVR98, SES95, LXSdH20, MP88]. **Frobenius** [CHLW23, CK20, DG19, GTH19a, GTH19b, GGMO17, HNT99, NNF14, YY10, YY11]. **Frobenius-Norm** [GGMO17]. **Full** [BD10, DD07, Grc10, TP22]. **Full-Rank** [TP22]. **Fully** [ADLK01, MP95b]. **Fulton** [Zha95]. **Function** [AH14, BD98a, Bar94, BHM97, CGMM22, CGMM23, CS10b, FHI15, FN04, FP16, Gow96, Gro98, Han03, KL91, KL92, Le 19, Lie08, LWW15, LW94, Nof17, NNPQ23, Sch23, WLD18, OW88]. **Function-GA** [Le 19]. **Functional** [BKS08, Le 96, LWWY14, Mei04]. **functionals** [Per88]. **Functions** [ALAK94, AB16a, AB18, ACL93, AH16, ABF16, AD21, Auj00, AABK19, AHH01, BIS12, BKS18, BS15, BV00, BH08, BD05, BZ00, CH94, CKM22, DH03, DMS09, DMS12, DMR09, DK98, EEG11, FKLR13, FGS14a, FGS14b, FLSS17, FLS20, FSS21, GTJ13, GG14, GMRS00, GS21, GS23, HK08, HMMT05, HR14, HL21, JRZ99, KB93, KO14, Kra95, KH13, LMZ03, Le 19, LS01, MR22, MNT10, Mat93a, Mat95b, Mat96, MYK14, MS18, PP05a, PK23, PT18, QY04, QCT15, QCT16, RST01, Sen06, Ser96, VFGM05, BN88, GBCW89, KL89]. **Fundamental** [Bar00a, Hey95, HO98, ST01]. **Fundamental/Group** [ST01]. **Further** [Djo08, YY10, YY11, Zhe96, Zhe98]. **Fuzzy** [GLP01].

G [LLZ23]. **G.** [KO05]. **GA** [Le 19]. **Galerkin** [PU14, CG96, EU10, PU10]. **Galton** [HM20]. **Game** [MOC91, Tro90]. **Games** [Mar91, RE13]. **Gap** [BD09, DI19]. **Gaps** [DP04, HSC04]. **Gauss** [CRY+21, FMRR13, Kau92, MNR15, PTC13, SB03]. **Gaussian** [AW10, AW05, BT10a, BZ98, BS90, CD05, DGL99, Fos94, FM93b, Gar09, Gou91, Gov91b, GGC09, HH89, Hig90a, Le 19, LF02a, SCBC21, TS90, WA07, Wan15, Xu15, YC97]. **GCDs** [BL00]. **GCR** [JRG09]. **Gene** [Mol92]. **General** [AC18, BAMC20, CSX15, CL17, Cao08, CK00, DS19, Gei91, GIKT95, GSV00, JOAKt10, Lu10, MS02, MPS01, NY95, SZ99, SWZ11, TT99, XX17, Zha04, ZXS21, CLS88, DY90]. **Generalization** [Ben09, EM10, Fay95, HPS15, JDS03, VW12, Zhe96, Zhe98]. **Generalizations** [DV92a, LM98b, Tis93]. **Generalized**

[ASA04, AGP19, AB18, Ari13, ABF16, AG00, AABK19, AV91, BD22, Ben99, BNP22, BG04, BG15, BMS06, Bet09, BB98, BD05, BD90, BJMS17, BEGM05, BdTD11, BJ16, CGLV11, CS96b, Cha00, Che98, CL09, CFG97, CG98b, CG06, CFL07, CHZ03, CLG93, CHMW20, CS96c, CHLS00, CDH12, DBW15, DHT01, DDV04, De 94b, DK05, DHST05, DW15, Djo08, DG19, DD14, EW13, Fie95, FF99, FH93, Fri05, FT07, GS94, GLS94, GOS15, HL08, He21, HH98, HMT10, HPS15, HMP19, HJP03, Hua21, IM16, Jia95, JN21, JC22b, Kåg94, KC94, Kau93, KGD23, KN98, KM14, KH13, KM96, LP89, Law13, LGC08, LM98a, Li93, Li02, LNTX11, LNTX13, Lu95, Lu98a, Meh04, Mim00, Miy14, MN97, Mor22, ND06, Nof17, PAP00, PP05a, PP05b, Sen06, SHS03, SV00, Sun95b]. **Generalized** [SW98, gS00a, TY02, Tis01a, Uhl18, VGV09, WE94, Xu15, XPL+18, XNB22, XE12, ZMK02, ZHZ05, ZLN10, CJL96a, GBCW89, VV89]. **Generalizing** [DTGVL05]. **Generate** [JOvdD03]. **Generated** [IZ04, Tre88a]. **Generating** [AKP08, HHP21, Ser96, vdMS05]. **Generators** [Pil94]. **Generic** [CO12, COV14, Cho10, DD08, DD16, DDD20, DL15, Ste08, SD09, VNVM14, WC14, IM95]. **Geodesically** [MSM21]. **Geodesics** [Bry17, MA20, TP23]. **Geometric** [AFPA07, BD93, BS10, CR16, CF00, DQ02, De 18, DL02, EEK97, EEK99, FI18, FL18, JK95b, KN09, Krä19, Lim13, Moa05, ML89, MGS20, NQB14, Xie23, XNB22, ZPW18]. **Geometries** [TP22]. **Geometry** [BDD13, BF06, EAS98, FL19, Lin19, MA20, QCL16]. **GI** [LLZ23]. **GI/G/1** [LLZ23]. **GI/G/1-Type** [LLZ23]. **Ginibre** [CES22]. **Give** [Nie10]. **Given** [BHH+08, CPTP09a, HP09, Næv93, Peñ95, Whi00, fX96, YB91, dF05, BN88, HPR89]. **Givens** [DV08b, GO95]. **Givens-Weight** [DV08b]. **Global** [AIM22, BBT05, BBTT06, BBTK08, BM01, CG03a, Drm10, FP98, Gow96, Har19, Men18, WC14, WCY15, WZL21, Yan20]. **Globality** [Mit21]. **Globally** [Auc91, LUC18]. **Glued** [PV09]. **GMRES** [AGJ14, BJM05, BGT05a, BR08, Ble21, BW97, CG15b, ES12, FLT13, GSTPT22, GPS96, HYI10, JC22a, JRG09, Kni00, KS20, Lie00, LS04, Meu11, Meu17, Mor95, Mor00, MH15, MR18, NRT92b, PRS06, RY05, SS19, SEM13, TM12, Toh97, YXS21]. **GMRES-Equivalent** [Kni00]. **Goal** [BvdG11]. **Goal-Oriented** [BvdG11]. **Gohberg** [AG91a]. **Golden** [Lim07]. **Golub** [Ari13, HPS15, Mol92]. **Good** [MMMM06a]. **Google** [WW08, LM06a, SC05, WI09]. **GP** [MR18]. **GPMR** [MO23]. **Grade** [DDD20]. **Graded** [Li05]. **Gradient** [AV91, BM00, BES98, BG06b, CFT16, Car18, CYA+18, DFT92, EG00, FAT16, GRT07, GMN16, Hal20, HS10, JX20, KL08, KN09, LW20a, LUC23, LH05, MMH94, NOZ11, SH23, YBZC16, GS92]. **Gradient-Based** [LUC23]. **Gradients** [CG03a, GTPTI14]. **Gram** [PRS06, Bar19, BP92, CLR21, Di 09, GGL04, GMRS00, HI15, Ste05]. **Graph** [AEGL19, AR93, AL98a, BSS13, BGH+06, BHH+08, Bor09, DS23, FT14, Fit19, FV98, FC01, GPS90, GHN18, GMS90, GM00, GW22, KA07, MP12, PV17, Van08, dF05, vdWM95]. **Graph-Theoretic** [vdWM95]. **Graphs** [BJL98, DMW23, Fie00, FT16, GTJ13, KN99, Lew91, Peñ98, SS23, PSL90, Pow88]. **Grassman** [Mac99]. **Grassmann** [BBBT20, CDH12, ES09, LE02, QZL05, XPL+18, XNB22]. **Grassmannian** [LWY19]. **Greatest** [NV23]. **Greedy** [ABM+17, CB00, MHG17, NR99]. **Green** [HK08, Nab01]. **Greville** [ZZLY02]. **Grid** [DFT92, PV17, XZ22]. **Grids** [AC18, BHL+93, RW94]. **Gröbner** [BDD14]. **Ground** [Bar08]. **Ground-Based** [Bar08]. **Group** [BT06, BAMC20, DS17, DJ09,

FKZ23, GdlI08, Jia98, JTZ20, Kir95, KNS97, KN98, Lew96, Moa02, ST01]. **Groups** [DL03, HMMT04, HMMT05]. **Growth** [BZ98, DT11, Gou91, HHP21, KNX04, KMS01, KMS03, PMT23, Ran07, SST06, HH89]. **Growth-Factor** [DT11]. **GSVD** [EW20, JL23, WXZ16]. **GTH** [OW96, Sen98]. **Guarantee** [FM93b]. **Guarantees** [ED22, WCCL16]. **guide** [AdHN88]. **Guyan** [BB96]. **Gyroscopic** [JW11].

H [KZ10, Mol92]. **Hadamard** [BZ07, BG13, CDP94, DMS09, DMS12, FM88, GG02, HM90, MS91, Mat93b, MP98, Sen06, WZ95, Zha97, ZY93]. **Hall** [BS94b]. **Halley** [NBG10]. **Hamilton** [Mac95]. **Hamiltonian** [ABK+11, AM23, BBMX02, CKO+22, FGL21, GHR21, JL98, KMP01, Kre05, LW97, Meh99, MMS16, MMW18, MV20, MV21, PLM94, Tis01b, ZHZ05, vdMRR01]. **Hamiltonian-like** [JL98]. **Hamiltonian/Hamiltonian** [BBMX02, Meh99]. **Hand** [AIM22, GRT07, HPS13, HPS16, KS92, MB10]. **Hankel** [Bez12, CM93, FPST13, GP03, HH93, HR04, MVP05, NY19, PK94]. **Hard** [GG11, HO10, RK95]. **Hardness** [LRG23]. **Harmonic** [VD21, VKDD21, Wu17]. **Hartley** [BF93, HR00]. **Hartwig** [BV07, LH05, VJ07]. **Having** [CMPX03, Har99]. **Heisenberg** [CRR93, Per88]. **Helmholtz** [LXSdH20, OL99, RN18]. **her** [GKRV90]. **Hermite** [ASA04, BFZ07, CJL96a, CJL96b, Kuz15, LHHR95, Per88]. **Hermite-type** [Kuz15]. **Hermitian** [LNTX13, AG88b, AKPP08, Ash91, BDY99, BGN03, Ben09, BS15, Bin90, BLAK91, BKMS14, BS16, BDF17, Cao00b, CE12, Cha89, CPS00, Chu95, DHST05, DPP13, DH97, ENV92, ESS+12, FNS08, Gro97, GHT10, GS21, HD97, HBW90a, HBW90b, Hon89, Huh02, IN09, JS04, Joh08, LN22, LT89, LM06b, LNTX11, MV97, Mat92, Mat98, Meh04, MMW17, MMW22, MYK14, MT00, NY20, Nie10, Pai10, PK93, Pha01, PR88, PR91, RSS09, RP10, Ser96, SB04, SK16, Ste91b, SH93, Tis93, Tre89, Tre94, Tru06, WZ95, Wim06, Yas03, YXC+17, ZZ98a, ZHZ05, dF05]. **Hermitian-Generalized** [ZHZ05]. **Hessenberg** [BEG+09, BDG20, BEGG07, BKK18, BGH95, DV07, GL03, GR17a, Kni04, PP11, Ste06, Stu91]. **Hessenberg-Triangular** [BKK18]. **Hessian** [CRY+21, Mön11]. **Heuristic** [GK15, Sal88]. **Heuristics** [AR93, NR99]. **Hidden** [MN97, ML89]. **Hierarchical** [ADGH18, CKM22, DHM19, EZ95, GD22, Gra10, Le 06, LRSV13, QXX14, XX16, Xia12]. **Hierarchically** [CGP06, HG14, LHC16, Mar11b, XC18]. **Hierarchies** [DK14]. **High** [AB19b, BB20, CNX22, DMM03, GL18, HLW94, LXSdH20, LM18, WLD18, WZZH21, Yse22, ZG01, JP94]. **High-Frequency** [BB20, LXSdH20]. **High-Order** [GL18]. **High-Performance** [WZZH21, JP94]. **Higher** [BFG23, BE03, CG03a, CGMZ21, DDV00b, De 08a, De 08b, DN08, DSD17, GLPS11, HR14, IAVD11, KGD23, KR02, Men08, PSW22, Sai16, SK20, SQ13, VGA10, VD21, VKDD21, Yse22, Zab89]. **Higher-Order** [BFG23, CG03a, DDV00b, De 08a, De 08b, DN08, DSD17, IAVD11, KGD23, KR02, SK20, VGA10, VKDD21, VD21, Zab89]. **Highly** [Men12]. **Hilbert** [Lu98a, Sta22]. **Hitting** [PCB16]. **HOID** [Sai16]. **Holdability** [NT08]. **Hölder** [KPM09, Wim88a]. **Holds** [GKL18]. **Hollow** [CFJKS13]. **Hollowization** [DF20]. **Homogeneous** [SQ13, von93]. **homotopies** [WBP89]. **Homotopy** [CHZ16, CLS88, DYY16, LKK97]. **Hopf** [Guo01b, MS10]. **Horizon** [OS09].

Hottopixx [Gil13, Miz22]. **Householder** [BKK18, CH23b, CB90, Dub00, GBCW89, RS88, Sha23b]. **Householder-Based** [BKK18]. **HSS** [CDG+07, LGWX12, XHC21]. **Hungarian** [HPTH19]. **Hurwitz** [WZ23]. **Hutch** [PCK22]. **Hybrid** [AGP19, BB20, Cav94, GRT07, HO94, LMPT20, MV23, NRT92b]. **Hyperbolic** [AH16, BHP03, CB90, DS17, GHT09, Par05, Ple06, RS88, SS98, SV05, PS88]. **hypercube** [CG90]. **Hyperrectangles** [Mön11]. **HZ** [Har19].

Ice [SW91]. **Ideal** [Toh97, Özg91]. **Idempotent** [Lew91, Pat00]. **Identifiability** [CO12, COV14, COV17, DDL14, GR23]. **Identification** [FPST13, FGM91, LV10, PGVR98, SH91b, Ver96, Vog99]. **Identity** [FHL23, Rie92, MP88]. **IDR** [GZ13]. **If** [HO10]. **II** [AMR+18, BL13, Bap89, BDMS12, BG19a, BBM02b, CJL96b, Car94, CM92b, De 08b, DG91c, DD13b, DV08d, EEK99, FLS20, Gut94, Ito96, KMS03, LLZ09, Li98b, Mur93, PL18, Rum03b, SDD15, VKDD21, YY11, ZZS04]. **II/III** [PL18]. **III** [DN08, PL18]. **Ill** [BGT14, ES12, Fos03, Kil99, KO01, NV02, PAP00, SS19, Zen19, dSL08, DK88, FGS96, Rum91]. **Ill-Conditioned** [NV02, PAP00, Zen19, FGS96, Rum91]. **Ill-Conditioning** [SS19]. **Ill-Posed** [BGT14, ES12, Kil99, KO01, Fos03, DK88]. **Ill-Posedness** [dSL08]. **ILU** [BW99]. **ILUs** [BS02b]. **ILUT** [SZ99]. **Image** [BBTK08, NNP04, RHE14, ZGP10]. **Images** [CR96]. **Imaginary** [MS10, Sch95a]. **Imaging** [BN06a, GMN18, HKBM08, KBHH13]. **Immanant** [CL99]. **Immitance** [BLAK91]. **Immitance-Type** [BLAK91]. **Implementation** [DW06, DDN20, Day97, GMS92, JNP21]. **Implementations** [Bér09, Fuh07]. **Implications** [LT97]. **Implicit** [DGSW06, DSSC11, FSV14, Jam92, MT15, MP91, PJM21, Sor92, SZK95]. **Implicit-Factorization** [DGSW06]. **Implicitly** [BF00, JK97, JN03, LS96, Leh01, Mor00, XE12]. **Imply** [EI98]. **Improve** [Swe93]. **Improved** [BT10a, BV90, BM19, BG13, BMMT10, DH93, DGR23, For03, GTP18, GHT10, Gup02, HL13, JR13, Nab00, PCK22, RJ14, SST05, SL12, Ste03]. **Improvement** [AL98a, LZ97, OS09, ZY93]. **Improving** [BBD+16, CD14, JMPR19]. **Inclusion** [BRR00, HL02, NW98, Peñ05, SHJ09]. **Incomplete** [AL95, BCMM95, BMMT10, CHMW20, DK00, HT17, LRN06, LS06, Nap13, WT11, XX17, Zha01, ZFW07]. **Incremental** [Bis90, BLP90, CT93, IO16, TT14, ZN21]. **Indefinite** [AGL98, BNW09, BBD+14, BHP03, BvdMR+97, CNX22, Cao02, CGS98, CH98, Cle00, DP05, DP07, FXG18, GMPS92, GS10b, HS14, IT06, JP93, KGW00, Meh04, NP23, RT93, RS02, RODS15, SZ07, SvdVM00, Tis04, Zha01, CH92, CH93a, JP94, Liu88]. **Independence** [Ste10a, Wan98b]. **Index** [ADHM19, BCN95, CC92, IT18, Kra95, KH13, RR08]. **Indexing** [VS14, ZZ99]. **Indices** [BFZ07, DDM10, DS10, PT18]. **INDSCAL** [DL15]. **Induced** [Bea01, GL05, SQ13]. **Induction** [SKP11]. **Inductive** [PS94]. **Inequalities** [AJRS13, Auj00, BSvdD95, Ber88, BK97, CL99, Dri06, GHR95, HLS97, HLM23, Li91, LM02, Mat92, MP98, Pop15, So92, Tam99, TFL11, WZ95, YL00, Zha97, Zha99, Zha04, ZQ10, CT88, GP88]. **Inequality** [BSS13, BD93, DGIM15, Fou18, GG02, GS10a, GLT96, HM90, LZ97, yPWjP12, Sch05, VBW98, ZY93, Sch95a]. **Inertia** [BS91, BS94a, CHW10, FGM91, HS90, Loe90, TU91, PR88]. **Inertia-Controlling** [FGM91].

Inertia-Preserving [BS91, BS94a]. **Inertial** [Wim06]. **Inertias** [CD98, Dan93]. **Inexact** [AGJ14, BMS06, BF05, FHS09, GL21, GTI11, GSTPT22, JR08, LM98a, LZ10, Not03, RSS09, SX11, XNB22, XZ22, XE10, XE12, vdES04]. **Infinite** [AM23, GLP01, GP04, JMM14, JC22a, KMS01, KMS03, Mae98, OS09, SA22, Wat00, vdMS05]. **Infinite-Horizon** [OS09]. **Infinity** [BET02, FH21]. **Infinity-Norm** [FH21]. **Inflation** [Stu88, Stu89]. **Influence** [DS23]. **Information** [BR05, DIS15, CT88]. **Inherited** [JOvdD89]. **Inner** [AV91, CGLV11, DS18, GSTPT22, HN09, IZ20, JR13, MH13b, MH15, Rod05, Sha23b, SX11, Wan98b, ZHY16, CF89]. **Inner-Iteration** [MH13b, MH15]. **inner-outer** [CF89]. **Input** [AD98, BMU94, LSM22, MX98, Mim15, HJ89, Meh88]. **input-output** [HJ89]. **Input-Tailored** [LSM22]. **Input/Bounded** [Cor93]. **Inputs** [AB19a, BOS16]. **Insights** [RS21, RST18]. **Instability** [HW98, HO98, Men18, PL93]. **Instances** [Lau00]. **Integer** [CG10, Lin11]. **Integral** [Che01a, HK08, LY91, Vav92, YXC+17]. **Integration** [DL02, LXSdH20]. **Integrators** [GG14, Nov11]. **interaction** [GBCW89]. **Interactions** [RST18]. **Interactive** [AIM22]. **Interface** [CM92a, GL99]. **Interior** [CH93c, FS01, KS22a, LV10, LP13, Més08, Wri95, FGS96, Wri97]. **Interior-Point** [LV10, Wri95, Wri97]. **Interlacing** [BO96, HP92a, HS95b, Tam99, dF05]. **Interleaved** [LRN06]. **Interpolants** [BL00, Law13, LC15a]. **Interpolation** [AT07, AABK19, BB12, DS18, DSZ14, FG15, GVV04, JSG15, MV97, Mit21, VZ06, MH95]. **Interpolation-Based** [BB12, Mit21]. **Interpolative** [XC20]. **Interpolatory** [Sai16]. **Interpretation** [FV98]. **Intersection** [BW95]. **Interval** [AM95, AM09, AM05, FM93b, Gar90, Gar09, GP04, HDT10, JR99, LF02a, Neu00, Pop15, RR98, Roh93, Roh94, RK95, RR96, Roh03, Zha05]. **Intervals** [HS90, Peñ05, SHJ09]. **Introduction** [MG92, NP99]. **Invariance** [DDL14, Lew96]. **Invariant** [ASVM04, AKPP08, BD98a, BER04, BKS08, BT10b, BHM97, BK06, DS20a, DHW92, DLT15, DLMT13, FMX02, GS03, GP16, HM90, KK14, Kre05, Miy14, PLM94, QZL05, RR08, Rod05, SS19, Sai19, VF00, VJ07, WLB05, Zab89, Zha99, dSV01, LT89]. **Invariants** [AJRS13, GPPT23]. **Inverse** [AH16, AHS00, Bai05, Beb06, BMS06, BS02a, BW93, CCS05, CGRVC08, Che01a, CLNW20, CG98a, CKL04, CC17, CHMW20, DBW15, DMS09, DMS12, DMS13, DLM04, EW13, FI18, FF99, FSZ14, FMFJ18, Fri92, FHS+94, GG02, GN13, GITT96, Gov91b, GTI11, Gre05, GHL03, GH06, HLW05, JS07, KM16, Kau92, KK12, KNW20, KOSvdD07, Kir95, KNS97, KN98, Kni04, KN91, KLX07, Lan07, LZ14, LGL16, LM03, Lu10, MMS94, MSZ03, MH13a, MS10, Meu92, NV94, Nab99, Ogi10, Ors06, PDF16, Pat00, RSS09, RW01, ST01, SW98, Tan99, TW00, Uhl18, Vec03, wVjBqJ11, Wan98b, Wei96, WLB05, fX96, XSW10, YBZC16, ZWF05, vD99, FM88, KY93]. **Inverses** [BMF05, BM02, BS02b, CLG93, Djo08, DG19, ES08, Elt92, HH93, HR00, JC22b, KM96, MNST96, SHS03, LP89]. **Inversion** [AK20, AK21, AHH01, BLNT13, BC10, CM93, GR17b, HH94, PK93, PK94, PW03, RS92, Ste91a, XXCB15, ZZ98b, CJL96a, DV06a]. **Invert** [AM23, FS10, HL06]. **Invertible** [WCW10]. **Inverting** [FP16]. **Involutory** [IZ04]. **Involving** [Ain17, AG91a, FF94, SD12, ZZ98b, Zha95]. **Ion** [BBM21]. **IRA** [BFS21]. **Irreducible** [Art96, FGJ00, FG94, GR93, Kir95, LGL16]. **Irregular** [GLS12, RW94]. **Isometric** [FNV08, HKV05]. **Isometries** [BvdMR+97]. **Isometry** [BT10a]. **Isotropic** [Kre05, MS18]. **Isotypic** [MOR04]. **Issue**

[DCM08, Ips06, Ips09]. **Issues** [Ari00, Mei04, Més08, SV97]. **Iteration** [AGQS22, BLL22, Ben09, BMS06, BX08, Dan91, ESR01, EW13, Emb09, KZ10, KO14, LS96, Leh01, LWWY14, LGL16, Lu05, MOR04, MOR16, MS10, MP11, MH13b, MH15, NBG10, Not03, Nou96, OA23, RSS09, RS08, Saa16, Sai19, SvdV96, SY98, SX11, TP14, XE10, YGM09, YLA97, ZHY16, de 92, AdHN88, BF89, Lag91, San88]. **Iterations** [ASVM04, AV91, BKS08, Bor09, BPS05, CKL21, CNP94, GVK20, Gaw19, HMMT05, HN09, Ian09, IKSG10, NS07, NRT92a, NH12, NOZ11, STT17, ZZS04]. **Iterative** [AH07, ADR92, AG00, BN06a, BB18, BN06b, BGSC07, BV01, CGRV20, CR96, Cao00a, Cao08, CE02, CPTP09b, CG96, DHT01, DGSW06, ET10, EOS19c, EOS19b, EL91, FS10, FNS08, GLS12, GL17, GR15, GV09, GRK17, GL00b, Guo01a, GH07b, HNRS22, HHRV99, HLT12, Han94, HO92, HV05, HZ01, Jam92, JC22b, KKSZ22, KL91, KS99, KO01, LHHR95, LWXZ06, Li02, MNR18, MG92, MS02, MR97, MO20, MO23, NP02, NY95, Not19, OL99, PAP00, Pan91, PJM21, RW92, SWZ11, Tis01a, Wei95, Woź93, XE10, dKV10, AdHN88, BY88]. **iteratively** [O'L90].

J [Ano11, CH93a, GI97, HC89b, WW08, Zha95, Ikr97]. **Jacobi** [CS96a, DV92b, Dem23, Drm96, DV08c, DV08d, Drm10, DK08b, Hac93, Har07, HM89, HPS15, HP02, HKP05, HN09, IAV13, KHH04, Kni04, LUC18, LR05, Mac95, MV08, Mas94, Mas95, Mat09, Mat95a, Meh04, Meh08, Not05, Nou96, OYBV19, OYV22, SS89, SvdV96, Sta02, SX11, fX96]. **Jacobi-like** [Meh04]. **Jacobi-Type** [LUC18, MV08]. **Jacobians** [HKG09]. **Johnson** [BKW22]. **Join** [BV18]. **Joint** [Afs08, BN05, BN10, BAMC20, CSX15, CL17, DF20, FKZ23, JL23, Joh08, JCG14, LP00, LUC23, Pha01, PJB10, WA07].

Jordan [WW08, BFZ07, MMT08, MV17, MBO97, MD03, SC05, Ste13, Wel11].

Kaczmarz [MNR15, MM23, Nec19, Sha23a, Ste21, ZF13]. **Kahan** [Zhe98, Ari13, HPS15, Zhe96]. **Kähler** [JV16]. **Kalman** [KMN11]. **Karcher** [Zha17]. **Karlson** [GJTP12]. **Karmarkar** [MT89]. **Kaufman** [DT11, JP93]. **Kawasaki** [FP17]. **Kemeny** [ABC$^+$23, BK19]. **Kerdock** [FGK$^+$22]. **Kernel** [AC20, ACW17, BWQ06, BU21, CNX22, MTV10, PP05a, SCBC21, SB95, WLMD19, XC20]. **Kernels** [WLD18]. **Kinematic** [GKK99]. **Kinematics** [DS17]. **KKT** [FJ97, IKSG10]. **Kleinman** [FHS09]. **Knopp** [Kni08]. **Known** [AD02, CHMW20]. **Kohn** [LWWY14]. **Kolmogorov** [FMSS21]. **Kreiss** [Mit20, Mit21, TT99]. **Kron** [SS23]. **Kronecker** [BT13, HC89b, Zha95, BKW22, Bar98, Bea01, BS15, BT12, CNG23, DD07, DD08, EK96, FF94, FGP00, GP98, GMN18, Gre05, HL17, HC89a, IT11, KN00, MV07a, NNP04, RHE14, SB03, de 90]. **Krupnik** [Ikr97]. **Krylov** [Ste02, BER04, BG15, BR05, BF05, CFT16, CH23a, CGMM23, DMR09, DIKMI18, DK98, DSZ14, ESS$^+$12, EN08, Ern00, FGS14a, FLS20, FKST23, GGLN13, GMN20, GL21, GG14, GOR14, GTI11, GPTPV16, GMN16, GS00b, Gut14, GS21, GS23, HPZ23, HS95a, JK97, KO15, KJH16, KT10b, KT11, LM98a, LY03, MJM11, MH13b, NZ16, RS02, Saa97, SS13, Sid95, Sim00, Sim16, SvdVM00, SSR20, Ste01, VMM15, WY17, ZH17, vdES04]. **Krylov-Aware** [CH23a]. **Krylov-Based** [MJM11]. **Krylov-Subspace** [CFT16]. **Kublanovskaya** [GKRV90]. **Ky** [FHLS13, LM98b].

Lagrange [AT07, Law13, LC15a, Nie10]. **Lagrangian** [AW00, FMX02, GSCS15, LW97, MP12, RR08]. **Lambert** [FHI15]. **Lanczos** [AIM22, BDY99, BKS08, BF00,

BES98, BBGL92, CD15, CGMM22, CZ02, Day97, FKLR13, FLSS17, GVK20, GS92, GLS94, Gut92, Gut94, GR00, HL06, Huh02, Jia95, JN03, JLSZ22, Jou92, KW92, KW94, Kui00, MOR04, MB10, Pai10, PP11, Pai19, SdJL+18, UCS17, Urs21, WS00, Wül05, XK94, ZSYJ18, vDHvdV00]. **Lanczos-Based** [CGMM22]. **Lanczos-Type** [AIM22, GR00]. **Landscape** [CLL20]. **Langemeyer** [SH91a]. **Langville** [IK06]. **Laplace** [FKST23, KK12, RN18]. **Laplacian** [BSS13, FA23, Gre92, GHN18, GMS90, GM00, HO15, KNS97, KA07, LY91, PV17, STvDD17, TS99]. **Laplacians** [CL99]. **Large** [ABM+17, BMfY03, BSFM10, BYDW18, BKS08, BHM00, BGKS99, BrD07, DK99, DK01, ES92, EW13, FI18, FF94, FM93a, GIG22, GH07a, GAB08, GHL03, GS23, HXY11, HH89, HHP21, HP92b, IO16, JK95a, Jia95, JL23, KMMM18, LC15b, LC16, LS06, LwCKL13, LKK97, MS10, Men18, MZ19, NY95, OS09, PR12, Reu02, SS13, Sim16, SK16, SY98, SCA12, Ste01, Ste02, WZ17, WS00, WZZH21, XCGL10, Zha95, ZSYJ18, ZS07, HC89a, HC89b]. **Large-Scale** [ABM+17, BYDW18, ES92, FI18, FM93a, GAB08, GS23, HXY11, KMMM18, LC15b, LwCKL13, MS10, Men18, OS09, PR12, SS13, Sim16, SK16, WZ17, ZSYJ18, MZ19, HC89a, HC89b]. **Largest** [Ano11, CPZ11, DSD17, GR93, JN91, KW92, NQZ10, OW92]. **Latent** [Elt92, VS14, ZZ99]. **Latouche** [Guo02]. **Lattice** [LK95]. **Lattices** [PAH17]. **Laurent** [HM04a, Tre88b]. **Law** [BZ07, CG03a, Djo08, BHKR11]. **Layer** [MMN22]. **Layered** [BKKL91, KT10a]. **LCM** [Wan98a]. **LCP** [Mor94]. **LDL** [XXC14]. **LDU** [DDY14a]. **Leading** [EG15, GS10b, JV04]. **Learning** [MM23, PSS19, Yan98]. **Least** [ABG07, Aru92, ANT09, BG11, Bar98, BBT05, BBTT06, BBTK08, BE10, BST16, Ben99, BN06b, BPE94, BES98, BHM00, Bjö14, BV01, BHP03, BX05, BV95, CGCDM13, CNP94, CGS98, CPTP09b, CGP09, CG10, CH93b, CLL20, CJ21, Chu91, CG98b, CSEP21, CK91, CHMW20, CC92, CH99, DN08, DHZ03, EL97, EP94, EOS19c, EOS19b, FF94, FB94, For96, FS01, GS10a, GHO99, GJTP12, GTPI13, Grc10, Gu98a, Gu98b, GW92, Gul95, HG18, HYI10, HXY11, HPS+11, HG14, HM97, HV97, HLM23, IW14, INRZ21, Jam92, KS92, KLR98, KP08, KT10a, LY03, LS06, LW20a, LJW22, LPT10, Mal04, Mal03, MVP05, Mar11a, MLV00, MH13b, MH15, PRS06, PO03, Rei91, RG05, Rod06, RPG96, RPG98, Rum12, Sha95, SC03, STT17, TETA05, Usc12, VZ91, Van92, WC14, WCY15, Wei92, WD00]. **Least** [XXCB14, Yan20, ZH03, ZHY16, ZMW17, ZZLY02, ZF13, O'L90, Qia88, VV88, VV89, Zha95]. **Least-Index** [CC92]. **Least-Norm** [EOS19b]. **Least-Squares** [ANT09, BG11, Ben99, BX05, CGS98, CK91, EL97, EOS19c, For96, FS01, HG18, HM97, LS06, Mal04, Rod06]. **Lee** [Ikr97]. **Leffler** [AD21]. **Left** [KOSvdD07, LEMCD19]. **Left-Looking** [LEMCD19]. **Legendre** [Zha10b]. **Lemma** [LJS19]. **Lemmas** [De 08a]. **Length** [AKP08, JN93]. **lengths** [Gri88]. **Leslie** [Kir92, KN94]. **Less** [HM04b, OP05]. **Letters** [JH02]. **Level** [Bor09, BBM02a, DQ02, DK13, EDK16, HR14, Not16, TMNV10, WT11, LSB16, Sou19]. **Level-** [HR14]. **Level-Geometric** [DQ02]. **Leverage** [HIW15, Hoo17, LK22, SG21]. **Leverage-Based** [LK22]. **Leverrier** [Bar89]. **Levinson** [CH93a, BLAK91, CH92, FLM10, Mel01]. **Liapunov** [KB93]. **Lidskii** [Lew99, MBO97]. **Lie** [BW93, KHH04, MMT08, Tam99]. **Lifted** [JCG14]. **Like** [AG92, CT99, FLM10, GL00a, KRS19, lLNS17, MSZ03, May12, Rod06, RODS15, ZZS04, ZZ98b, FLM12, GIMT95, Hig90b, JL98, Kil99, Lu96, Meh04, Rei91, SK95, wVjBqJ11, Xu05]. **Likelihood**

[BE10, YLA97]. **Limit** [BU21, Ste13]. **Limitations** [ABM21]. **Limited** [EM15, GS21, Sal88]. **Limited-Memory** [EM15, GS21]. **Limiting** [BK15, DD10, DK08a]. **Lindenstrauss** [BKW22]. **Line** [HHRV99, HK01, RCH08]. **Linear** [AGP19, AIM22, ADC04, ABG07, Art96, AGL98, ANT09, Bai99, BGN03, BL12, BL13, BDHS11, BFZ07, BSFM10, BEBT07, BF06, BGT14, BES98, Ble21, Bom00, BM06, Bor03, BT92, BAMC20, BF05, BCW12, CT91, CP03a, Cao08, Cap98, CP03b, CE02, CI95b, CS98, CGS98, CG03b, CGS$^+$08, CPTP09b, CH93c, CFL17, CRR93, CGH11, CC92, CHLS00, CG96, DGMR00, DH22, DK05, DTGVL05, DD12, Din98, DS16, DS95, DLMT13, ENV92, EHvP04, EGTP17, ES12, ES92, EG00, EOS19c, EL91, FXG18, FM93a, For96, FS01, FHLS13, FL99, FNS08, FKLR13, FGK$^+$22, Gar90, GL03, GHR21, GPPT23, Gil13, GJX22, GLT96, GKK99, GRT07, Gow90, GS94, GS02, GR15, GMMN21, GTI11, GJTP12, Grc10, GCL16, GV09, Gu98a, Gu98b, Gu98c, GAB08, GHL03, GHR95, GW92]. **Linear** [Gul95, HNRS22, HLT12, HL08, Han94, Har05, HH92, HPS13, HG21, HLT91, HLM94, HJ89, JC22a, JT98, Jou92, Kan96, Kar11a, KGW00, KLR98, KC09, KS08, KO14, KJH16, KT10b, KT11, KLX04, LW02a, LWXZ06, lLNS17, LNT18, LJW22, Loe90, LEMCD19, LMC22, Lu94, Lu95, LT94b, MNR18, Mal03, MP95a, MG92, MV07b, Mat92, MR97, Mee03, MB10, MMS16, MMW18, MV21, Men12, Mim15, MN97, MO20, MO23, Mor21, MPS98, MPS00, NV94, NRT92b, Naj98, Neu00, NY95, Not19, OST08, PS05, PYHK93, PP05b, PJM21, PJM23, PFRR17, PR88, Pop12, Pop15, PS22, QL99, RT93, RT20, RK95, Roh03, Rum12, STvDD17, Sch05, SŠ91, Sha23a, SWZ11, SA22, SH23, SvdV96, SvdVM00, ST14, Ste10a, Ste23, SJ92, Tig91, TV09, TETA05, VBW98, Ven93]. **Linear** [Wei95, Wim88b, Wri95, XCGL10, XXG12, ZvSD20, Zen19, ZHZ05, ZXL14, ZXS21, vdES04, All89, ADD89, Ash91, BDV89, Cri88, MT89, Pan91, Qia88, WBP89, Wim88a]. **Linear-algebraic** [CRR93]. **Linear-Time** [Bom00, DD12]. **Linearizable** [CJMU22]. **Linearization** [HLT08, HMT09, LC15a, LVV16, MBN17, SB11]. **Linearizations** [AB16a, ADMZ18, BdTD11, BDF17, DDM10, DQV22b, HMT06, HMMT07, LP17, MMMM06a, MMMM06b, NNT17, RVV17]. **Linearized** [HKBM08]. **Linearly** [CH97, GR17b, GMBS12, SdA10, SL12]. **Lines** [LF02b]. **Link** [De 06]. **Liouville** [Mal06]. **Lipschitz** [BD22, BLO07]. **Lipschitzian** [MNT99]. **List** [Ano97]. **LNLQ** [EOS19b]. **Loadings** [GMBS12, SdA10, SL12]. **Local** [ALN07, Art03, CYA$^+$18, FGM91, FP16, GS03, He21, Usc12, WZL21, Gad88, Sun89]. **Locality** [Tol97]. **Localization** [BF89, BH13, BBM21, CE12, CKP11, Peñ01]. **Localized** [SS19]. **Locally** [AG19, Cap00]. **Locating** [BP21, BNS13, DPP22]. **Location** [GVK20, Lin03]. **Locations** [BB98]. **Log** [DGIM15]. **Log-Det** [DGIM15]. **Logarithm** [CR16, CHKL01, DP00, FH18, Hig01, KL98a, Zim17, ZH22]. **Logarithmic** [BE03, HGC99, HGC00, IM13, Koh99, NNF14]. **Logarithms** [DMP96]. **Look** [AD98, GR00, SK95, CH92, CH93a]. **Look-Ahead** [GR00, SK95, CH92, CH93a]. **Looking** [LEMCD19]. **Loop** [Bér09, Guo98, CLL20]. **Loop-Based** [Bér09]. **Lorentz** [AYLR04, ZSYJ18]. **Loss** [BP92]. **Lossless** [RD95]. **Low** [ADGH18, AG88b, ABM21, Asw16, BL21, BR19, BYDW18, BKS18, BDG20, CCB$^+$20, CWY20, CS09, CGMM23, COV14, CP03c, CDLP05, CK20, CKM22, Dax08, DD07, DD16, DGR23, DI19, DWWY20, DL17b, ES18, ED22, ED23, FHL23, FMSS21, Fou18, GMN20, GG11, GQ14, GC19, GL13, Hal22, HS23, HM20, IAVD11, IAV13, IUM14, JMPR19, JKN11, KK12, KB90, KL07,

Kol03, KO15, KK17, KT11, LK22, LC16, LW02b, LS17, Lie08, MU13, MK20, MD03, NP23, NS11, Nie17, OA23, OSS14, PK23, PTC13, SCPW12, SS10, SC10, SDN21, Ste08, Ste13, STT17, Tas15a, TYUC17, VV10, VYH11, WCY15, WCCL16, XLS16, Xie23, Yan20, YXY20, YGL18, ZZ99, ZZS02, ZZS04, ZXS21, dSL08, dTDM08, vdV96]. **Low-Memory** [CGMM23]. **Low-Nonnegative-Rank** [DWWY20]. **Low-Order** [KB90]. **Low-Rank** [ADGH18, ABM21, Asw16, BL21, BYDW18, BKS18, CCB+20, COV14, CDLP05, CK20, CKM22, Dax08, DD16, DGR23, DI19, DL17b, ES18, ED22, FHL23, Fou18, GMN20, GG11, GQ14, GC19, GL13, Hal22, HS23, HM20, IUM14, JMPR19, KK12, KL07, Kol03, KO15, KT11, LK22, LC16, LS17, MU13, NP23, NS11, OA23, OSS14, PK23, SCPW12, SC10, Ste08, Ste13, STT17, TYUC17, VV10, XLS16, Xie23, Yan20, YXY20, YGL18, ZZS02, ZZS04, ZXS21, dSL08, vdV96, FMSS21, MK20]. **Low-Rank-Plus-Shift** [ZZ99]. **Lower** [AR93, AW05, BSU15, DS97, GW22, INRZ21, Lás94, LW05, Li06, MBM08, RST18, Vec03]. **Lower-Bounding** [DS97]. **Lower-Rank** [MBM08]. **Lowest** [PL18]. **LSLQ** [EOS19c]. **LSMB** [HG18]. **LSQR** [Ben99, Hal20, JTP10]. **LU** [ES92]. **Luk** [YB91]. **Lumpability** [DS97]. **Lur'e** [PR12]. **Lyapunov** [CT15, BES15, BH90, BD05, BC88, BN87, CFL07, CH97, DL03, EW13, HS95a, HP92b, KO15, LŠ10, LW02b, MPR18, MZ19, Mor22, RDC93, SS17, TCTM00, TV09, VV10]. **Lyusternik** [MBO97].

M [GL03]. **M-Matrix** [GL03]. **M.** [Ikr97]. **Machines** [SYJ00]. **Magnitudes** [Nie10]. **Maintaining** [BBM02a]. **Majorization** [Bap89, KA07, KA10, MSZ20, Zha17, ZK17]. **Majorization-Minimization** [Zha17]. **Make** [JRG09]. **Management** [GJX22]. **Manifold** [Bry17, DL02, Din98, Fio11, LE02, MA20, Zim17, ZH22]. **Manifolds** [ANT19, CDH12, GL18, LWW15]. **Manufacturing** [CCZ97]. **Map** [ANT19]. **Mapping** [MMT08]. **Mappings** [GTH19a, Gow90, VZ06]. **Maps** [CS96c, FHLS13, FGK+22, GTH19b, Loe90]. **Marginals** [SH91b]. **Markov** [AGQS22, Bar93b, Bar00a, BF11, BHKR11, Bor09, BPS05, Buc00, BrD07, CCZ97, DS97, DA05, DLLT22, DR93, DWWY20, ES08, EHW10, Ger92, Hey95, HO98, IM94, Kir02, LP89, LM06a, LFW13, LX12, Liu12, LLZ23, Mas16, Mey94, O'C02, OW96, ST01, TVW15, XG98, Zha93b]. **Markov-Modulated** [CCZ97]. **Markovian** [MP11]. **Markowitz** [ALN07, ALP07, DDN20]. **Masks** [JZ99]. **Mass** [AK20, BB96]. **Matching** [KO14]. **Matchings** [HS13]. **MATLAB** [GMS92]. **Matrices** [ABL94, ADGH18, AB05, ABK+11, AH07, AG91a, ADMZ18, AC20, ADHM19, AG88b, AG92, AD02, Arg15, AM05, AFPA07, Art96, AL98b, ABM21, AKP08, AYLR04, AB13, Axe92, BBS15, BDE+20, BT10a, BMfY03, Bai05, BNW09, BIS12, BW95, BRR00, BO96, BOCL97, BV92, BZ98, BU21, BDGY20, BYDW18, Baz00, BBT05, BR08, BT17, BMV18, BOS13, BT06, BNP23, BS15, BMF05, BP21, BS91, BS94a, BBD11, BDG15, BDG20, BB98, BH08, BE03, Bin90, BD90, BEGG07, BLP90, BS96, BLAK91, BN10, BCR11, BKK07, BD98b, BD10, Bom00, BS10, BHH+08, Bor09, BJMS17, BW99, BGKS99, BET02, BV07, BCN95, BS94b, BD15, BMP20, BGH95, BBM21, BMV20, BCGG10, CM93, CNX22, CCS05, CKRU08, CS01, Cao02, Cao09, CT99, Cap00, CE12, CCJ+00, CGRVC08, Cav94]. **Matrices** [CO99, CDG+07, CPTP09a, CFJKS13, Che98, CD05, CC09, CG15b, Chu91, CE94, CFG98, CK91, CS10b, CC17, CM03, CGS94, CRS99, CRS01, CLG93, CKM22, CC92,

CHLS00, CW96, CKP11, CP20, CB90, DDY14a, DDY14b, Dan93, DS97, De 08a, DL02, DP10, DP15, DMS09, DMS12, DMS13, DG91b, DG91c, DV07, DV08a, DV08b, DD10, Dem99, DHST05, Di 09, DD12, DMP96, DE99, DPP13, DPP22, DZ01, DK06, DQV22b, DGIM15, DY10, DK99, DK08a, DK08b, DL17b, EEK97, EEK99, EL05, EL08, ES08, ESS+12, EN08, EU10, EM15, FLT10, FGJ00, FHGJ06, FLV04, rFO06, FKKL96, FI18, FH21, Fer98, FP20, Fie95, Fie00, FF99, Fio11, FA23, FSZ14, For96, FHLS13, FNV08, FMFJ18, FC01, Fri92, FHS+94, FG94, Fri02, FT16, FR23, FGS14a]. **Matrices** [FLS20, FIS01, FJ06, GLS12, GP98, GSCS15, GP06, GT04, GLPS11, GR17a, GHNV03, GITT96, GI00, GIK00, GGJ18, GW07, GMS92, Gil13, GKL18, GD22, GS06, GKX94, GN03, GT08, GS10b, GL23, GK06, GCL16, GPTPV16, GR93, Gro97, GP03, GLV10, GWZ05, GZ09, GZ15, GP16, GW00, Guo01b, Gup02, GR97, GS21, GLP01, GP04, Hac93, HNT99, HB94, Har05, Har93, Har98, HR93, HH93, HH94, HR04, HLW94, HKG09, HMT93, HS90, Her96, HHSW97, Hig92, HHP21, HBW90a, HBW90b, HDT10, HPS15, HG14, HS13, Hol91, HLT91, HLM94, HLS97, HHH12, HC15, Huc92, Huc94, Huh01, Huh02, IM13, IN09, IW14, IT06, IZ04, IIM94, JR99, JV16, Jia98, JN93, JT98, JOvdD03, JS04, JS07, Joh08, JP93, JL98, JSG15, KC94, KN00, KK14]. **Matrices** [KU13, KGD23, KBHH13, KSH02, Kir92, KNS97, Kit95, KS03, Koe05, Koe07, KN91, Kre05, KS17, KK93b, KK93a, KRS19, LLŠ09, LŠ10, Lat95b, LP96, LN22, Le 06, LC15b, LC16, Lew91, LGPS90, LO20, Li91, LT94a, Li02, LM02, LF02b, LW05, Li05, LPS08, LGWX12, LUC23, LS04, LT09, LW97, LOvdD02, LC05, Lin11, Lin19, LZ97, LZ05b, LW94, LB96, Lu98b, MMT08, MM11, Mae98, Mai99, MS02, MMS94, MSZ03, MA20, MR22, MSZ20, MNT10, MV13, Mat09, Mat92, Mat97b, MOvdDW89, MP21, MNST96, Mel99, Meu92, MZ19, MPS01, MT00, Moa05, MN97, MP98, Mön11, MBO97, Mor22, Mur91, Mur93, Mur98, MP95b, MNT99, Nab99, Nab00, Nab01, Næv93, NP23, NS96, ND06, NP99, NNPQ23, Nou96, OV99, OR93, Ors06, OST09, Ose10, OW95, PK93, PK94, Pan16, PDF16, PLM94]. **Matrices** [Pat00, PMT23, PM06, Peñ95, Peñ98, Peñ01, Peñ05, Per91, PW14b, Pes14, PW15, Pes19, PT05, Pha01, PR91, PW90, PSW22, PJB10, Pro13, PL14, Pul13, RN18, RKN20, RVA05, RD95, Rei91, Reu02, RR98, Rie92, RS92, RW95, Rod05, Roh93, Roh94, RSS94, RODS15, RST18, SZ99, Saa16, SST06, SCPW12, SK95, Sen98, Ser98, SHS03, SGX14, SHJ09, SHY10, SWYM96, ST08, SB05, SEM13, SAGS21, SDN21, SM16, SMM20, Spe98, SCA12, Ste91a, SV97, Ste16b, Stu91, SB01, SB95, Swe93, TY02, TP22, TP23, Tig91, Tre94, Tre05, Tru06, Tům02, VFGM05, VV15, VH16, VP93, VT98, VJ07, Wal03, WZ95, Wan98a, WA07, WCB22, WD94, Wil08, Wim06, WT11, XLS16, XG10, XX17, Xie23, XC20, XHC21, XSW10, YL00, YL08, Yas03, Ye09, YXC+17, Yse22, ZZ99, Zha00]. **Matrices** [Zha05, ZY93, Zha01, ZZ01, Zha04, ZFW07, Zha17, Zhl12, ZZ98b, Zie95, ZZTA02, dF05, dSV01, vDHvdV00, vD99, vdMS05, All89, Auc89, BY88, BH96, CJL96a, CF89, Che92, DGIM06, DS95, Ede88, FF93, GP88, Hav89, HM89, HPR89, HRS88, HS88, Hon89, HC89a, HC89b, Ikr97, IM95, JN89, JP94, KN89, KN94, MP88, ML89, Per88, PR88, PSL90, RR96, Rum91, Stu88, Stu89, Tre88a, Tre89, Wim88a]. **Matricity** [GG13, BG19a]. **Matrix** [AS93, ALAK94, AA09, Afs08, AAB10, AMH09, AMH10, AMHL22, AB16a, AB18, AMPV97, AK20, AK21, AG91b, AW10, AEGL19, ACL93, AT98, Ano11, AW00, AH14, AH16, AKPP08, ABF16, ANT19, AG00, Art03, AMR+18, AABK19, AHH01,

AW05, BL21, BD98a, BB95, BD22, BBD+16, BR19, BR22, Bar00a, Bar94, BLdP97, BL94, BL00, BKS18, BI99, BT12, BT13, BV00, Bez12, BB96, BD93, BM94, BF93, BM96, BNS13, BMM20, BMSV92, BL91, BM06, BKMS14, BKMS15, BS16, BB20, BHR10, Bor14, Bos21, BW99, BL10, BF05, BG13, BX05, BD95, BZ00, BC92, BdTD11, BDF17, BGN12, BHM97, CSX15, CGHR07, Cao00b, CR16, Car94, CG03a, CH93a, CS10a, CT93, CMPX03, CRY+21, CGMM22, CGMM23, CHKL01, CD00, CCG+09, Chu95, wC03, CH06, CHW10, CSEP21, Cif21]. **Matrix** [Cla10, CD98, CGI10, CR10, DB20, DH03, Dax08, De 06, DD99, DD08, DD16, De 18, DDD20, Dem92, DGR23, DRSZ07, Dhi98, DT08, Di 00, DP00, DMR09, DK14, DK15, DS10, DS19, DS20b, DG19, DHM19, DD13a, DJ09, DMM08, DI19, DH97, Drm00a, DK98, DLT15, DK01, EEK97, EEK99, EJ23, EEG11, EI98, ESR01, EK96, Elt92, EK17, FL02, FZ16, Far16, FHI15, FH18, FH19, FHL23, Fay95, FPST13, FH17, FL19, Fer97, FFH+19, For03, FV98, FP16, FT07, FH10, FKLR13, FGS14b, FLSS17, FH20, FSS21, FKST23, GPM03, GH91, GL18, Gaw19, Gei91, GL03, GIKT95, GI97, GL99, GT17, GPPT23, Gil94, GG11, GK15, GR23, GTJ13, GHHW90, GSV00, GMRS00, Gov91b, GR17b, GTI11, Gro98, GdlI08, GKL95, GO11, GKL14]. **Matrix** [GLM17, GP18, Guo98, Guo01a, GH06, GKL12, GR05, GN16, GS23, HLT12, Hal22, HIS23, HM04a, Har99, HLW05, He99, He21, HR00, HO10, Hey95, HO98, Hig92, Hig93, HK95, HT00, Hig01, HK01, Hig03, HMMT04, HMMT05, Hig05, HMT06, HMMT07, HMT09, HL11, HL13, HR14, HS16, HL21, HGC99, HGC00, Hla23, Ho90, HS95a, HI15, Hu92, Huc92, HSC04, HL02, HKBM08, HC89b, Ian06, Ian09, Ikr97, Ito96, IM16, IS07, IT11, JMPR19, JS94, Jia22a, Jia01, JTZ20, JMO93, JOvdD03, JKN11, JOAKt10, KKS97, Kau93, KB90, KL91, KL92, KL98a, KO18, KS22b, KP08, Kir95, KN98, KNOX02, KRU14, Koh99, KN91, KPC94, KMS15, Kra95, KH13, KL18, KK21, KL98b, KLS16, LP01, LMZ03, LP05, LNV92, Lau00, LH22, Law13, LP17, LRG23, LT97]. **Matrix** [LV06, Lew96, LR94, LY03, Li06, LBL05, Lie08, LT09, Lim07, LX06, LNP93, LWW15, LLZ23, LM18, Lu98a, Mac99, MV97, MMMM06b, Mar11b, Mat93a, Mat95b, Mat96, Mat97a, MSZ15, MMW22, Mei04, Mel04, MYK14, Mit20, Miz22, Mor21, Mor22, MGS20, NV94, NRT92a, NBG10, NNT17, NTTZ18, NS11, NP20, NS18, NK01, NS09, NST15, Nof17, NV23, Nou96, Ogi10, Ost10, OW92, PAP00, Pai09, Pai10, PP11, PW14a, Pál11, Pan93, PN18, PN23, PYHK93, Par05, PV09, Peñ01, yPWjP12, PK23, Pet21, Pil94, PSW22, PS08, PT18, PS22, PL14, QS06, Qi13, QCT15, QCT16, RS96, RR94, Rau02a, Rau02b, RE13, RS06, RVV17, RE98, Rum97, Rum22, SCPW12, SD16, STvDD17, Sch05, Sch95b, Sch23, Seb96, SC05, Sev03, SCBC21, SMBJS13, SC03, Sid95]. **Matrix** [SH23, SC10, Smi03, So92, ST01, SDC+12, Sta22, SU94, Ste91b, Ste16c, Ste18, SH93, SV15, SD12, Tam98, TFL11, Tas15b, TDV15, Tho94, TL06, Tis93, TZ13, TT98, TT99, Tre90, TW03, TYUC17, Tro90, TU91, Tsu93, Uhl20, Uhl18, VVM05, VBW98, Vec03, Ven93, Vog99, Wan98b, gWcWL12, WY17, WLB05, WS12, WCCL16, Whi90, WD95, Wim92, WZZH21, WZ23, XX16, Xia12, XBC22, XC18, fX96, XPL+18, XNB22, Xue96, YLA97, YGL18, ZMK02, Zha91, Zha95, ZHZ05, ZGP10, Zhe96, Zhe98, Zim17, vdV96, von93, AdHN88, BJ95, BMO92, BK89, Bas89, BV88, Ber88, BHH88, BN88, CS89, CLS88, DV06a, FM88, Gad88, GL96, HD97, JMW96, JJ88, JN89, JOvdD89, JH88, KL89, LG06, Liu88, Naz89, Ove88, OW88, Stu88, Wim88b, WW08, EW20, ZF14]. **Matrix-Algebraic** [Zim17]. **Matrix-Analytic** [LLZ23]. **Matrix-Matrix** [MSZ15]. **Matrix-Sequences** [FFH+19].

Matrix-Stencils [He21]. **Matrix-type** [BL94]. **Matrix-Valued** [ALAK94, Cla10, Kra95, KH13, Mat93a, QCT15, QCT16]. **Matrix-Vector** [BF05, GTI11, HR00]. **Matroids** [Mor94]. **Max** [BSvdD95, BCGG10, BJ16, DD98, HT17, Hoo17, HPTH19, MV23]. **Max-Algebra** [BCGG10]. **Max-Balanced** [HPTH19]. **Max-Plus** [BJ16, DD98, HT17, Hoo17]. **Maxima** [RSS94]. **Maximal** [CYA+18, CP20, Lat95b, SZH22]. **Maximally** [EG15]. **Maximization** [Fuh07, LWW15, Men18, VBW98, WZL21]. **maximizing** [All89]. **Maximum** [BW95, BE10, Bor03, CD14, JR08, OR93, YLA97, Ove88]. **Maxwell** [CHH+15]. **May** [ZvSD20]. **Mean** [BEBT07, BD93, BS10, CR16, FI18, HL08, JV16, Lim07, Moa05, Zha17]. **Mean-Square** [HL08]. **Mean-Squared** [BEBT07]. **Means** [AMPV97, AFPA07, DDV04, Dri06, Gem98, Lim13, Moa02, Pál11, PT05, PT18]. **Measure** [ABC+23, NQB14, Yse22]. **Measurement** [CH93b]. **Measures** [BK15, BGMN15, DRSZ07, Sch23]. **Measuring** [DMW23]. **Mechanics** [CGS94]. **Media** [BKKL91, CHH+15]. **Meet** [Mac95]. **memoriam** [Joh96]. **Memory** [ADV05, CGMM23, EM15, INRZ21, LHC16, GS21, KP92]. **Mendelsohn** [AL98a, IM95]. **Meromorphic** [ALAK94]. **Mesh** [vdSBvdV93]. **Meshes** [Ten97]. **Metabolic** [LS95]. **Metamorphosis** [Van11]. **Method** [AGJ14, Ain17, AT07, AM09, ABM+17, Ano11, BBS15, BDY99, BS05, BV90, BBTK08, BST16, BMV18, BF00, BNP23, BGSC07, BGT05b, BIP08, BR05, BBGL92, Bos21, BMRZ94, BHM97, CMV19, CS01, CFT16, CD15, Car18, CGLV11, CPZ11, CH93c, CD17, CESC20, CG98a, CYA+18, Dan91, DHT01, DD97, Del97, DV92b, DYY16, Drm96, DS18, ESR01, ES09, ES18, EG20, EG00, EOS19c, EOS19b, FJKM96, FAT16, FKZ23, FHS09, FS10, FSV14, FLSS17, GLS12, GTJ13, GG14, GH07a, GTPTI14, GRK17, Guo98, GL00a, Guo01a, GH06, Hac93, Hal20, Hal22, Har07, Har19, Hem95, HMT93, HS10, Hig92, Hig97, HK01, Hig05, HP02, HKP05, HN09, HGL05, HDSC23, HV05, Hu92, HZ01, HMWY18, Huc94, Huh02, Ian06, IT06, JNP21, JMM14, Ji92, JN03, JN21, JLSZ22, JL23, Joh08, KMMM18, KL92]. **Method** [KP08, KM11, KM14, KO15, Kui00, LLZ09, LM98a, LY03, LZ05a, LW20a, LV10, LMPT20, LM18, LR05, Lu98b, LP13, LKK97, LE02, MV08, Mas95, MOR16, Mat09, MR97, Mee09, MB10, Miz22, MO20, MO23, Mor95, Mor21, MM00, Nov11, OL99, PW15, Ple00, QL99, QS06, Qi13, RCH08, RST01, RT99, RP10, RW92, SGX14, Sim16, SH23, SH91a, SvdV96, SS17, Sor92, Sta02, SCMV21, SD09, Ste10b, SX11, Tis01a, TV09, Urs21, wVjBqJ11, Wal95, WC14, WCY15, WS00, Wül05, XCGL10, Xu05, XQ08, XNB22, XE12, YBZC16, ZŠ94, ZN21, ZZ98a, ZH03, Zha10a, ZSYJ18, ZYSY20, ZH17, de 92, vDHvdV00, vdMS05, vdV96, CS89, CLS88, HL06, KN89, Meh88, SS89]. **Methods** [AL95, Bai99, BGN03, BWQ06, BN06a, Bar08, BV92, Bar93a, BB18, BN06b, BBD11, BM99, BES98, BHM00, Bjö14, BV01, BM02, BDFF22, BF05, BrD07, BGBM92, BGBM93, BCW12, CR96, Cao00a, Cao08, CG92, CHZ16, CGMM23, CGI10, CKM22, CH99, CG96, DFT92, Drm10, ENV92, EHvP04, ESS+12, EN08, Ern00, EL91, FJ97, FGM91, FM93a, FS01, FS97, FNS08, FGS14a, FLS20, Gar90, GGLN13, GMN20, GL21, GOR14, GR15, Gre97, GV99, GMN16, GS03, Gu00, GMO+06, GR00, Gut14, GS21, HNRS22, HHRV99, HIS23, HJ07, HYI10, He99, HXY11, HL23, HS95a, HO92, HK12, INRZ21, JWN18, JK95a, JK97, Jam92, Jia95, Jou92, JCG14, Kan96, KS22a, KL91, KO01, KL08, KT10b, KT11, KV14, LWXZ06, Leh01, LS17, LLZ23, Lu10, Lu20, MNR15, MNR18, MG92].

Methods [MS02, Mat95a, Més08, Mor00, MH13b, MH15, NP02, Not19, Ors06, PW90, Ple06, PPLG20, RSH21, RS02, Saa97, Sch23, SS13, SWZ11, Sid95, Sim00, SG21, SV15, SJ92, VMM15, WY17, Wei95, Whi00, Woź93, Wri95, XZ22, ZZS04, ZHY16, ZH22, dBG08, vdG93, vdES04, AdHN88, BY88, FGS96, GL96, Wri97]. **Metric** [Bar00b, BD10, BS10, BDST08, XPL+18, Zim17]. **Metrics** [QZL05, ZH22]. **Meyer** [IK06]. **MGS** [PRS06]. **MGS-GMRES** [PRS06]. **Midranges** [MGS20]. **MIMO** [DSZ14, GVV04]. **Minc** [Lat95b]. **Minimal** [BEGM05, BMOvdD04, BdTD11, DDM10, DS10, DS19, DQV22b, FJKM96, Fio11, HP09, IM16, JN21, OV99, Par92, PR01, Pey01, Sch95b, SMBJS13]. **Minimal-Distance** [Fio11]. **Minimax** [Ash91, IM95]. **Minimization** [ABMV20, BL12, BL13, CKL21, EOS19c, EOS19b, FPST13, FM93a, HN98, Lu20, NNF14, SAGS21, ZN21, Zha17]. **Minimizer** [CS10b]. **Minimizers** [FGM91]. **Minimizing** [BDHS11, CG96, Ern00, GV07, HG18, LP11, TP23, Ove88, OW88]. **Minimum** [ADD96, BS90, BHH+08, Dax08, GJX22, HJ07, LN14, MV97, Mat05, MO20, PP05b, Wat92a, WS12, All89]. **Minimum-Residual** [HJ07]. **Minkowski** [ML89]. **Minors** [KMS01, KMS03]. **MINRES** [HDSC23, KS99, PW15]. **MIQR** [LS06]. **Mirrorsymmetric** [LF02b]. **Mirsky** [Fou18]. **Missing** [GG11, MU13]. **Mittag** [AD21]. **Mittag-Leffler** [AD21]. **Mixed** [DP07, GK93, IT11, MR22, Mur98, PS04, Ver96, fX96, ZK17]. **Mode** [LF02b, Ste10a, GMBS12]. **Model** [ASvG17, BB12, BGG18, CGGS99, CGSS01, CD17, CCL09, DRV21, FL18, FST+13, FG15, GVV04, Gil13, GAB08, JK95a, JLSZ22, JX20, LFW13, LSM22, MJM11, SS17, Ste08, SD09, VGA10, Ver96, ZPW18, KN94, Liu88, Tsa94]. **Modeling** [BH93, HV05]. **Models** [BCR11, GQ14, KNX04, PL14, SH91b, GBCW89, HJ89, Sal88]. **modes** [Sch95a]. **Modewise** [INRZ21]. **Modification** [AB16b, GE94, RBB90, VYH11]. **Modifications** [CFG98, DH01, DH05, GV07, BK89]. **Modified** [AG88b, Bar19, BP92, CH98, FLS20, GGL04, JX20, LZ10, PAH17, RDC93, Sil03, PRS06]. **Modifying** [DH99, GW92, HV19]. **Modular** [BvdG11]. **Modularity** [FT14]. **Modulated** [CCZ97, DLLT22, LX12]. **Modulus** [GR93, ZHY16]. **Modulus-Type** [ZHY16]. **Moment** [BH93, KO14, Tis93]. **Moment-Matching** [KO14]. **Moments** [Ain17, DA05, Hel95, SK20]. **Monotone** [Auj00, CdS90, CS96c, Kra95, KH13, Mas16, PK23, Tig91]. **Monotonic** [GLV10]. **Monotonicity** [Bor03, CHLS00, DRTW91, HHH12, Lag91]. **Monte** [HIS23]. **Moore** [BC10, FF99, HH93, HH94, Pat00]. **Morrison** [Rie92]. **Most** [OA23, WD95]. **Movable** [GT02]. **MR** [CH93a, GI97, HC89b, Zha95, Ikr97]. **MR2179674** [WW08]. **MSOR** [HMT93]. **Multiband** [MNT10]. **Multicoloring** [Har93]. **Multiconductor** [LF02b]. **Multidimensional** [AC18, HK08, LJW22, VD21, VKDD21, ZMW17]. **Multifilter** [Jia01]. **Multifrontal** [ADLK01, AP02, ADV05, DD97, LB96, PL97, XCGL10]. **Multigrid** [BWQ06, BDFF22, BC22, CD17, CESC20, DYH06, DSSC11, ES18, GH07a, HL23, HG21, HK12, Pul13, RKN20, Sou19, TW00, TMNV10, VZ06]. **Multihomogeneous** [GTH19a, GTH19b]. **Multilayer** [CRY+21]. **Multilevel** [ADC04, BM02, BW99, Buc00, BrD07, CT99, DK00, EV06, FMFJ18, GTW00, KCT90, Le 06, LS06, MP21, Not06, Pes19, SZ99, XLS16, Zha01]. **Multilinear** [BB08, BLNT13, BFP95, CWY20, DDV00a, De 06, DSD17, DD20, ES09, ES11, GLY15, HPZ23,

IAVD11, IAV13, KK17, SD15a, SDD15]. **Multiparameter** [DYY16, GA18]. **Multiple** [AAB10, AIM22, BM00, BSZ20, DH01, GRT07, HPS13, HPS16, JRZ99, KS92, KPM09, LMPT20, MB10, MBN17, PCB16, SH91b, VV15, VZ06, WLV06, Sun89]. **Multiple-Rank** [DH01]. **Multiplication** [BBD+16, BMSV92, HR00]. **Multiplications** [Hig92]. **Multiplicative** [DM04, LGI21, RW01]. **Multiplicatively** [SM16]. **Multiplicities** [DD16, JK95b, JS04]. **Multiplicity** [FL02]. **Multipliers** [CDP94, Nie10]. **Multiply** [AGQS22]. **Multiplying** [Hig92]. **Multipoint** [ASA04, FG15]. **Multipole** [SCMV21]. **Multiprecision** [FH18, HL21]. **Multipreconditioned** [BG06b]. **multiprocessor** [CG90]. **Multiresolution** [AKP08, MK20]. **Multisection** [AL98b]. **Multishift** [ASvG17, BBM02a, BBM02b, DW06, Gem98, KK07, SCMV21, VW12]. **Multisplitting** [Bai99, BCMM95, FS97, SB01, SJ92, Whi89, Whi90, Whi00, KN89]. **Multisplittings** [MPS01]. **Multistage** [ET10]. **Multistochastic** [CLN14]. **Multivariable** [Pál11]. **Multivariate** [BDD13, Bos21, CMPX03, DIS15, GMRS00, Han03, JLZ16, Zha10a]. **Multiwavelets** [Tur03]. **Multiway** [MBM08]. **MUSIC** [SES95].

N [GKRV90]. **N.** [Ikr97]. **Nano** [GKL12]. **Nash** [CT15]. **Navier** [WT11, Elm97]. **Navier-** [WT11]. **Near** [CJL96a, GCL16, GDF01, Har99, KKSZ22, BL02]. **Near-Diagonal** [KKSZ22]. **Nearest** [BHR10, Cif21, DB20, Dem92, FGL21, GHHW90, GLM17, HS16, Men12, QS06, Qi13, Rum97]. **Nearly** [BR08, BW97, DS97, Dem23, ESS+12, MHG15, ST14, WD95, Zha93b, GL96, Hav89]. **Nearness** [BDST08, DT08, GKL14, KMS15, SV15]. **Necessary** [Cor93, Gad88, HQ16, Pin19, Sou19, ZWF05]. **Need** [DI19, FH21]. **Nested** [BOS13, BHL+93, BT02, CCB+20, Cao00a, HR95, JLSZ22, SŠ91, SV93, Ten97]. **Nested-Dissection** [BT02]. **Network** [AD21, AL98a, BYDW18, BK15, GHN18, PT18, Sch23, vdSBvdV93]. **Networks** [BDR12, DS23, FMRR13, FH17, GDF01, IO16, KS15, WSSL06]. **Neumann** [CLN14, MOC91]. **Neville** [GP93, GT04]. **Newton** [KZ10, BIP08, BX08, CRY+21, DS16, ES09, EM15, FHS09, FM93a, GR17b, Guo98, GL00a, GH06, HK01, HMWY18, Ian06, JWN18, Joh08, KL92, LE02, PTC13, QL99, QS06, Qi13, San88, Tis01a, XNB22, ZŠ94, ZZS04, Zha10a, ZBJ15]. **Newton-Like** [GL00a, ZZS04]. **Next** [Mar91]. **Nilpotent** [LW05]. **Nine** [ZFW07]. **Nine-Diagonal** [ZFW07]. **NMF** [LGI21]. **No** [CCL09, FH21, QCCT17, ZL23, CH93a, GI97, HC89b, Ikr97, WW08, Zha95]. **No-Spillover** [ZL23, QCCT17]. **Node** [GPS90, RE98]. **Nodes** [BDGY20, Baz00, IS08]. **Noise** [BE07, DF20, Par94, Wan15]. **Noiseless** [Pin19]. **Noisy** [CR96, ED22, HL08, Miz22]. **Non** [BDY99, BGN03, CE12, CH93c, CESC20, ENV92, IN09, RSS09, YXC+17]. **Non-Diagonally** [CESC20]. **Non-Hermitian** [BDY99, BGN03, CE12, ENV92, IN09, RSS09, YXC+17]. **Non-Interior-Point** [CH93c]. **Nonadditivity** [CGMZ21]. **Noncommutative** [HM04b]. **Nonconvex** [BST16, TFL11]. **Nondefinite** [CPS00, Ser96]. **Nonderogatory** [Kar10, MH95]. **nondeterministic** [DY90]. **Nondiagonalizable** [LM06b]. **Nonexistence** [VNVM14]. **Nonfull** [Fei94]. **Nonfull-Rank** [Fei94]. **Nongeneric** [Van92, VV88]. **Nonhomogeneous** [Ger92]. **Nonincreasing** [GPS96]. **Noninterior** [Kan96]. **Nonlinear** [AA19, AG00, BLL22, BSFM10, BH13,

BM96, CZBL18, CCG+09, Eff13, ESR01, FL19, Gui99, Guo01a, GKL12, JMM14, KKM14, KS92, LM90, LZ10, Lu20, MOC91, MH13a, MBN17, PP05a, RRR06, RPG98, VMM15, VYH11, YGM09, ZBJ15, ZPW18]. **Nonlinearities** [CJMU22]. **Nonlinearizing** [RJ21]. **Nonlocal** [CD17, CESC20, KPC94]. **Nonmaximal** [FG94, Nab00, Wal03]. **Nonmonic** [GH91]. **Nonnegative** [Ano11, Art03, BN10, BCR11, CHLW23, CPZ11, CFJKS13, CK12, CSEP21, DWWY20, FGJ00, FHS+94, FG94, GTH19b, GGJ18, Gil13, GK15, GR23, GR93, Gru06, GP18, HNT99, Har98, HHSW97, HST19, HLM23, JZ99, JMO93, KOSvdD07, KP08, Kir95, KNOX02, Koe05, Koe07, KK21, LLŠ09, Lew91, LGL16, Miz22, Nab00, NP20, NS18, NQZ10, NT08, Ors06, PN18, PN23, PL14, QXX14, QCL16, SGX14, TFL11, WZ23, YY10, YY11, ZY93, ZHY16, AdHN88, HRS88, LH22]. **Nonnegatively** [BN06a]. **Nonnegativity** [BH08, KP08, NS94, SW91]. **Nonnormal** [BES15, GCL16, SCBG05]. **Nonorthogonal** [CL17, LUC23]. **Nonoverlapping** [CG92]. **Nonpassive** [FGL21]. **Nonpolyhedral** [ZvSD20]. **Nonpositive** [CKRU08, CFJKS13, HC15]. **Nonseparable** [Mae98]. **Nonsingular** [BC92, CKRU08, EG15, NK01]. **Nonsingularity** [GT99]. **Nonsmooth** [Beb06, DS23, Lew99]. **Nonspherical** [SS10]. **Nonsquare** [BEGM05, CG06, IM16, LGC08, Mor21]. **Nonstandard** [RT99, Sha23b, Zul11]. **Nonstationary** [Mat05, MPS01, SWZ11]. **Nonsymmetric** [AA94, BMS06, BGT05b, BIP08, BG06a, Cao02, CS98, CZ02, Day97, EN08, GV99, GL00b, Guo01b, GH07b, GIM08, Jou92, JL98, JOAKt10, KK93a, LwCKL13, LX12, Lu05, LKK97, Meh08, MO20, Mor00, Nab99, NRT92a, NRT92b, PW15, RKN20, SHY10, SB05, SSR20, SW94, VHK01, Auc89, OW88, AGQS22]. **Nonuniform** [BDGY20, GS03]. **NonUniformly** [RS21]. **Norm** [ABMV20, Auj00, BZ98, BE03, BK21, CK20, CG96, Dax08, DG19, EOS19a, EOS19b, FH21, FKLR13, GJX22, GGO13, GGMO17, HN98, Hal20, HNT99, HJ07, HT00, HGC00, HV19, Koh99, Li16, LT09, LV10, Mat93b, Mat05, Meu11, NS11, Pai09, PN18, PO03, RPG96, RPG98, TT14, WS12, FSV14, HC89a, HC89b]. **Norm-Minimizing** [CG96]. **Normal** [Bea01, CGRV20, Chu91, FKKL96, Fri02, GLPS11, GCL16, Huc94, Huh01, HL02, Huh02, Ikr97, Ito96, Lás94, LK95, Mai99, Mur91, Mur93, TMV18]. **Normality** [LJS19, Lee95, Lee96]. **Normalized** [GN13, PW14a]. **Norms** [BK97, BGKS99, BV07, CHLW23, CDP94, FHLS13, GKL95, GZ09, GZ15, HO10, HHSW97, HGC99, HM90, HLS97, IS11, MG10, MZ19, Mor12, NNF14, PR91, Sai19, VJ07, Zha99, Zul11, LT89, Wim88a, ABM+17]. **Normwise** [FLV04, Rum03a, XW07]. **Note** [BHL+93, Cao00b, Cao02, Cao09, CL09, CT15, DD08, DM04, FH93, GG03, GSTPT22, Gro97, KZ10, KP99, LT94a, LM03, Log17, LR99, Mas94, MNT99, Tům02, Zhe98, BM88, San88, Sun89]. **Novel** [AFPA07, GRK17, RCH08]. **NP** [GG11, HO10, LRG23, RK95]. **NP-Hard** [RK95, GG11, HO10]. **NP-Hardness** [LRG23]. **NQZ** [Ano11, CPZ11]. **Nuclear** [Li16, LV10, PN18]. **Null** [AD02, AB01, Bar93b, FJ97, GT08, GOS15, Guo02, KSH02, PR16]. **Null-Space** [FJ97, PR16]. **Null-Spaces** [KSH02]. **Nullspace** [IKSG10, Jam92, PW90, SV93]. **Number** [AMH09, AW10, ABG07, ANT19, AW05, BDMS10, BDMS12, BGT14, Bor10, BK19, BV18, CT93, CES22, Dhi98, ES05, Far16, FH21, GV07, Har05, HR14, KLV18, KW94, Li06, LP11, LT94b, gS00a]. **Numbers** [BK06, CD05, CC09, DMC13, GK93, Grc10,

KKT06, Kir02, KPM09, NW98, PT05, RVA05, SST06, VT98, ZMW17, Ede88]. **Numerical** [BDHS11, BBD+16, BDD14, BLd93, BBMX02, Bos21, BGBM92, BGBM93, CDGS10, CH93b, CG15a, Cho10, CG98a, Cro16, CP17, CG19, DBW15, DF20, DHW92, GLPS11, GL96, GKL18, GPTPV16, GC19, Gup02, HB94, KM16, LP01, LN22, LO20, Li91, LR94, LP00, LW05, LWY19, Lin03, LR05, Lu20, MG92, MA99, MYK14, Més08, MMH94, OOvdD98, Ors06, Ple06, PSW22, RS18, RD95, Ste03, Ste11b, Ste18, Swe93, Tre88a, Tre89, TW03, TU91, Tur97, Vav94, WLD18, Xu05, CJL96a, CJL96b]. **Numerically** [Fuh07]. **Nyström** [FTU23].

Obey [BHKR11]. **Object** [GL99]. **Object-Oriented** [GL99]. **Objects** [NW02]. **Oblique** [BMP20, CE02, DL02, GT99, JK95a, Ste11b]. **Oblivious** [INRZ21]. **Observability** [Bar94, CT91, EJK09, Wim88b]. **Observations** [CHZ03]. **Observed** [CH93b]. **Obtained** [Pai09, PW14a]. **occasion** [Mol92]. **Odd** [DDD20, LF02b, Mel01, Mel04]. **Odd/Even** [LF02b]. **Odd/Even-Mode** [LF02b]. **ODEs** [KJH16]. **Oettli** [May12]. **Off** [CDGS10]. **Off-Diagonal** [CDGS10]. **Ohta** [FP17]. **Once** [LW20b, WZZ22]. **One** [Arg15, BL21, BR22, BV90, BESS22, BEGG07, Bor09, BB07, CLL20, DS20b, DD13a, GTW00, GT17, GE94, HST19, JK15, JLS01, LNSU18, MMW17, MSS19, MHG15, OA23, PL14, Qi11, SB92, Sle09, Ste10a, Tre90, WC14, Wei92, ZG01, AKU20, BK21, MH95]. **One-Dimensional** [JLS01]. **One-loop** [CLL20]. **One-Parameter** [Tre90]. **One-Sided** [BB07]. **One-Way** [BV90, GTW00]. **Online** [ZPW18]. **onto** [Bor14, Din98]. **Operations** [LB02]. **Operator** [CT15, Dri06, HHLW13, JJ03, KK12, Mat93b, Nou96, PS08, RRR06, RHE14, TCTM00, TW03, BM88, BN87]. **Operators** [AMT90, Beb06, BK90, BJMS17, BET02, CHH+15, CZ03, Elm97, Gre92, GCL16, Gru06, HK08, HN98, HLT91, HLM94, JLS01, KBHH13, Kni00, KM96, PW03, Rog05, Sil03, SQ13, Tig91, ZAK13, DS95]. **Oppenheim** [LZ97, YL00, Zha04]. **Optic** [Kau06]. **Optical** [HKBM08, SdJL+18]. **Optics** [Bar08]. **Optimal** [ASvG17, ADC04, BB95, BBTT06, BSZ20, BOS16, BGG18, Bet09, BGH07, Bor14, CS09, CGMM23, CC17, DP10, Dem23, DS16, FG15, FL99, GH92, GLS12, GDX11, HB12, HL23, HS10, HG21, HS13, HDSC23, Jia22a, KN00, KMS01, KMS03, Li06, LC05, LP13, MM23, MV20, PS04, gSS97, TS99, TV09, Tyr92, VGA10, Whi00, Meh88, NW02]. **Optimal-Order** [DS16]. **Optimality** [CB00, ES11, EMC17, WZL21, OW88]. **Optimally** [KRS19, SES95]. **Optimization** [BL21, BAMC20, BM01, BLO03, CLL20, CDH12, FGL21, GHNV03, GMPS92, GGO13, HL08, Hig93, HMWY18, KMMM18, KLV18, LMPT20, MYK14, MV23, NBS10, OA23, PN18, PSW12, PFRR17, PPLG20, SZ07, SAGS21, TFL11, VV10, WCCL16, ZLQ12, FGS96]. **Optimized** [DK13, EDK16]. **Optimizing** [FNV08, HO94, NBG10, NP13, OW95]. **Optimum** [Woź93]. **Orbit** [DZ01, DK14]. **Orbits** [DD08, LPS08]. **Order** [AB19b, BFG23, BGG18, BB96, BE03, CG03a, CGMZ21, DDV00b, De 08a, De 08b, DN08, Djo08, DD13a, DD13b, DD14, DSD17, DRV21, DS16, DIS15, FLV04, FL18, GL18, GS94, Hem95, HR14, IAVD11, JX20, KB90, KGD23, KBHH13, KR02, LSM22, LNT18, LGL16, Lu10, Men08, MJM11, OA23, OL99, Peñ95, PS04, QCBZ21, Sai16, SK20, SS17, SQ13, SD15b, SM16, SMM20, SH91b, Ste10a, SW98, Vac94, VGA10, VKDD21, WZZ22, ZG01, dBG08, BS05, VD21, Zab89]. **Ordered** [Har93, JOvdD01, JOvdD04]. **Ordering** [Alt13, ADD96, ALP07, AL98b,

BFM03, BS90, DFT92, GO95, Gro97, HP09, LRN06, NR99, OYV22, RS94, RE98, YL08]. **Orderings** [BT02, Har93, Mas95, Pey01, SS89]. **Orders** [He99, JMW96]. **Ordinal** [WI09]. **Ordinary** [WZ95]. **Ore** [FR23]. **Oriented** [BvdG11, GL99, Har07, Mor94]. **Origin** [AHH01, ZvSD20]. **Orthogonal** [BZ98, BV95, CS09, Cla10, DDL14, DP04, DMM03, EM00, EGK91, FKZ23, FB95, Fie96, FR23, GW07, GGL04, GD22, Grc10, GdlI08, GC19, HLM94, HV97, Jia01, Kol01, Kol03, LUC18, LNSU18, LB96, LSB16, MV08, MHG17, Nap13, OST09, PN18, Rob16, Ste16b, SB95, Tur03, VFGM05, VVM05, WCY15, WZL21, Yan20, CH88, CG90, DGIM06, Hon89, Meh88, SB88]. **Orthogonality** [BP92, EAS98, HS98]. **Orthogonalization** [CGLV11, Dax08, RODS15, Sha23b]. **Orthogonally** [CCJ+00, DLT15, MHG15]. **Orthonormal** [BLW15, IW14, SDC+12]. **orthotropic** [CS89]. **Oscillation** [KH13]. **Oscillators** [FL99]. **Other** [Gre92]. **Out-of-Core** [Bér09]. **Out-of-Sample** [MSS19]. **Outer** [ZHY16, CF89]. **Output** [CCH98, GVK20, HJ89, Meh88]. **Overall** [DD13b]. **Overcoming** [HO98]. **Overdetermined** [HM97]. **Overlap** [Whi00]. **Overlapping** [CG92, SŠ91, ZŠ94]. **Overrelaxation** [GH92].

P [BG19a]. **P-matricity** [BG19a]. **Package** [GL99]. **Packets** [HL17]. **Padé** [Bas89, BL94, CM93, CJL96a, CJL96b, DP00, GN16, Hig01, HL11, HL13, Lu98b]. **PageRank** [WW08, BRZ06, GLY15, IK06, IS08, LM06a, SC05, WI09]. **Pair** [LŠ10, LM06b, LGL16, Ste16a, XNB22]. **Pairs** [BC92, Car94, EJK09, FV98, GPM03, GHT10, Hua21, JKM11, KS12, KLS16, Law13, LM06b, Tis04, XPL+18, HD97]. **Palencia** [CGL18, RS18]. **Palindromic** [BKMS15, De 18, HLQ09]. **Panel** [KDGG13]. **Parabolic** [DSSC11, MS97]. **PARAFAC** [dMGF14, GMBS12, PTC13, RCH08, Ste08, SD09, Ste12]. **Parallel** [BO96, BOCL97, BB07, Bos21, CGHR07, Cri88, DDN20, DYH06, DGL99, DP07, HR95, HP92b, JS94, Kon00, LC05, LR05, NY95, OYBV19, SYJ00, SJ92, Wal95, ZŠ94, ZGP10, de 92, vD99, vdG93, vdSBvdV93, DY90, KN89, SS89, Tsa94]. **Parallelizable** [ZZ98a]. **Parameter** [BK15, BKK07, CS01, CGGS98, DP09, HP02, HKP05, Ji92, LZ10, MH13a, MMW17, Ple00, SK16, SS17, Tre90, Uhl20, Vog99, RJ21]. **Parameter-Dependent** [BK15, MMW17, SK16, SS17]. **Parameterization** [KJH16]. **Parameterized** [BT10b, BCW12, CGI10, DBW15, JC22a, MB10, MSM21, NS09]. **Parameters** [DPP13, DPP22, FST+13, HG21, HZ01, KO01]. **Parametric** [BP21, GS06, Pop12, Pop15, SS17]. **Parametrization** [DJ09, DY10, FMX02, Jia01]. **Parametrized** [KT11, Mee03]. **Parareal** [Sou19]. **Paraunitary** [Jia01]. **Parlett** [DH03, HL21]. **Part** [BM94, FG94, Mat92, Nab00, AMR+18, BM00, BBM02a, BBM02b, De 08a, De 08b, DN08, DG91b, DG91c, DD13a, DD13b, EEK97, EEK99, Fer97, Gut92, Gut94, Ho90, LLZ09, MMT08, Rau02a, Rau02b, Rum03a, Rum03b, SD15a, SDD15, VD21, VKDD21]. **Parter** [JDS03]. **Partial** [ABG07, BDGY20, Bjö14, BT02, DD16, DEG+99, Fos94, GR23, GJX22, GKR89, GGC09, Gro97, GMBS12, HHRV99, He99, Hig97, JK97, JMM14, JN03, LO20, MSS19, RW95, Tam98, Tol97, Woź93, YL08, ZZ99, JMW96, JR88]. **Partially** [CKL04, Dan93, GOV19, KLX07, Næv93]. **Partition** [Wal95]. **Partitioned** [De 08a, IIM94, LNTX11, LNTX13, MO23, ZZ01, IM95]. **Partitioning** [AEGL19, AR93, FST+13, PV17, PSL90, YP98]. **Partitions** [Li16]. **Parts** [MMW22]. **Pasciak**

[FAT16, SW08]. **Pasciak-Type** [FAT16]. **Passage** [DA05, KN99]. **Passive** [FGL21, MV23]. **Passivity** [DRV21]. **Passivity-Based** [DRV21]. **Path** [GTJ13, JS07, LM18]. **Path-Following** [LM18]. **Path-Sums** [GTJ13]. **Paths** [PSS19]. **Pathways** [LS95]. **Pattern** [BSvdD95, DD97, Her90, LS95, HPR89]. **Patterns** [BMOvdD04, HLW94, KOSvdD07, LOvdD02, SHS03, Tsa98, JJ88]. **PDE** [CLNW20, DSSC11, PSW12, SZ07]. **PDE-Constrained** [PSW12, SZ07]. **PDEs** [BOS16, CDGS10, GLS12, Hem95]. **Penalized** [YLA97, ZZS04]. **Penalty** [LMPT20]. **Pencil** [AMR+18, BBV19, Bos21, CH06, DS10, DS19, GLM17, HGC00, JOAKt10, Naj98, SL94, BV88]. **Pencil-Based** [BBV19]. **Pencils** [AA09, AAB10, AB18, AT98, BR19, BR22, BBMX02, BT12, BT13, Bol90, BM06, BKMS14, BKMS15, BS16, BEGM05, CG98b, CG06, DD08, DD16, De 18, DK14, DJK17, DS20b, DQV22a, EEK97, EEK99, EK96, EK17, GPM03, GT17, GPPT23, HO94, HMT09, HGC99, IM16, IS07, IT11, KL98b, LGC08, LV06, LW97, Meh99, MMW17, MMW22, Mor21, PS22, TU91, NP16]. **Penrose** [BC10, FF99, HH93, HH94, Pat00]. **Per-Hermitian** [HBW90b]. **Perceptron** [CRY+21]. **Pereyra** [BEG+09]. **Pereyra-Type** [BEG+09]. **Perfect** [MV18]. **Performance** [BS90, BH90, BBM02a, NR99, Swe93, Wat00, WZZH21, ZH22, JP94]. **Periodic** [BT06, CCS05, CFL07, GKK99, GK06, Kir95, KLX04, LgS02, Sun04, Tam97, BC88, MF20]. **Periodicity** [CD00, DP09]. **Permanental** [GP88]. **permanents** [FF93]. **Permutation** [FJBd15, Stu88]. **Permuted** [MP12]. **Permuting** [DK99, DK01]. **Perron** [EKNX93, GTH19a, GTH19b, HQ16, KN94, KNOX02, LGL16, MP11, NS94, YY10, YY11]. **Person** [Mar91]. **Perspective** [DGR23, Mei04]. **Persymmetric** [AKM97, CLG93]. **Perturbation** [ABK+11, BCR11, BBGF00, BM06, BEGM05, CGRVC08, CPS97, CP98, CGP09, CS10a, CLN12, wC03, DDY14a, DDY14b, DD07, Din98, DM05, DOV94, EEK97, EEK99, EI98, ES11, Elm97, Far16, FHL23, Fie96, FJ06, GA18, Gu98a, HY00, Hig03, HMP19, HC15, IR08, IN09, IM16, JK15, Kåg94, Kar11a, KK14, KPC94, KP99, KMP01, Kre05, LMZ03, LNV92, Li95, Li98a, Li98b, Li99, LS03, Li05, LS07, LNTX11, LNTX13, LgS02, Liu12, LR99, LT94b, MOC91, Mat93c, Mat97a, Mat97b, MBO97, MD03, NNPQ23, Pet21, Ral09, RRR06, SMM20, Ste93a, Sun95a, Sun95b, Sun96, gSS97, gS98b, Sun04, TVW15, Vac94, Wan15, WD00, WLB05, Wel11, XSW10, XG98, Ye09, Zha93a, ZZ01, dTDM08]. **Perturbations** [AG88b, BR19, BR22, BEGG07, Ble21, BW93, DS20a, DD16, DS20b, EK96, GT17, GGMO17, HH21, HNT99, Kar11b, Li93, MMS16, MMW17, MT15, RS96, RW95, Rum03a, Rum03b, SW94, WD94, WD95, Zab91]. **Perturbed** [AKPP08, ANT09, BBS15, BFZ07, DLLT22, HHH12, MMN22, Naj98, SEM13, SM16]. **Phase** [BD22, CFL17, Mar11a]. **Phenomenon** [Hig03]. **Photonic** [HHLW13]. **Pieces** [CdS90]. **Piecewise** [BET02, Gow96]. **Pierce** [FF93]. **Pipelined** [CYA+18]. **Pivot** [Gar09]. **Pivoting** [BFG23, BS02a, BT02, CCJ+00, DEG+99, DGGX15, DP05, DP07, FH21, FXG18, Fos94, Gou91, GGC09, Hig97, HHP21, HS14, IT06, KDGG13, MM00, PMT23, SS98, Swe93, Tol97, YC97, HH89]. **Placement** [BR19, GT17, MX98, Mim15, vdWM95]. **Plane** [AP94, BMM20, PS88]. **Plus** [BESS22, BDG20, BJ16, CG03b, CESC20, DD98, Har05, HR04, HT17, Hoo17, ZZ99]. **POD** [CFT16]. **POD-Augmented** [CFT16]. **Point** [AGQS22, BSZ20, BB18, BG04, BG06a, CH93c, CHZ03, DH22, Din98, DGSW06,

Dol07, DJ00, DJR+18, EG15, GGV05, GS10b, GOR14, HZ01, JR13, JR08, KS22a, KC09, LV10, LZ10, LP13, Mar91, Més08, Not14, Not19, OS10, PW14b, PR16, PU10, PU14, RS02, RST18, SZ07, SHY10, SHZ12, SB04, SSR20, Tis01a, TS99, Tům02, Wri95, WT11, XW07, YXY20, Zul11, Rum91, Wri97].
Points [AAB10, BGN12, DPP13, DLT15, GL13, GKL14, O'N05, XC20, de 90].
Pointwise [CRS99, CRS01]. **Poisson** [CCZ97, LLZ23]. **Polak** [JX20]. **Polar** [BNP22, BvdMR+97, BX08, Eir00, GL17, GNS18, GI96, HMMT04, HMT10, Kap90, KL92, KZ10, Li95, LS03, Li05, Mat93c, NBG10, NH12, NNF14, Pil94, YL08, ZMK02, vdMRR01, GI97]. **Pole** [BMU94, FP98, MX98, Mim15, RS08, Sun96, Zab91, vdWM95, CM89, CM92b, GKR89].
Poles [GG14, MX98, VGA10]. **Policy** [OS09]. **Polyadic** [DD13a, DD13b, DD14, DL15, DGGG22, ED22, EVD22, SDC+12, SD15a, SDD15, SD15b, SD19, VD21].
Polyak [JX20]. **Polygons** [Fie95].
Polyhedral [GL23, Pil94, VF00, ZvSD20].
Polynomial [AB19a, AABK19, BDD13, BKS08, BFS21, Bet09, BN10, Bor10, CSX15, DMR09, DQV22b, FJKM96, FLV04, Gem98, HLT08, HLM23, KJH16, Lau00, LC15a, LVV16, LXSdH20, MMMM06a, Mur91, Mur93, Mur98, NNT17, NV23, Rei91, SKP11, Sor92, TMV18, TH01, VD21, VKDD21, Wim06, YXS21, Ash91, BV88, Tre88b].
Polynomial-Time [BN10]. **Polynomially** [GR97]. **Polynomials** [AKU20, AB16a, AMVW15, AMR+18, BNS13, BKMS14, BKMS15, BdTD11, BDF17, BV95, BGH95, wC03, Cla10, DB20, De 11, DDD20, DP15, DIS15, EGK91, FLT10, FIS01, GH91, GL18, GW07, GdlI08, GR05, HM04a, HM04b, HMT06, HMMT07, HMT09, IR08, JLZ16, JV04, Kit95, LP01, LP05, LNV92, LP17, LR94, LY03, LT09, Lin03, MMMM06b, Meu17, NNT17, NTTZ18, NK01, NST15, PSW22, RS96, RR94, RI11, RVV17, Tas15b, TDV15, TZ13, TT98, Xu15, ZZ98b, dSV01, DGIM06, MV88, Per88].
Polytope [GWZ05, GZ09, GZ15, JP09, JCG14].
Polytopes [GP16]. **Population** [KNX04, PL14, KN94]. **Port** [GHR21, MV20, MV21]. **Port-Hamiltonian** [GHR21, MV20, MV21]. **Posed** [BGT14, ES12, Kil99, KO01, DK88, Fos03].
Posedness [dSL08]. **positions** [BH96].
Positive [ADGH18, AMT90, AD02, AFPA07, Asw16, BGN03, BW95, BJL98, BDR12, BF06, BD05, BS10, BHH+08, BT92, CS01, Car94, CT08, CCL09, CHLS00, DK05, DHZ03, DY10, EG00, ED23, FHGJ06, FV98, FMFJ18, GP06, GT04, GHNV03, GLV10, HLW94, Her90, Hu92, HQ16, JMO93, JH02, JOvdD03, Joh08, JSG15, KOSvdD07, KN91, LLŠ09, Lat95b, Lau00, Li05, LS11, Lin19, Lu98b, LQ16, MV97, MA20, Mat92, Mat97b, MMW22, Mel04, Moa05, Mor22, NS07, ND06, NY95, NV02, OR93, Peñ98, Peñ05, PT05, Pha01, QXX14, Reu02, Roh94, RST18, SMBJS13, SAGS21, SH93, Wal03, WZ91, WZ95, Whi90, XG10, XC18, XHC21, Ye09, ZvSD20, Zha00, ZWF05, Zha17, Zha10b, vdMS05, AG88a, FM88, HPR89].
Positive-Definite [AFPA07, JSG15, KN91, MV97, Mel04, Moa05, SAGS21, WZ91].
Positive-Semidefinite [MA20]. **Positively** [SQ13]. **Positivity** [BD98b, CKP11, DD12, GP93, LGL16].
Possibility [Kol03]. **Possible** [GPS96, TM12]. **Posteriori** [BCW12].
Potential [ABM21, PYHK93, SC05, WW08].
Potentially [LOvdD02]. **Power** [BM01, CWY20, Del97, HS98, HV05, KM11, KM14, KW92, Ran07, TFL11, ZXS21, BN88].
Power-Compositions [BM01]. **Powers** [DD99, HK95, HL11, HL13, IM13, Seb96].
pp [Ano11]. **Practical** [BBK18, LK22, Lee95, TYUC17]. **Practice**

[Fos94]. **Prager** [May12]. **Prager-Like** [May12]. **Precise** [AS93]. **Precision** [AMHL22, CD15, FH19, HK95, JL23, MR22, PP11, YGL18, GS92]. **preclude** [JJ88]. **Preconditioned** [ASvG17, Axe92, BN06a, BN06b, BGSC07, CNP94, DFT92, DGGG22, Elm97, FS10, HS10, HS95a, HDSC23, HSC04, IW14, KN09, KK93b, KK93a, LW20a, LH05, Pes14, PW15, RP10, RW92, Ser98, SHY10, SX11, WZZ22]. **Preconditioner** [BG04, BS02a, BW99, CT99, ES12, EZ95, FP17, For03, FMFJ18, GLS12, GGV05, HT17, JWX03, LS06, lLNS17, MMN22, RN18, SZ99, SB04, SW08, Tan99, XLS16, XHC21, ZXS21]. **Preconditioners** [AGP19, AG19, ACST09, BNW09, BDSC11, BSZ20, BGH$^+$06, BK95, BG06a, BCMM95, Cap98, CP03b, CPS00, Che01a, CCZ97, CNW08, DYH06, Dol07, DS16, EN08, GMPS92, GG06, Gre92, HO92, KO05, KS22a, Kil99, LG06, LS17, Not14, NV02, PSW12, PR16, Pes19, SST05, SZ07, SHZ12, SSR20, TMNV10, TS99, Tyr92, Cha89, KCT90]. **Preconditioning** [ADGH18, ACW17, AV91, ABN09, Beb06, BOS16, BH03, Cao02, Cap00, Dem23, DGSW06, DSSC11, FJKM96, FTU23, GHL03, HJ07, JC22b, KNW20, KGW00, KL08, LRN06, LXSdH20, Log17, MT00, NS96, Not06, PAP00, PV17, PS04, PU10, RW94, RSS09, RS02, Ser96, SCBC21, SEM13, ST14, SCA12, SW08, Vav92, XX17, YXS21, vD99, Ash91, PU14]. **Preconditionings** [MP21, KY93]. **Preconditoner** [LW20b]. **Predicting** [Gil94, GS92]. **Prediction** [Elt92, GGC09, NP96, Qia88]. **Predictor** [BB98, HS23]. **Predictor-Corrector** [HS23]. **Preface** [LGPS90]. **Prescribed** [ADHM19, CE94, CKL04, DHST05, FIS01, NS94, RSS94, TDV15, BH96]. **Presence** [CGGS98, Par94, Wat00]. **Preserve** [DMS12, Loe90]. **Preserved** [DV06b, DV06a]. **preservers** [PR88]. **Preserving** [AM23, BWQ06, BNP23, BS91, BS94a, BH08, BDF17, Fit19, FHLS13, FT16, GLV10, GL10, HMMT05, HLT91, HLM94, HJP03, HLQ09, JN21, KRU14, KK17, KS12, KLS16, LX06, LGL16, MMS16, SS06, SdJL$^+$18, SMM20, VZ06, XC18, DS95]. **Pressure** [Mor22]. **Prewavelets** [Mae98]. **Primitive** [GGJ18, Pro13]. **Primitivity** [Ano11, CPZ11, FV98, WZ23]. **Principal** [AR93, Drm00b, JK95b, MSZ21, MTV10, MYA19, MM00, RST10, XK94, Yan98, dSV01, Özg91]. **Principal-Components** [AR93]. **Principle** [BRR00]. **Principles** [BL12, BL13, Bor03, Auc89]. **Priori** [AMS07, EV06, Lat95a, Sch23]. **Probabilistic** [CH23b, HI15, HIS18, IZ20, KW94, YC97, vDHvdV00]. **Probability** [Spe98]. **Probing** [CM92a, FSS21]. **Problem** [ASA04, AA94, Afs08, AE97, AHS00, AB19a, Aru92, BG11, Bai99, BS05, BL12, BL13, Bar93a, BJL98, BBT05, BBTT06, BBTK08, BF00, BGT14, BD90, BGT05b, BHP03, BEGM05, BDST08, BMU94, BFP95, BMV20, BW93, CZBL18, CE02, CGS98, Cha00, CP98, CG98a, CG06, CH06, CMT09, CF00, CB00, CH99, DBW15, DW06, DD10, DS19, DYY16, DS23, DK08a, DL17b, ES18, FZ16, Fri02, GOV19, Gow90, GS94, GS02, Gul95, GL10, HLT12, HPS$^+$11, HPS13, HPS15, HPS16, HP02, HKP05, HGL05, IM16, JNP21, JKN11, KM16, Kau93, Kau92, KN98, KN91, KMS01, KMS03, KLX07, LZ14, LM90, LGC$^+$14, LJW22, LM03, Lu95, Lu98a, LZ10, LN14, LKK97, Mac99, Mac95, Mal06, MP95a, Mar11a, MLV00, Mat98, Mee09, Meh04, MX98, MBN17, Mim00, MN97]. **Problem** [MPS98, NOZ11, NS18, NBS10, PDF16, Ple00, Ple06, Qi13, RW01, Sid95, Sun96, SD12, TETA05, VZ91, VGV09, Ven93, Voo12, VYH11, WE91, Wat93, WE94, Wei92, fX96, ZZ98a, ZWF05, Zha10a, ZXL14, ZYSY20, ZMW17, ZF14, dSL08, BJ95, Pan91, San88,

Tis93, Tre88a, Tre89, VV88, VV89, WBP89]. **Problems** [AT07, AGQS22, AM23, ABG07, ACST09, ANT09, ABN09, BDY99, BLL22, BESS22, Bar98, BST16, BSZ20, BDR12, Ben99, BOS16, BFS21, BG04, BN06b, BMS06, Bet09, BT10b, BH13, BM96, BES98, BHM00, BKK07, BBGF00, Bor10, BS16, BB20, BG06a, BGBM92, CGCDM13, CPTP09b, CGP09, CG10, CH93c, CESC20, CLNW20, CKL04, CGH11, CK91, CC17, CHZ03, CGS94, CSK95, CC92, CHLS00, DFT92, DG91c, DT08, DLM04, DW15, DS10, Dol07, DS16, DJR$^+$18, DP05, Eff13, EHvP04, EL97, EW13, EOS19b, FF94, Fio11, FJBd15, For03, For96, FS01, Fos03, Fri92, GH91, GHNV03, GITT96, GP97, GA18, GTI11, GJTP12, Gre05, Gu98a, Gu98b, GKL97, GKL14, Guo03, GHT09, HG18, HYI10, HMR01, HL23, HS10, HH98, HPZ23, HMP19, HZ01, HLQ09, Huc92, Ips06, Ips09, IW14]. **Problems** [Jam92, JMM14, Ji92, Jia22a, JLS01, Kan96, KKM14, Kau06, KNW20, KKSZ22, Kil99, KO01, Kni04, KMS15, KLV18, Lan07, LX09, Lau00, LC15a, LVV16, LG06, LY03, LS06, LNTX11, LNTX13, LW20a, LMPT20, MMMM06a, MMT08, Mal04, MH13a, MS10, MBN17, MZ19, MV23, Miy14, MH13b, MH15, Mor21, MM00, MPS00, NS07, Not14, Ors06, PS05, PYHK93, PSW12, PS04, QL99, QACT13, RT93, RHE14, RJ21, RSS09, Rod06, RPG96, RPG98, RS02, Rum12, RW92, Saa16, Sch05, SZ07, See11, SHZ12, SB04, SvdV96, SSR20, SW94, SB11, Sun95a, SV15, Tis01a, TH01, Tis03, Tům02, VMM15, Van92, wVjBqJ11, Wat01, WD00, WS12, WS00, WZZ22, XE12, YGM09, YBZC16, ZS14, ZH03, ZLQ12, ZSYJ18, ZBJ15, ZHY16, Zul11, CS89, CLS88, DK88, GIMT95, JN89, Meh88, MT89, Qia88, Wim88a]. **problems** [Zha95]. **Procedure** [CW96, GIKT95, GGL04, LSB16]. **Procedures** [GR00]. **Process** [Art96, BR08, CKR05, Gut92, Gut94, HKV05, Pai10, PP11, Pai19, Van08]. **Processes** [AGQS22, AG00, Cap98, CCZ97, Cla10, DQ02, GdlI08, Guo02, HM20, LF02a, LP89]. **Processing** [Aru92, SKP11, ZR95, Cri88, Fuh88]. **Procrustes** [AE97, SB88, ZYSY20]. **Product** [Alt13, Bar98, BOS13, BK90, BvdMR$^+$97, DHM19, DS18, GSV00, GK06, GR00, HK08, JS07, KN00, Kar11a, KT10b, LS11, LWW15, MMT05, MV02, MV07a, MP98, NNP04, RHE14, Sen06, Sha23b, SB03, Van10, Zha10b, ZR95, FM88, Tre88b]. **Product/Quotient** [GSV00]. **Products** [BZ07, BF05, CNG23, CDH12, FF94, FHLS13, FIS01, GTI11, GSTPT22, GLP01, GP04, HL17, HM90, HLS97, IZ20, JR13, MMT08, Mae98, MSZ15, Rod05, Ste18, WZ95, Zha97, HC89a, HC89b, PS88, Zha95]. **Profile** [PK93, PK94]. **Programming** [Ari00, AB01, ES92, FGM91, FS01, GS10a, Gil13, HXY11, LT97, LP11, MW01, OS09, PJB10, MT89]. **Project** [GMMN21]. **Projected** [CFL07, GL18, GOR14]. **Projecting** [Din98]. **Projection** [Bor14, BMP20, CWY20, GHHW90, JK95a, Jia22b, Mor21, Sim16, TP14, ZH03]. **Projections** [BL21, CE02, FL19, FNV08, Grc10, MOR04, RKN20, WD00, WZ17]. **Projective** [Hu92, Sal88]. **Projectors** [GT99, KS17, MS03, RE13, Ste11b]. **Prony** [Bos21]. **Proof** [Drm10, NV94, PS94, RS18, Bar89]. **Propagation** [CYA$^+$18]. **Proper** [SCBG05]. **Properties** [BSvdD95, BO96, BU21, BDMS10, BDMS12, BRZ06, Che98, DG91a, Elt92, FLT13, GIK00, Gov91b, Gow96, GW00, HP92a, Hla23, KK93b, KK93a, Le 96, LF02b, LQ16, MNR15, MMW18, MP95b, ND06, NS94, NSCS10, OS10, PP11, PW14a, RE13, SB04, SQ13, Sta22, SU94, Tre94, Tre05, VZ91, Xie23, dF05, Bas89, Lag91, ML89, VV89].

Property [DRTW91, EOS19c, EOS19b, HV19, JWX03, LT97, MO20, NNF14]. **Proportional** [BGMN92, CCH98, KLX04, LEMCD19]. **Proximity** [KT10a]. **Proxy** [XC20, YXY20, YXS21]. **Proxy-GMRES** [YXS21]. **Pseudocontractions** [SB01]. **Pseudoinverse** [LC16]. **Pseudoinverses** [DS17, FA23]. **Pseudomonotone** [Gow90]. **Pseudoperipheral** [GPS90]. **Pseudopolynomial** [GHNV03]. **Pseudospectra** [AA09, AAB10, BLO03, BLO07, BBM21, EK17, GL13, GKL14, HT00, Kar10, Kar11b, LP05, Ran07, TH01]. **Pseudospectral** [BLO04, GO11, KV14, LV17]. **Pseudospectrum** [BL10, BGN12]. **Pseudosymmetric** [BNP23]. **PSVD** [ABL94]. **Pure** [SDN21]. **Purely** [MS10]. **Pyramids** [HO15].

QMR [Sim97]. **QR** [CH23b, Ste06]. **QTT** [DK13, EDK16, KK12]. **Quadratic** [Ain17, AW00, Ari00, AB01, BS05, BBTT06, BGG18, BH90, BT10b, BMM20, CKL04, CCL09, DL03, FGM91, FS01, GP97, GHT09, GL10, HK01, HGL05, HLQ09, KLX07, LP01, LZ14, LNV92, LY03, LSM22, LS11, Lin03, Mat98, Mee09, MP11, NK01, OYBV19, Pin19, Ple06, PPLG20, QACT13, RS96, RT93, See11, SH91a, Tas15a, Tas15b, TZ13, TU91, Voo12, ZS14, ZH03, Zha10b, Meh88]. **Quadratic-Bilinear** [BGG18, LSM22]. **Quadratically** [BBTT06, HMWY18, MV23, QS06]. **Quadrature** [CKR05, FMRR13, FGS14b, UCS17]. **Quadratures** [Kau92]. **Quadric** [Nie10]. **Quadruples** [CMT09, GP98]. **Quality** [GM98]. **Quantile** [HNRS22]. **Quantile-Based** [HNRS22]. **Quantum** [CKO$^+$22, ELN22, MSV19]. **Quarter** [BMM20]. **Quasi** [BGG18, BT12, BT13, BLAK91, CS98, Cla10, DS97, DQ02, EM15, GI00, GIK00, GR17b, GdlI08, Guo02, Guo03, Har07, HM20, HMR01, MO20, Ste05, VGV09]. **Quasi-Birth-and-Death** [Cla10, DQ02, GdlI08]. **Quasi-Birth-Death** [Guo02, Guo03, HMR01]. **Quasi-Cyclic** [Har07]. **Quasi-Definite** [GI00, GIK00]. **Quasi-Gram** [Ste05]. **Quasi-Kronecker** [BT13, BT12]. **Quasi-Minimum** [MO20]. **Quasi-Newton** [EM15, GR17b]. **Quasi-Separable** [VGV09]. **Quasi-Stationary** [HM20]. **Quasi-Toeplitz** [BLAK91, CS98]. **Quasidefinite** [GSS96]. **Quasiseparable** [BOS13, BBD11, BEG$^+$09]. **Quasiseparable-Vandermonde** [BEG$^+$09]. **Quaternion** [JN21, SDN21]. **Quaternions** [Mac95]. **Question** [Kir02]. **Queue** [GT02]. **Queueing** [BM96]. **Queues** [DLLT22, HN97]. **Quotient** [DJ00, GSV00, MA20, Not03, RS08, Ste16c, SL94, SX11, XE10, ZAK13, BF89]. **Quotients** [CDH12]. **QZ** [KK07].

R [CT15, Ikr97, KZ10]. **Radau** [FLSS17]. **Radial** [Le 19, WLD18]. **Radii** [GP18, HNT99, Li91, MMS16]. **Radius** [Alt13, BM19, BN05, BN10, BZ00, COP20, GR93, GO11, GGMO17, JCG14, KV14, LO20, LW05, Mor22, NP13, Tig91, Tro90, BH96, OW88]. **Radix** [PL18]. **Radix-2** [PL18]. **Ramaswami** [Guo02]. **Random** [Ain17, AB19a, BMM20, BK21, CWY20, CD05, CLNW20, CC09, Del97, DMS13, DRSZ07, DGIM15, DK08b, ES08, GN03, HHP21, Hol91, INRZ21, Jia22b, KN99, KW92, PCB16, PMT23, RVA05, RS21, VT98, Ede88]. **Randomization** [SG21]. **Randomized** [BYDW18, BBK18, BG13, CD13, DGR23, FXG18, FTU23, GR15, GR17b, GS23, HI15, MNR15, MM23, Mar11b, MSKC21, NP23, Nec19, PJM23, PK23, RST10, Sai19, Ste21, WXZ16, XXC14, XXCB14, XXG12, Xia13,

YGL18, ZF13]. **Randomly** [PJM21]. **Range** [AS93, BLd93, CP17, CG19, DF20, GKL18, GTI11, KM16, LP01, LR94, LP00, Lin03, Lu20, RS18, TW03, TU91, FM88]. **Range-Space** [GTI11]. **Ranges** [Cro16, GLPS11, MA99, PSW22]. **Rank** [AKU20, ADGH18, AJRS13, AC20, AG88b, Arg15, ABM21, Asw16, BL21, BR19, BR22, BV92, BESS22, BLW15, BYDW18, BKS18, BBV19, BV00, BBBT20, BDG20, BEGG07, BCR11, BD10, BSU15, BS10, BHH$^+$08, BPR20, BK21, CCB$^+$20, CGCDM13, CR21, CI94, CDGS10, CWY20, CS09, CO12, COV14, Cho10, CGMZ21, CFG98, CP03c, CDLP05, CHW10, CSEP21, Cif21, CLG93, CGLM08, CK20, CKM22, DH01, Dax08, DDV00b, De 11, DD07, DD08, DD16, De 18, DDD20, DV07, DV08a, DV08b, DGGX15, DGR23, Di 09, DS20b, DD20, DK06, DI19, DWWY20, DL17b, ES09, ES11, ES18, EG15, ED22, ED23, FHL23, FPST13, Fei94, FB95, Fos03, Fou18, FP16, FT07, Fri16, GLPS11, GMN20, GR17a, GT17, GOV19, GG11, GGL04, GQ14, Grc10, GV07, GE94]. **Rank** [GCC18, GC19, GL13, Hal22, HY01, HS23, HM20, Hel95, HLW94, HMP19, HS13, HST19, IAVD11, IAV13, IUM14, JMPR19, JK15, JKN11, KM16, KK12, KGD23, KDGG13, KO18, KL07, KR02, Kol03, KO15, Kon00, KK17, KT11, LK22, LH22, LLZ09, LC16, LW02b, LZ05a, LS17, LNSU18, LMPT20, MU13, MA20, MPR18, MMW17, MSS19, MH15, MD03, MHG15, MBM08, NP23, NS11, NW14, Nie17, OA23, OSS14, PK93, PK94, Pan93, PE95, PK23, PL97, PSW22, PL14, Qi11, QCL16, Rie92, SCPW12, SS10, SMBJS13, SB92, SC10, SG21, SDN21, SZH22, SD15a, SDD15, Ste08, Ste10a, Ste13, Ste93b, Ste16b, Ste16c, Ste18, STT17, Tas15a, TP22, TYUC17, VV10, VYH11, WC14, WCY15, WLD18, WS12, WCCL16, WD94, WD95, XLS16, XX16, XG10, Xie23, Yan20, YXY20]. **Rank** [YGL18, Zab91, ZZ99, ZG01, ZZS02, ZZS04, ZLQ12, ZHQ16, ZXS21, Zhl12, dSL08, dTDM08, vdV96, BK89, FMSS21, MK20, Wim88b]. **Rank-** [BLW15, BV00, CSEP21, ES09, GGL04, KR02, Kon00, NW14, DDV00b, De 11, DD20, SD15a, SDD15]. **Rank-1** [DDV00b, GCC18, Ste10a, ZLQ12]. **Rank-Completing** [HMP19]. **Rank-Constrained** [FT07]. **Rank-Deficient** [Fos03, HS13, KGD23, MH15]. **Rank-One** [Arg15, BL21, BR22, BEGG07, GE94, HST19, JK15, LNSU18, MMW17, MSS19, MHG15, PL14, Qi11, SB92, WC14, ZG01, AKU20, BK21]. **Rank-Reducing** [WD95]. **Rank-Revealing** [CGCDM13, CI94, HY01, LLZ09, LZ05a, PE95, Ste93b]. **Rank-Structured** [CR21, MPR18, XG10, Zhl12]. **Ranking** [WI09]. **Ranks** [DL17a, NY19, RW95, TP23, TL06, HPR89]. **Rapidly** [Auc91]. **Rate** [BLL22, Guo01a, KNX04, MM23, Ste23]. **Rates** [BMfY03, LFW13, Nab99]. **Ratio** [AKU20, CHLW23, LNSU18, NBS10, Qi11]. **Rational** [AB16a, AB18, ADMZ18, ADHM19, BL00, BGV10, BFS21, BG15, BV00, BD90, CMV19, CGMM23, DD10, DQV22b, DSZ14, EG20, FKLR13, GG14, HB12, Ian09, KL91, KO15, KK93b, KK93a, LM98a, Lie08, LMC22, LW94, MV97, Nov11, OV99, Sid95, Sim16, SCMV21, SB11, VFGM05, VMM15, CF89]. **rationally** [Tre88a]. **Raviart** [PS04]. **Rayleigh** [BF89, BD09, CDH12, Hav89, KA10, Not03, RS08, SX11, Tan94, WZ17, XE10, ZXL14, ZAK13, ZK17]. **Rayleigh-Quotients** [CDH12]. **Reachability** [BF06, NT08]. **Reachable** [Men12, ZvSD20]. **Reaction** [KS15]. **Real** [AA94, BGMN15, Che01b, Chu91, CP03c, CES22, CDN14, DMP96, DLT15, Fio11, FG94, FIS01, GZ09, GL13, GGMO17, GR05, HIS23, Hig92, HDT10, JWN18, JW11, JLZ16, JP93, KN91, Li06, LV17, LKK97, MV07b,

Mel99, Nab00, PDF16, Peñ01, Peñ05, Roh93, SHJ09, Tam99, TY02, Tre90, Voo12, WD94, XZC99, Zha05, vdMRR01, AG88a]. **Real-Structured** [BGMN15]. **Real-Symplectic** [Fio11]. **Real-Valued** [CP03c, JW11, JLZ16]. **Realization** [CFL07, FPST13, LM90, MSKC21, Par99]. **Realizations** [FN04, HMP94, JK97, Par92, Wim88a]. **Realness** [ABK+11, CT08]. **Recapture** [BP92]. **Recession** [Gow96]. **Reciprocal** [LF02a]. **Reconstruction** [Bar08, BKKL91, GS03, ZGP10, HM89]. **reconstructive** [Sal88]. **Recovery** [BIS12, BdTD11, DDM10, Fou18, GQ14, Pin19, QCBZ21, WCCL16]. **Rectangular** [Baz00, BHL+93, BD10, GT04, GT08, HLS97, WA07, YL08]. **Recurrence** [ESS+12, ZZ98b]. **Recurrences** [GS00b, GR00]. **Recurrent** [Guo02]. **Recursion** [BM00]. **Recursions** [BLAK91]. **Recursive** [AHS00, Bér09, CS01, CGV03, EVD22, KS08, LM03, MR22, PL18, PV17, Qia88, ST01, Tam97, Wel11, ZWF05, ZZLY02]. **Recursively** [Gre97]. **Recycling** [CFT16, RSH21]. **Recycling-Based** [RSH21]. **Reduced** [GV99, Gre99, JX20, NS96, SS17]. **Reducibility** [LJS19, LW94]. **Reducible** [BCGG10, EHW10]. **Reducing** [DYH06, GMN16, RS06, WD95, YB91]. **Reduction** [ASvG17, AG91b, Bar02, Bar94, BB12, BGG18, BDG20, BB96, BG94, BKK18, DV07, DD14, DRV21, Fei94, FL18, FG15, GVV04, GPM03, Gei91, GR17a, GP97, GAB08, Guo03, HMR01, HJP03, IT18, JK95a, Law13, LSM22, MJM11, NTTZ18, NBS10, OA23, OST08, OST09, Ost10, PYHK93, Par92, RT99, SS17, Sou19, SS23, Tis04, VVM05, VGA10, ZPW18]. **Reductions** [SH91b]. **Reeves** [YBZC16]. **Referees** [Ano97]. **Reference** [Tol97]. **Refinable** [Han03, JRZ99, RST01]. **Refined** [Eir00, HP92a, IN09, JN03]. **Refinement** [BES05, DHT01, JC22b, JDS03, Miz22, Tis01a, Hav89]. **Refinements** [BG19a, CKP11]. **Refining** [RST18]. **Reflection** [BKKL91]. **Reflexive** [Che98, NNP04, Wan98b]. **Reformulations** [RT20]. **Region** [IAVD11, Kir92, SW94]. **Regions** [HL02]. **Regression** [ACW17, BE07, Fei94, GIG22, MYA19, SCBC21, SA22, O'L90]. **Regular** [BR19, Bez12, Cao00a, Cao00b, DD16, GT17, Hua21, LV06, Pow88]. **Regularity** [FGP00, GP16, JR99, RR98, RST01]. **Regularization** [BE07, BGMN92, CCH98, GMN20, GL21, GHO99, JLSZ22, KS99, KO01, KLX04, Mal03, MH13a, PSW12, RSH21, WXZ16]. **Regularization-Robust** [PSW12]. **Regularized** [BBTT06, BBTK08, BST16, CC17, DGSW06, Dol07, HMWY18, LC16, LPT10, PO03, RG05, SNC02, SHZ12]. **Regularizing** [HJ07]. **Regulators** [KB90]. **Related** [Alt13, BF93, BKMS14, CZ03, Cro16, CKP11, DMC13, DLM04, DK98, FS01, GP18, Gut92, Gut94, Gut14, Hla23, HLS97, KLV18, May12, MP91, PK93, PK94, SWYM96, ZLQ12, Bas89, BBDS95]. **Relation** [Fie95, GHR21, Nou96, Tam97, Xu98, ZZ98b, MV88]. **Relations** [BS02b, CG96, EGGR99, GPPT23, GP03, HLT91, Mat05]. **Relationship** [CG92, HPS+11, PP05b, Peñ98]. **Relationships** [CF02]. **Relative** [Bar00b, DDY14b, DP04, DMM03, DMM08, DH97, EI98, EGTP17, HC15, Le 96, Li98a, Li98b, Li99, Li05, LR99, Par05, Tru06, Ye09]. **Relative-Error** [DMM08]. **Relatively** [WLV06]. **Relaxation** [AW00, BF05, Cif21, ENV92, HG21, HZ01, LZ10, Woź93]. **Relaxations** [FJBd15, Hel00, LQ16, NW14, Sch05]. **Reliable** [Dhi98, Ral11]. **Remark** [Lat95b]. **Remarks** [BGT05a, Fri16, RS18, Wei95]. **Renumbering** [BW99]. **Reordering**

[GK06, JNP21, PFRR17, Zha01]. **Reorderings** [LC05]. **Reorthogonalizing** [GGL04]. **Repartitioning** [GH92]. **Repeated** [AT98, BS96, QACT13]. **Replacement** [CD14]. **Representation** [DV08b, FS97, GdlI08, KK12, Mar11b, PJM21, Sai16, Ste16a, SB95, SB03, Wei96, Xie23]. **Representations** [CDG+05, CGP06, CDG+07, HLW05, HR00, JLZ16, LHC16, MW01, WLV06, WL12]. **Representing** [Tig91]. **Reputation** [dKV10]. **Require** [Tsa98]. **Rescaling** [Hu92]. **Research** [GKL12]. **Residual** [AIM22, CD14, CGLV11, DH97, Ern00, FJKM96, GJX22, Gre97, HJ07, JN21, Mat98, Meu11, Meu17, Saa06, Ste91b, gS96, Tru06]. **Residual-Minimizing** [Ern00]. **Residual-type** [Saa06]. **Residuals** [BD09, Grc10]. **Resistance** [Fit19, SS23]. **Resolution** [CC92]. **Resonance** [GS06]. **Respect** [Ble21, RODS15, Uhl18, WD94]. **Response** [BL12, BL13, ZXL14, MP88]. **Restart** [WS00]. **Restarted** [BJM05, BER04, BF00, FGS14a, JK97, JN03, LS96, Leh01, MR97, Mor95, Mor00, NZ16, Sim00, XE12]. **Restarting** [AGJ14, CGLV11, EEG11, FKST23, JLSZ22, Sta02]. **Restarts** [FGS14b, ZH17]. **Restoration** [CR96, NNP04, RHE14]. **Restricted** [BT10a, CDD00, DG91a, MT15, Nov11, VZ91, Zha91]. **Restricted-denominator** [Nov11]. **Restrictively** [LW20a]. **Result** [CGL18, Pai10, Sle09, Voo12]. **Results** [BLd93, Cho10, DG91b, Din98, Djo08, DD13a, DIKMI18, Fer97, GS02, GWZ05, KS03, Mei04, Men99, MT00, MPS98, NP96, Ser98, Wil08, YL00, YY10, YY11, von93, CRR93]. **Resummations** [GTJ13]. **Retractions** [GL18]. **Retrievable** [BD22]. **Retrieval** [BR05, CFL17, VD21, VKDD21]. **Revealing** [CGCDM13, CI94, DGGX15, DK06, FB95, HY01, KDGG13, LLZ09, LZ05a, PE95, PL97, SG21, Ste93b]. **Reverse** [BMRZ94, Djo08]. **Reversible** [DR93]. **Review** [AYLR04, Meu92]. **Revisited** [Dub00, Hig05, Pey01, Wu17]. **Revisiting** [AC20, NV23]. **reweighted** [O'L90]. **Ribière** [JX20]. **Riccati** [BIP08, CR10, FHS09, Guo98, GL00b, GL00a, Guo01b, GH07b, GIM08, JL98, JOAKt10, KP99, LwCKL13, Lim07, LgS02, LX06, LX12, Lu05, MOR16, MX09, Sch95a, Sim16, gS98b, Sun04, gWcWL12]. **Riccati-Type** [LX06]. **Ridge** [ACW17, GIG22, SCBC21]. **RidgeSketch** [GIG22]. **Riemannian** [BS10, BAMC20, CDH12, DGGG22, HMWY18, IAVD11, JX20, Lim13, Lin19, SAGS21, VV10, WCCL16, YBZC16, Zha10a, ZBJ15, Zim17, ZH22]. **Riesz** [vdMS05]. **Right** [AIM22, GRT07, HPS13, HPS16, HP02, KS92, MB10, Ple00, WCW10]. **Right-Hand** [AIM22, GRT07, HPS13, HPS16, KS92, MB10]. **Rightmost** [EW13, MR97]. **Rigidity** [KK21, ST08, SC10]. **Rigorous** [CS10a, DN11]. **Ring** [CLL20]. **Ritz** [AKPP08, BGV10, BD09, CE12, Hav89, KA07, KA10, MSZ20, MSZ21, PP11, Tan94, TM12, WZ17, Wu17, Wül05, ZXL14, ZK17]. **Robert** [Joh96]. **Robust** [AGP19, AL98b, BSZ20, BH90, BLO03, DLMT13, Eff13, EL97, FMFJ18, GQ14, HL23, KB93, LGWX12, LNT18, MRU22, NK01, O'L90, PSW12, SNC02, Sch05, WLV06, WT11, XG10, XX17, Yan93, Zha01, Zul11]. **RobustMap** [Ost10]. **Robustness** [BCGG10, Gil13, MV20, WD94]. **Role** [Liu90]. **Root** [DK98, EKNX93, FHL23, Gaw19, GH06, HMMT05, Ian06, Ian09, KNOX02, LFW13, Mat97a, Mei04, MV23, KN94]. **Root-Max** [MV23]. **Rootfinding** [CR21]. **Roots** [AMVW15, AMR+18, CG15b, FH10, GR05, LB02, Lu98b, MS91, NST15, Smi03, JN89]. **Rosenbrock** [AB16a]. **Rotation** [DL02, JSG15]. **Rotations** [AP94, Drm10, GO95, Moa02, SV05, Van11, PS88, SB88].

Rounding [CH23b, CYA+18, SvdVM00]. **Roundoff** [EMC17, LEMCD19, LMC22]. **Roundoff-Error-Free** [EMC17, LEMCD19, LMC22]. **Row** [CH06, CK20, CH99, DH05, FHS+94, GNP94, RS94, RSS94, Pan91]. **Row-Wise** [CH99]. **Rows** [GN03]. **RQ** [SY98]. **Rule** [DTGVL05, Mat96, SW98]. **Rules** [CKR05, LK95, Xu15]. **Rutishauser** [WE90].

S [CT15, WW08]. **Saddle** [BSZ20, BB18, BG04, BG06a, CHZ03, DGSW06, Dol07, DJR+18, EG15, GGV05, GS10b, GOR14, HZ01, JR08, KC09, LZ10, Not14, Not19, OS10, PW14b, PR16, PU10, PU14, RS02, RST18, SZ07, SHY10, SHZ12, SB04, Tům02, WT11, XW07, Zul11]. **Saddle-Point** [CHZ03, DGSW06, EG15, GOR14, HZ01, Tům02]. **Saddlepoint** [RW92]. **Saddlepoints** [Men99]. **Salesman** [JNP21]. **Sammon** [ZLN10]. **Sample** [BMfY03, GTP18, GKL95, GKL97, MSS19]. **Sampling** [AKP08, GS03, IW14, LK22, LH22, SD19, XXCB14, XXG12]. **Sandwich** [Jia98]. **Satisfy** [ZZ98b]. **Satisfying** [CG03a]. **Scalable** [WLMD19, vD99]. **Scalar** [ACST09, BvdMR+97, Kar11a, MMT05, MMT08]. **Scale** [ABM+17, BSFM10, BYDW18, BHM00, ES92, FI18, FM93a, GIG22, GH07a, GAB08, GS23, HXY11, JK95a, KMMM18, LC15b, LwCKL13, MS10, Men18, OS09, PR12, SS13, Sim16, SK16, SY98, WZ17, ZSYJ18, HC89a, HC89b, MZ19]. **Scaled** [CE02, FHL23, GN16, Mat09, HD97]. **Scaling** [AMH10, AP94, BBS15, Bet09, BZ00, BX08, CH94, DP05, FLV04, FH19, Fay95, Hig05, HO15, JSG15, KL92, KZ10, KRU14, RSS94, SW97]. **Scaling-Rotation** [JSG15]. **Scalings** [BB95, DQV22a, Gre92, HPTH19]. **Schatten** [FHLS13]. **Scheduled** [MM23]. **Scheduling** [ADLK01, ADV05]. **Scheme** [ALN07, ALP07, CWY20, IAVD11, NY95]. **Schemes** [Bor03, JZ99, Whi00, vdG93, Whi89]. **Schmidt** [Bar19, BP92, CLR21, GGL04, PRS06, Ste05, VNVM14]. **Schrödinger** [JLS01]. **Schubert** [YL16]. **Schur** [GLV10, Ste02, ALAK94, ABN09, BLAK91, BL10, CO99, CS96b, CDGS10, CLN12, CNW08, CH88, DH03, DDV04, DV06b, ET10, GKX94, GK06, GH06, HL11, HL13, HL21, HS95b, HLS97, IM13, JMM14, KS22a, KL98a, KPC94, KMP01, LZ05b, MV07b, Mat95b, Pet21, SK95, Smi03, Ste01, Sun95b, ZXS21, ZH17, vdV96]. **Schur-Monotonic** [GLV10]. **Schur-Type** [ZH17]. **Schur's** [LJS19]. **Schwarz** [Bor09, BPS05, FS97, FNS08, HM90, NS07]. **Science** [AD21]. **Scores** [HIW15, Hoo17, SG21]. **Search** [Hig93, RCH08]. **Searches** [HK01]. **Secant** [CFG98]. **Second** [BS05, BH93, BB96, DRV21, FLV04, GR93, Koh99, LNT18, OL99, OW95, PS04, Vac94, WZZ22]. **Second-Moment** [BH93]. **Second-Order** [BB96, OL99, PS04, Vac94, WZZ22, BS05]. **Section** [LGPS90, MG92, NP99]. **Sections** [Rog05, Sil03]. **Secular** [LB02]. **Segregation** [DMW23]. **Seidel** [MNR15]. **Selected** [RS21, XXCB15]. **Selection** [AB13, CK20, CB00, Lu10, RE98, YXY20, dBG08]. **Self** [BLL22, BP21, CKL21, Cao09, DQV22b, GL23, LP01, LWWY14, MSZ20, PL18, Per88, WE89, WE90, YGM09, ZAK13, vdMS05]. **Self-Adjoint** [Cao09, LP01, MSZ20, ZAK13, BP21, vdMS05]. **Self-Conjugate** [DQV22b]. **Self-Consistent** [BLL22, CKL21, LWWY14, YGM09]. **Self-Dual** [GL23, Per88]. **Self-equivalent** [WE89]. **Self-Recursive** [PL18]. **Self-Similar** [WE90]. **Selfadjoint** [KL98b, RRR06, ZZTA02]. **Semantic** [VS14, ZZ99]. **Semencul** [AG91a]. **Semi** [BY88, GK15, LHC16, SA22]. **Semi-Infinite**

[SA22]. **Semi-iterative** [BY88]. **Semi-Nonnegative** [GK15]. **Semi-Separable** [LHC16]. **Semialgebraic** [QCL16]. **Semicircle** [BZ07]. **Semiclassical** [HL17]. **Semiconvergence** [AM05]. **Semidefinite** [AD02, BS10, BHH+08, CS01, Car94, CFG98, DHZ03, DH97, DY10, FNS08, GS10a, GS02, HXY11, Hel00, HLW94, Her90, JT98, Lau00, LWXZ06, Mal04, MA20, MW01, MMW22, NS07, NW14, Ste10b, SH93, WZ95, Zha00, HPR89]. **Semidirect** [HG14]. **Semigroups** [GR97, Jia98]. **Semimonotone** [MP95b]. **Semiproximal** [BST16]. **Semirings** [Pat00]. **Semiseparable** [CG03b, CDG+05, CGP06, GLV10, Har05, Mar11b, VVM05, XC18]. **Semisimple** [LMZ03, Lan07, QCT15, QCT16]. **Semismooth** [DS16, Qi13]. **Semismoothness** [QY04]. **Sense** [HPS16]. **Sensing** [JKN11]. **Sensitivity** [Afs08, AA19, Bol90, CI95b, DB88, GA18, GG06, GTPI13, GKL97, Mey94, Sch23, Zen16, Zen19, Zha93b]. **Separability** [Miz22]. **Separable** [HG14, KS92, LHC16, VGV09]. **Separation** [De 11, GED22, LZ05b, WLB05]. **Separator** [GW22]. **Separators** [GM98]. **Sequence** [BGH95, DD99, LM98a, Pai09, PW14a, Tam97]. **Sequences** [Arg15, FFH+19, FC01, GJX22, HSC04, NSCS10]. **Sequential** [DP07, Pea88]. **Sequentially** [CDG+05]. **Serial** [OYBV19]. **Series** [DM05, FG15, HR93, KS03, LW20a, SGX14, VP93, Bas89, BN88, Tre88b]. **Serra** [WW08]. **Serra-Capizzano** [WW08]. **Server** [GT02]. **Set** [AM95, AKM97, BM19, BF06, CP17, EK96, Gow96, Gro97, Hla08, Hla23, HLM23, Huh01, KP08, LP96, LH22, May12, NS18, Pil94, RS18, Pea88]. **set-theoretic** [Pea88]. **Sets** [AMT90, BN10, CRS99, CRS01, CG19, De 18, DLT15, GGJ18, GGO13, GZ15, GP16, Kar11a, KO18, May12, MPS00, Pop12, Pro13, SU94]. **Several** [Bin90, CCG+09]. **Sham** [LWWY14]. **Shape** [AKM97]. **Shared** [ABM21, KP92]. **Sharp** [BLL22, BT92, Dri06, Hal20, TVW15, PS88]. **Shary** [Neu00]. **Sherman** [Rie92]. **Shift** [AM23, BMS06, FS10, GS03, MV02, ZZ99, HL06]. **Shift-Invariant** [GS03]. **Shift-Invert** [AM23, FS10, HL06]. **Shifted** [CES22, CM03, GLS94, Guo03, GIM08, HMR01, HG21, KM11, KM14, MV07a, RN18]. **Shifting** [MP91, vdG93]. **Shifts** [BBM02a, Emb09, MV18, Wat95, Zhl12]. **Short** [ESS+12]. **Short-Term** [ESS+12]. **shorted** [BM88]. **SIAM** [Ano11, CH93a, HC89b, WW08, Zha95, GI97, Ikr97]. **Sided** [BB07, CZ02, FB95, Fie96, OYBV19, OYV22, SWYM96, ZH17]. **Sides** [AIM22, GRT07, HPS13, HPS16, KS92, MB10]. **Sign** [BD98a, BMOvdD04, BC92, BD15, BDF17, BHM97, CK00, HMMT04, JMO93, KL91, KL92, KOSvdD07, LOvdD02, LS95, Peñ95, Sha95, SHS03, Tsa98, JJ88]. **Sign-Central** [BD15]. **Sign-Nonsingular** [BC92]. **Sign-Solvability** [CK00, Sha95]. **Signal** [Aru92, SKP11, ZR95, Fuh88]. **Signature** [PSS19]. **Signatures** [Wim06]. **Signed** [FA23, HKG09, KSH02, SHS03]. **Significance** [Van92]. **SIMD** [BMSV92]. **Similar** [LLŠ09, Sle09, WE90]. **Similarity** [CG15a, FP98, GKK99, IIM94, LPS08, VVM05, dSV01, CH88]. **Similarity/Equivalence** [IIM94]. **Simple** [Bol90, GG14, Lu05, MA20, OP05, Ste91b, Tam99, WLB05]. **Simpler** [JRG09, NTTZ18]. **Simulation** [CKO+22]. **Simultaneous** [AhS98, Bin90, BGBM93, BMV20, CS96a, DF20, DDV04, De 06, GOV19, LN22, LUC18, MM11, OST09, PR91, Sut12, CJL96a, CJL96b]. **Sinc** [NP02]. **Sine** [CDD00]. **Single** [AD98, BMU94, CHH+15, MX98, Mim15, SX11, Meh88]. **Single-Curl** [CHH+15]. **Single-Input** [AD98, BMU94, MX98, Mim15].

Single-Vector [SX11]. **Singly** [Tis03]. **Singular** [AMMS08, AHH01, BB08, BES15, BV90, Bar02, BL02, BT17, BGT14, BB96, BK90, Bor09, BW97, Cao08, CGV03, CI95a, CL09, CT15, CHH+15, CFG97, CCH98, CDD00, DDV00a, DG91a, DV92a, De 94b, DD98, Dem92, Dem99, DP09, DPP22, DSD17, DI19, DJ00, Drm00a, ES12, Fer98, Fri05, GMN18, Gra10, GE95c, GRK17, GLM17, Han94, HMP94, HHSW97, HDT10, HMP19, HS00, HJP03, HC15, IS07, JS94, JN03, JC22b, JN91, JN93, KGD23, Kit95, Krä19, LC15b, Li93, Li98a, Li98b, LM02, LS07, LNT18, MS02, MMW17, MVV92, MMH94, MR18, MS03, Not16, O'N05, OYV22, PS94, PP05a, PSW22, RY05, RW95, Rog05, Rum97, SCBG05, SS06, SWZ11, Sil03, Ste21, SB01, gS00a, Tam98, wVjBqJ11, WA07, Wan15, Wat92b, WCB22, XPL+18, XNB22, YB91, Zen19, Zha91, Zha97]. **Singular** [Zha00, ZQ10, Bap89, BY88, BN87, FF93, GL96, KN89, WE89]. **Singularities** [MS99, VJ07]. **Singularity** [Bea01, FP16, LH05, PS22, RR98, Roh93, Wan98a]. **Singularity-Induced** [Bea01]. **Singularly** [DLLT22, MMN22, Naj98]. **Sinkhorn** [Kni08]. **Size** [CNW08, GW22, KNX04]. **Size-Classified** [KNX04]. **Skeleton** [CD13]. **Sketch** [GMMN21]. **Sketch-and-Project** [GMMN21]. **Sketched** [PJM21]. **Sketching** [ACW17, CLNW20, CJ21, FGK+22, GIG22, GS23, MYA19, TYUC17]. **Skew** [AKM97, BGN03, BLdP97, BBMX02, Ben09, DHZ03, DK14, Fer98, GV09, GPTPV16, Hac93, Hla08, Kre05, Meh99, Rod05, RP10, SB04, Tam98, TY02, Tre05, Yas03]. **Skew-Adjoint** [Rod05]. **Skew-Centrosymmetric** [TY02, Yas03]. **Skew-Hamiltonian** [BBMX02, Kre05, Meh99]. **Skew-Hamiltonian/Hamiltonian** [BBMX02, Meh99]. **Skew-Hermitian** [BGN03, Ben09, RP10, SB04]. **Skew-Symmetric** [AKM97, BLdP97, DHZ03, Fer98, GV09, GPTPV16, Hac93, Rod05, Tam98, DK14]. **Skewcirculant** [Huc92]. **Slack** [GL23]. **Slicing** [Har98]. **Slow** [BET02]. **Sluggish** [O'C02]. **Small** [BPR20, BLO07, CO12, CNW08, GTP18, GV07, GKL95, GKL97, Hig03, JV04, Kar11b, Ste21]. **Small-Sample** [GTP18, GKL95, GKL97]. **Smallest** [GW22, Mal06, Mel04, Xue96]. **Smith** [LK95, Mur91, Mur93]. **Smooth** [DE99, Mae98]. **Smoothed** [BC10, SST06]. **Smoother** [TW00]. **Smoothers** [DJR+18]. **Smoothing** [AIM22, AC20, HJ07, HL23, QL99]. **Smoothing-Norm** [HJ07]. **Smoothness** [CD00, Han03, JRZ99, JJ03, LO20]. **Snap** [IT06]. **Snap-Back** [IT06]. **SOAR** [BS05]. **Sobolev** [RST01]. **Solution** [AM95, AKM97, BS05, Bar98, BBT05, BBTT06, BBTK08, BFS21, BGT14, BM96, BV01, CGRV20, CGCDM13, CI95b, CPTP09b, CH97, DK05, DHZ03, DS16, DP07, EHvP04, FLM12, Gar90, GL03, dMGF14, GTPI13, GV09, GL00b, GH07b, HLT12, HB94, Han94, Hla08, Hla23, HP92b, HM97, HO92, HLM23, Ips06, Ips09, Jou92, KS08, LŠ10, LHHR95, LN22, Li99, LW02b, LBL05, LEMCD19, Lu94, Lu96, Lu05, Mac99, May12, Mee03, Mee09, MP11, MPS00, OS10, OL99, PAP00, Pai19, PYHK93, PP05b, PJM21, Pop12, PPLG20, RG05, Rod06, RPG96, SC03, SJ92, Tsu93, Ver96, Wei92, Zha93b, AG88a, Tre88a, Tre89, VV88]. **Solutions** [BES15, BPE94, BT92, Buc00, CPTP09a, Che01b, CGH11, CK91, CH94, CR10, DYY16, EL97, EP94, GHR95, Ho90, KC09, KT10a, KLX07, Lat95a, LH22, Mal03, MX09, NS18, OSS14, yPWjP12, RDC93, RK95, Ste23, gS96, VV10, WS12, Wim92, XZC99, ZHZ05, ZWF05, DK88, Wim88b]. **Solvability** [CK00, DBW15, HPS16, Pop15, Roh03, Sha95]. **Solve** [ANT09, BLL22, GH07a, VGV09]. **Solved**

[HLT08, LC15a, LVV16]. **Solver** [ADLK01, ADV05, AV91, CS98, CGP06, CDG+07, DV08a, DL92, GIG22, GJX22, HY00, Ste03, VHK01, XXG12, Tsa94]. **Solvers** [AGP19, AIM22, ADR92, AGL98, DH93, DGSW06, DSSC11, Gov91a, GTI11, GS00b, Gut14, JR08, MR97, PJM23, PFRR17, STvDD17, SvdVM00, Wri95, XXCB14, Xia13, XE10]. **Solves** [FS10, SX11]. **Solving** [AT07, ADD89, BEG+09, Ben99, BD90, BM99, BMM20, BHP03, BF05, BLNT13, BMV20, CG10, CG96, DHT01, DTGVL05, ESR01, ES12, EG00, FXG18, Fio11, Fos03, GRT07, GMMN21, GLS94, GKL14, GL00a, GHT09, GL10, HXY11, Hig90b, HK01, HMP19, HV05, Huc92, Ji92, JLSZ22, JV04, JOAKt10, LwCKL13, LXSdH20, LLZ23, LMC22, LH05, MNR18, MV07b, MPR18, MLV00, MM00, NY95, Ors06, PV17, Sha23a, SWZ11, SS17, ST14, SB11, TMV18, ZF13, BDV89]. **Some** [Auj00, BLd93, BGT05a, BK97, BN10, CGL18, CCJ+00, CDG+05, CS10a, CD00, Cho10, CHW10, CZ03, CHZ03, Cro16, DLM04, Dri06, EGGR99, EL91, GR17a, GIK00, GG06, GS02, HMT93, Ho90, JJ88, Kan96, KS03, LN22, Li91, LZ97, MP95b, MPS98, ND06, NP96, Not19, SU94, Ste11a, TL06, Tre94, Wei95, XX16, Xia12, YL00, ZQZ14, von93, GIMT95, MT89, VV89]. **SOR** [Dan91, HN98]. **Soules** [EM10]. **Source** [KNW20]. **Space** [AD02, AB01, AFPA07, BW95, BGK+18, BH90, BH93, BD10, Bry17, Cle00, Drm00b, FJ97, GP98, GTI11, GOS15, GS00b, PR16, Qi11, QZL05, YXS21]. **Spaces** [AG19, BvdMR+97, DIKMI18, DS18, GT08, GS03, HV19, KSH02, MMT05, MMMM06b, NNT17, Sal88]. **Sparse** [ADGH18, AGP19, Ari00, AB01, AL98b, AKP08, BV92, BLP90, BM02, BW99, BT02, BFP95, BrD07, Cav94, CDG+07, Che01a, CC09, CG90, DD97, DH99, DH01, DH05, DGL99, DEG+99, DD12, DK99, DK01, DP05, DP07, EL92, EL05, EL08, FSS21, GL99, GMS92, GL93, GNP94, Gil94, GO95, GD22, GT08, GED22, GGC09, GLS94, Gup02, HS13, HS14, JN93, KU13, LRG23, LGPS90, LS06, LC05, Liu90, LNP93, LEMCD19, LMC22, LB96, Lu10, LN14, LKK97, MSZ15, NP96, NP99, NR99, NY95, PFRR17, PL97, Pin19, RS06, Reu02, RS94, RE98, RS21, SZ99, STvDD17, SYJ00, SV93, SV15, Tan99, TW00, Vog99, WZZH21, XLS16, Xia13, XXCB15, XBC22, ZZS02, ZZS04, ZXS21, dBG08, vD99, vdSBvdV93, ADD89, DY90, KY93, Liu88, PSL90]. **Sparsified** [CCB+20]. **Sparsifying** [FGK+22]. **Sparsity** [CK12, HJOvdD93, HLW94, PN18, HPR89]. **Spatially** [Par94]. **SPD** [LGWX12, XX17]. **Special** [BG94, BJ16, Che98, DCM08, FFH+19, Fie95, Fie00, Ips06, IS08, Ips09, LGPS90, MG92, NP99, SHS03, Tho94, BHH88, HM89]. **Specific** [COV14, COV17]. **Specified** [CHKL01, Chu91, CS10b, Dan93, DB20, KKM14]. **Spectra** [BP21, HSC04, IZ04, KA07, MT00, Ser98]. **Spectral** [Alt13, AG91b, AG88b, BMfY03, BSvdD95, BU21, BGK+18, BM19, BGSC07, BE03, BN05, BN10, BZ00, BCGG10, BCW12, CSX15, CHLW23, Cap00, CF89, COP20, CG98b, Cle00, CGI10, CP17, CG19, FGJ00, FKZ23, FST+13, FC01, FL99, GSCS15, GP97, GG06, GS06, GS10b, Grc10, GR93, GM98, GGO13, HNT99, HGC00, HDSC23, JJ03, JW11, JCG14, Kar11a, KS17, KK93b, KK93a, Lan07, LS01, Li16, MS97, MSZ21, Mat97b, MW01, Mön11, MS18, NNF14, NP13, NSCS10, PR01, PJB10, QY04, RS18, Sen06, SB04, SQ13, Sta22, TP14, TY02, Tig91, Tre90, Tre94, WS12, Wel11, WZZ22, XE12, Yas03, BH96, OW88]. **Spectrally** [BMOvdD04]. **Spectroscopy** [LW05]. **Spectrum** [BHS23, Chu91, CG98a, DHST05, FT16, GMS90, MP21, MF20, MSS19, MS03, PV09,

RN18, SdJL+18, ZAK13, DS95]. **Spectrum-based** [MF20]. **Sphere** [CDLP05]. **Spherical** [ZLQ12]. **SPIKE** [MM09]. **Spill** [CCL09]. **Spill-Over** [CCL09]. **Spillover** [ZL23, QCCT17]. **Spline** [AC20, HHRV99, GBCW89]. **Splines** [AC20, Pin19]. **Split** [Mel01]. **Splitting** [BBS15, BGN03, Ben09, Cao00b, HM04a, lLNS17, MBN17, Ral09, RP10, SB04, YLA97]. **Splittings** [Cao00a]. **Spread** [MSZ21]. **Spring** [NW02]. **Spurious** [LRG23]. **Square** [DL02, DK98, FHL23, FH10, Gaw19, GD22, GR93, HL08, HH94, HMMT05, LFW13, Lu98b, MS91, Mat97a, Mei04, PR01, XSW10, JN89]. **Squared** [BEBT07, GN16, PP05b]. **Squares** [ABG07, Aru92, ANT09, BG11, Bar98, BBT05, BBTT06, BBTK08, BE10, BST16, Ben99, BN06b, BPE94, BES98, BHM00, Bjö14, BV01, BHP03, BX05, BV95, CGCDM13, CNP94, CGS98, CPTP09b, CGP09, CG10, CH93b, CLL20, CJ21, Chu91, CG98b, CSEP21, CK91, CHMW20, CH99, DN08, DHZ03, EL97, EP94, EOS19c, FF94, FB94, For96, FS01, GS10a, GHO99, GJTP12, GTPI13, Grc10, Gu98a, Gu98b, GW92, Gul95, HG18, HYI10, HXY11, HPS+11, HG14, HM97, HV97, IW14, INRZ21, Jam92, KS92, KLR98, KP08, KT10a, LY03, LS06, LW20a, LJW22, LPT10, Mal04, Mal03, MVP05, Mar11a, MLV00, MW01, MH13b, MH15, PRS06, Rei91, RG05, Rod06, Rum12, Sha95, SC03, STT17, TETA05, Usc12, VZ91, Van92, WC14, WCY15, Wei92, WD00, XXCB14, Yan20, ZH03, ZHY16, ZMW17, ZZLY02]. **Squares** [ZF13, O'L90, Qia88, VV88, VV89, Zha95]. **Squaring** [AMH10, BBS15, FH19, Hig05]. **SR** [Hua21]. **Stability** [BBD+16, BH90, BvdG11, BES98, Bjö14, Ble21, BLO03, BX08, CLR21, CMT09, Cor93, DLMT13, FLM10, FJ97, FGS96, GSS96, GLT96, GGMO17, GP18, Hig90b, Hig92, Hig97, IM94, JWX03, KB93, KZ10, Kni04, KV14, LNT18, LR05, LSB16, MS99, Mai99, MMS16, MT15, MF20, NH12, OOvdD98, OP05, PRS06, Pai10, PMT23, PT18, RR08, Roh94, RT99, SV97, SS98, Ste03, Ste16b, Tis01b, TS90, Tro90, Wat95, Wri95, Wri97, XX16, YP98, Yal00, Yan98, ZFW07, BBDS95, BDV89, JJ88]. **Stabilization** [DF20, HY00, MF20, Wül05]. **Stabilized** [Ern00, Le 19, LZ10, Sim97, VHK01]. **Stabilizing** [CS96b, OS09]. **Stable** [AB05, AMVW15, AMR+18, AABK19, Bar00a, BBV19, BNP22, CM93, CS98, CGS98, Cha00, CG03b, CH99, CP20, DP07, rFO06, FGS14b, Fuh07, GNS18, Gov91a, GE94, Gu98c, GGbCC03, GP18, Hu92, JK97, JRG09, LŠ10, LW97, LOvdD02, NP20, PLM94, RR08, Sut12, TCTM00, Tro90, Vav94, XXCB14, XSW10, ZS14, CJL96b, GL03]. **Stable/Unstable** [GP18]. **Stage** [SJ92, YLA97, SB01]. **Staircase** [EEK99, EM00, SZK95]. **Start** [Del97, KW92]. **State** [BH90, BH93, BGMN92, CMT09, Cle00, Cor93, DGMR00, DWWY20, ES18, HS10, KLX04, LFW13, BHKR11, Zab89]. **State-Discretization** [DGMR00]. **state-feedback** [Zab89]. **State-Space** [BH90, Cle00]. **States** [DA05, NT08]. **Stationary** [BF11, Cao08, FNS08, GV99, HM20, KS15, LF02a, Liu12, MS02, Mey94, OW96]. **Statistical** [BCR11, GKL95, GKL97, Hoo17, KLR98]. **Steady** [ES18]. **Steady-State** [ES18]. **Steepest** [KL08]. **Stencils** [He21]. **Step** [AV91, CD14, CD15, Car18, KMN11, Sle09, Sor92]. **Steps** [MV18, Sle09]. **Stepwise** [Mim00]. **Stiefel** [Bry17, LWW15, Zim17, ZH22]. **Stieltjes** [Bas89, FGS14a, GS21, MMS94, NV94]. **Stiffness** [GSCS15]. **Stochastic** [AK90, BF11, CH23a, CG98a, DGMR00, ES18, EU10, Fie95, FST+13, GDF01, HR93,

MW12, PU10, PU14, Pul13, RT20, Sen98, UCS17, WSSL06, XBC22, YBZC16, Hav89]. **Stoichiometry** [WCB22]. **Stokes** [Elm97, WT11]. **Stopping** [ADR92, Ari13, CPTP09b, EL91]. **Strang** [KO05]. **Strassen** [BPR20]. **Strategies** [DP05, DP07, Kon00, RE98, Ser96]. **Strategy** [BF05, CD14, HS23, KS22a, PFRR17, Zha01]. **Stratification** [EEK99, EJK09, FGP00, GP98, Huh01]. **Stratification-Enhanced** [EEK99]. **Strict** [BD15, Zie95]. **Strictly** [GP06, MMS94, NV94]. **Strong** [ADMZ18, BS94b, Ger92, LP17, Yal00, BDV89]. **Stronger** [FJKM96]. **Strongly** [BS94a, DQV22b, Mal06, Tas15b]. **Structural** [ADHM19, DIKMI18, EL92]. **Structure** [AM23, AFPA07, BRR00, BKW22, BFZ07, BR19, Bar98, BT17, BNP23, BS15, Bol90, BHR10, BJMS17, CK91, CSK95, CKM22, De 94b, Di 09, DLM04, DJK17, DS18, Gil94, Gre05, GGC09, GL10, HH93, HJP03, HLQ09, HKBM08, JN21, KC94, KO05, KK17, KT10b, KS12, KLS16, LP96, LGC08, LX06, LK95, MV17, MMS16, MBO97, MD03, NP96, SdJL$^+$18, SMM20, ZZ99, ZZ01, dTDM08, DS95]. **Structure-Preserving** [BNP23, GL10, HLQ09, KK17, KS12, KLS16, LX06, MMS16, SMM20]. **Structured** [AA09, AK20, AK21, AC20, ADC04, ANT19, BB08, BBT05, BBTK08, BE10, BST16, BM06, Bor10, BKMS14, BKMS15, BK19, Buc00, BGBM92, BGN12, BGMN15, BK06, CGCDM13, CR21, CLNW20, CJ21, Cif21, CB90, DV07, DV08a, DV08b, Dem99, DK06, Fuh07, GR17a, GW07, GK93, Gu98b, Gu98c, GGMO17, GRK17, GL10, HHSW97, HH92, HH98, IUM14, JV16, JK95b, KKT06, Kar10, Kar11b, KS22b, KS08, KPM09, LX09, Li99, Mac99, MMT05, MMMM06a, MMT08, MVP05, MU13, MPR18, MLV00, MV21, Mur91, Mur93, NP99, OSS14, PS22, PO03, RVV17, RPG96, RPG98, Rum03a, Rum03b, Rum15, SV97, Ste16b, gS98a, TH01, Tis01b, Tis03, VFGM05, Wat92b, WD95, XXC14, XXCB14, XX16, XG10, XCGL10, Xia12, XXG12, XX17, XW07, Zhl12, vdWM95, DGIM06, GIMT95]. **Structures** [BKMS14, BKMS15, DD07, DV06a, DV06b, EK96, FGJ00, FFH$^+$19, GL93, PS22, RD95, ST08, ZGP10, DB88]. **Study** [CG15b, Zhe96, Zhe98]. **Sturm** [BGH95, Mal06]. **Style** [Dol07]. **Subadditive** [ZQ10]. **Subclasses** [LQ16]. **Subcritical** [HM20]. **Subdefinite** [CHLS00, ND06]. **Subdiagonal** [GN16]. **Subdivision** [JZ99]. **Subdivisions** [GP16]. **Subdominant** [GN03]. **Subgeometric** [Mas16]. **Subgraph** [COP20]. **Subgraphs** [CP20]. **Subject** [CG98b, VV89]. **Sublinear** [CD13]. **Submatrices** [JK95b, RS21, dSV01]. **Submatrix** [Bai05, OR93]. **Submultiplicativity** [JN91]. **Subsampled** [BG13]. **Subset** [AB13, CK20, CB00, DA05, Fei94, ZvSD20]. **Subspace** [ASVM04, AT07, ABM$^+$17, ABMV20, AKPP08, BR05, BD09, CP03a, CFT16, CGMM23, DS20a, ESS$^+$12, ELN22, EN08, Ern00, FGS14a, FLS20, FKST23, GGLN13, GJX22, GG14, GPTPV16, GMN16, Gut14, HPZ23, HS95a, HIS18, HGL05, INRZ21, JK97, Jia22a, KMMM18, KO15, KT10b, KT11, KV14, KLV18, Leh01, Li98b, LY03, MVV92, MH13b, NZ16, RSH21, RSS09, RS02, Saa97, Saa16, SS19, Sai19, SS13, Sid95, Sim00, Sim16, SK16, TP14, Ver96, WY17, ZPW18, vdES04, Fuh88, Lag91]. **Subspace-Based** [AT07]. **Subspaces** [BD98a, BER04, BKS08, BBMX02, BT10b, BHM97, BK06, CGV03, DHW92, DIKMI18, Drm00b, DK98, DSZ14, FB95, FMX02, HIS18, Jia22b, KK14, KA07, Kre05, Li93, LW97, Men12, Miy14, PLM94, RR08, Rod05, Ste16a, SL94, Tam99, WLB05, YL16]. **Substochastic** [Har99]. **Substructures**

[ST08]. **Substructuring** [EV06, PW90]. **Successive** [Eff13, GH92, MHG15]. **Successively** [JOvdD01, JOvdD04]. **Such** [JKM11]. **Sufficient** [BM00, Cor93, CC92, HQ16, LŠ10, Mor12, MM00, Pin19, RR98, ST08, ZWF05, Gad88, Pan91]. **Sum** [ADHM19, BLW15, BLdP97, Her96, LPS08, OW92, WZL21]. **Summations** [GMN18]. **Sums** [FF99, FHS+94, GTJ13, GED22, HS00, MW01]. **Superdiagonal** [Tam98]. **Superfast** [AG88a, CGS+08, FLM12, Ste03, VHK01, XXCB14, XCGL10, XXG12]. **Superlinear** [CT99, CP03b]. **Supernodal** [DGL99, DEG+99]. **Supernodes** [JNP21, LNP93]. **Superoptimal** [Tyr92]. **Superresolution** [ZGP10]. **Supersymmetric** [KR02]. **Support** [BGH+06, BH03, BGH07, LRG23, SW97]. **Support-Graph** [BGH+06]. **Supports** [RS21]. **Suprema** [AMT90]. **Surfaces** [Nie10]. **SVD** [BYDW18, CS09, DP09, DM04, DV08c, DV08d, GSV00, GL05, GE95a, GCC18, IO16, LGC+14, MSKC21, MVV93, OYBV19, OYV22, Par05, Vac94, WLV06, Xu05, ZZ99]. **SVD-Based** [GCC18]. **SVD-like** [Xu05]. **SVDs** [CF02, Koe05, ZZ01]. **Swarztrauber** [Tsa94]. **Sylvester** [AT07, BMO92, CJL96a, DK15, GL96, GH07a, HM97, KP92, Kåg94, Li99, MPR18, SS13]. **Sylvester-type** [DK15]. **Symbol** [BGK+18, BDFF22, GSCS15]. **Symbol-Based** [BDFF22]. **Symbolic** [EL92, GGC09, Gup02]. **Symbols** [BV07, HK12]. **Symmetric** [ADGH18, AM95, AKM97, AT98, AG92, Arg15, AFPA07, AGL98, Auc91, BNW09, BBD+14, BO96, BOCL97, Bar93a, BESS22, BLdP97, BR08, BS96, BL91, Bor14, BMV20, CNX22, Cao00a, Cao09, CD15, Cav94, Cha00, CFJKS13, CH98, CE94, CG98b, CGLM08, CDN14, CW96, DHT01, DDD20, DHZ03, DMM03, DK06, DRV21, DP05, DP07, EGTP17, EG00, rFO06, FXG18, Fer98, FMFJ18, Fri92, Fri16, GITT96, GI00, GIK00, GOV19, GSS96, GV09, GPTPV16, GLS94, GL05, GE94, GLV10, GCC18, Hac93, HO94, HL17, HIS23, Han03, HM04a, HB94, HY01, HR00, Her96, HMMT07, Hla08, HS14, HV05, IT06, IAV13, JWN18, Jia01, JLZ16, JP93, JLS01, JSG15, Kau93, KN91, LZ14, LF02b, LUC18, Lin19, LM03, Lu98b, MV97, MV13, Mat09, May12, Mee03, MB10, MMW17, Mel99]. **Symmetric** [Mel04, Meu92, MSS19, Moa05, MHG15, MHG17, MRU22, NS07, NP23, NOZ11, Nie17, NY95, Not19, NV02, OW92, OW95, PM06, Ral11, RBB90, Reu02, Rob16, RS92, Rod05, RODS15, SZ07, SS10, SK20, SvdVM00, SAGS21, ST14, Tam98, TY02, TL06, Tis04, Tre90, Tre05, Tur03, VGV09, VYH11, WZ91, Whi90, WS00, XLS16, XG10, XHC21, Ye09, Zha05, ZWF05, ZLQ12, ZHQ16, ZS07, vDHvdV00, All89, BDV89, DK14, FGS96, GE95b, JP94, Liu88, Ove88, Tre88a]. **Symmetric-Definite** [Cha00, CG98b]. **Symmetric-Indefinite** [BBD+14]. **Symmetries** [FT16, RR94, VV15]. **Symmetrization** [ALN07, Fit19, Le 19]. **Symmetrized** [DD98, FFH+19, Pes19]. **Symmetry** [AM23, CCL09, EL92, HM04a, KRU14, PS22, SS06, Ste11a]. **SYMMLQ** [EOS19a]. **Symplectic** [BF00, DJ09, Fio11, GS06, GKL14, JTZ20, KS12, KLS16, LW97, SAGS21, SMM20, Xu20, Meh88]. **Synchronization** [FKZ23]. **Synchronizing** [GGJ18]. **Synthesis** [JKN11]. **System** [AB16a, BFZ07, DH93, DK05, DJK17, FPST13, FGL21, FL99, JW11, KPC94, LSM22, LV10, MR97, PJM23, PGVR98, RBB90, WCW10, WZZ22, ZL23, Wri97]. **System-Theoretic** [LSM22]. **Systematic** [EJ23, QCT16]. **Systems** [AIM22, AM95, ADC04, AK90, BGN03, BRR00, Bar08, BSFM10, BEBT07, BB18, BEG+09, BB12, BGG18, BG19b, BF06, BH90, BH93, BB96, BM99, BDFF22, BG94, Bor03, BF05, BLNT13, BW97, BGMN92, BCW12, CT91,

CP03a, Cao08, CP03b, CPS00, CI95b, CS98, CG03b, CGS+08, CESC20, CCZ97, CNW08, CCH98, CH06, CFL07, CT08, CK00, CHMW20, Cor93, CG96, DGMR00, DTGVL05, DL03, DGSW06, DRV21, DS16, DSZ14, DP07, ENV92, EGTP17, ES12, EG00, EG15, EL91, FLM10, FLM12, FXG18, FL19, FG15, FJ97, FV98, FNS08, FKLR13, GVV04, GL03, Ger92, GMPS92, GSS96, GJX22, GLT96, GGV05, GRT07, GOR14, Gov91a, GR15, GMMN21, GTI11, GV99, Gre99, GV09, Gu98c, GAB08, GHL03, GHR95, HNRS22, Han94, HMP94, Hig90a, Hig90b, HH92, HG21, HS14]. **Systems** [HO92, HV05, IKSG10, JC22a, JC22b, Jou92, KGW00, KC09, KS08, KT10b, KT11, KLX04, Lan07, LW02a, LWXZ06, LM90, LSM22, lLNS17, LNT18, LW20b, LEMCD19, LMC22, Lu94, Lu95, Lu96, Lu98a, LH05, LT94b, MNR18, MV02, MV07a, MV07b, Mat92, Mee03, MB10, MMS16, MMW18, MV20, MV21, Mel01, Men08, Men12, MG10, MJM11, MF20, Mim15, MV23, MO20, MO23, Mor00, MR18, NRT92b, NP02, NY95, Not16, Not19, NV02, OS10, PAP00, PS05, PJM21, PR16, PV17, Pop12, Pop15, PU10, QCCT17, RT93, RE13, RD95, RY05, RT20, RK95, Roh03, Rum12, STvDD17, Ser96, SŠ91, Sha23a, SvdVM00, ST14, Ste23, gSS97, gS98a, SZK95, SJ92, TMV18, TV09, VHK01, VD21, VKDD21, Var94, Vav94, Ver96, Wal95, Wei95, XCGL10, XXG12, XW07, YP98]. **Systems** [Yan93, ZvSD20, Zen19, ZXS21, dKV10, vdES04, vdWM95, AG88a, ADD89, Ash91, BDV89, CJL96a, CJL96b, Cha89, CH92, CH93a, Cri88, FGS96, HC89a, HC89b, Sch95a, Tre88b, Wim88a, Zab89, PU14]. **Systolic** [MVV93].

T [Zha95]. **T.** [JWX03, KO05]. **Tailored** [LSM22]. **Tails** [AW05, ES05]. **Takagi** [DPP22, XQ08]. **Tandem** [GT02]. **Tangential** [DSZ14, GVV04]. **Task** [ADV05]. **Taylor** [SGX14]. **Technique** [BJM05, CM92a, HM20, Hav89]. **Techniques** [DMP96, FSS21, JX20, JOAKt10, LS96, PS08, BK89]. **Telescopes** [Bar08]. **Tensor** [AJRS13, BLW15, BYDW18, BBK18, BFG23, BBV19, BG19b, BLNT13, CS09, CHZ16, CLL20, CJ21, CNG23, CGLM08, CDH12, De 08a, De 08b, DN08, DCM08, De 11, DW15, DK13, DD20, DD21, DGGG22, DIS15, ES09, ES11, EDK16, ED22, FHLS13, GQ14, GCC18, HK08, INRZ21, JK15, JLZ16, JX20, KS15, KS22b, KL10, Kol01, Kol03, KM11, KM14, Krä19, KT10b, KT11, LK22, LC15b, LC16, Li16, LUC18, LGL16, LRSV13, MMD08, MV08, MSV19, MK20, MHG17, MBM08, NQZ10, NW14, Nie17, NY19, NY20, Ose10, Qi11, QXX14, QCL16, QCBZ21, RV12, Rau02a, Rau02b, SK20, SD19, Ste10a, Ste11a, SL12, Ste13, Usc12, VD21, VKDD21, WCY15, Yan20, ZN21, ZLQ12, dSL08]. **Tensor-Based** [MMD08]. **Tensor-CUR** [MMD08]. **Tensor-Product** [HK08]. **Tensor-Structured** [CJ21]. **Tensor-Train** [LRSV13]. **Tensors** [Ano11, Asw16, AB19b, BB08, BBBT20, BPR20, CHLW23, CPZ11, CWY20, CS09, CK12, CO12, COV14, COV17, CGMZ21, CGLM08, CDN14, CLN14, DDV00b, DL17a, DD13a, DD13b, DD14, DSD17, ED23, Fri16, GTH19b, Gra10, GC19, HST19, IAVD11, IAV13, JWN18, KBHH13, KR02, KK17, LNSU18, LRSV13, LQ16, MHG15, MRU22, NQB14, PSS19, QXX14, QCBZ21, Rob16, Sai16, ST21, SQ13, SZH22, SD15b, VNVM14, WC14, YY10, YY11, ZG01, ZQZ14, ZHQ16]. **Term** [BLAK91, ESS+12, GR00, VKDD21, ZZ98b, GS00b]. **Terms** [BLW15, De 08a, De 08b, DN08, De 11, DD20, SD15a, SDD15, Ste10a, Ste12]. **Test** [OP05, vdMS05, Stu89]. **Tests** [MH13a]. **Text** [HJP03]. **th** [Ian09, Smi03, Ste10a, Ian06, GH06]. **Their** [Bar19, Bez12, CCZ97, CM03, DL17a, EK96, GL23, HL13, JLZ16, KMS01, KMS03, Lew91,

LF02b, NP99, RS96, Sil03, SX11, Tig91, AD21, HM89, HMT09, JN89, MV88, TFL11]. **Theorem** [AMS07, ADHM19, CLN14, GTH19a, GTH19b, HS95b, JDS03, Kol03, Kra95, KH13, Lew99, LM98b, Lin11, May12, MSV19, TT99, YY10, YY11, Zhe96, Zhe98, IM95, Tis93]. **Theorems** [BH13, wC03, CK00]. **Theoretic** [FV98, LSM22, vdWM95, Pea88]. **Theoretical** [Jia22a, KBHH13, Mei04]. **Theoretically** [TP22]. **Theory** [ABK+11, AH16, AHN21, BL12, BKS08, BBGF00, BH03, BGH07, BM06, BCGG10, DDY14b, DS23, DM05, EEK97, EEK99, EL05, ES11, EJK09, ELN22, FS97, GPM03, GLT96, GS06, GdlI08, Gut92, Gut94, HDSC23, KP99, KH13, KK21, LMZ03, Li98a, Li98b, Li99, LWWY14, Lu05, Mai99, Mal03, MOC91, MX09, MBO97, Mor94, NNPQ23, Not16, RT20, SKP11, SC10, SMM20, gS98b, WE94, XG98, CT88, DK88, OW88, KY93]. **Thick** [WS00]. **Thick-Restart** [WS00]. **Third** [DD13a, DD13b, DD14, KBHH13, LGL16, QCBZ21, SD15b]. **Third-Order** [DD13a, DD13b, DD14, KBHH13, SD15b]. **Thomas** [PS04]. **Thompson** [Joh96]. **Three** [BLAK91, BPR20, CHH+15, Cho10, DPP13, EJ23, EI98, GV99, Gre99, GMBS12, GS00b, GR00, Hig92, HHLW13, LRA93, LXSdH20, OST08, RHE14, SdA10, Ste13, ZZ98b]. **Three-Dimensional** [CHH+15, GV99, Gre99, HHLW13, LXSdH20, OST08]. **Three-Term** [BLAK91, GR00, ZZ98b, GS00b]. **Three-Way** [Cho10, GMBS12, LRA93, SdA10, Ste13, BPR20]. **Threshold** [DDN20, HS14]. **Tight** [DT11, Sou19]. **Tightening** [Gar09]. **Tikhonov** [GHO99, GW00, Mal03, WXZ16]. **Time** [BGK+18, BN10, Bom00, CT91, CFL07, Cor93, Dhi98, DD12, DLMT13, Har05, JOAKt10, KNW20, KS03, KLX04, LF02a, LgS02, LNT18, LEMCD19, Mas16, MG10, MJM11, MF20, OST08, PCB16, PSW12, RT93, Sou19, ST14, Sun04, TCTM00, VP93, BF06, LP89, Meh88]. **Time-Delay** [MG10, MJM11, MF20]. **Time-Dependent** [PSW12]. **Time-Invariant** [DLMT13]. **Time-periodic** [MF20]. **Time-Varying** [CT91, LNT18]. **Times** [DA05, FI18, GN13, KN99]. **TLS** [HPS16, PGVR98]. **Toda** [DRTW91, Lag91]. **Toda-Type** [DRTW91]. **Toeplitz** [CH93a, Ikr97, AG88a, BN06b, BMF05, BD90, BM99, BLAK91, BBDS95, BDFF22, BK95, BGKS99, BET02, BV07, BBM21, BGN12, Cap98, Cha89, CH92, CNP94, CPS00, CS98, CGS+08, CESC20, CNW08, CE94, DG91b, DG91c, DD10, DLM04, DK08a, FKKL96, FLM10, FLM12, FFH+19, FSZ14, Fri92, GKX94, GP03, HB94, HY00, HH94, HR00, HR04, Huc92, HSC04, Ito96, JV16, JR88, KC94, KN00, KN91, KL18, KK93b, KK93a, LS04, lLNS17, LH05, MV97, MV88, MP21, Mel99, Mel01, Mel04, MT00, Næv93, NSCS10, NV02, PK93, Per91, PW15, Pes19, RS92, Rod06, Rog05, SK95, Ser96, Ser98, Sil03, Ste03, SH93, Swe93, Tre88a, Tre88b, Tre89, Tre90, Tre94, VHK01, Var94, Vec03, VJ07, XXCB14, XXG12, ZZTA02]. **Toeplitz-** [Rod06]. **Toeplitz-Block** [KC94]. **Toeplitz-Derived** [KC94]. **Toeplitz-Like** [FLM10, lLNS17, FLM12, SK95]. **Toeplitz-Plus-Hankel** [HR04]. **Toeplitz-Plus-Tridiagonal** [CESC20]. **Toeplitz-Related** [DLM04]. **Toeplitz/Hankel** [MVP05]. **Tolerance** [BBGL92]. **Tomographic** [HKBM08]. **Tomography** [Sal88]. **Torus** [Tho94]. **Total** [Aru92, BG11, BDSC11, BBT05, BBTT06, BBTK08, BE10, BST16, BHM00, FB94, GP93, GHO99, GTPI13, HPS+11, LJW22, LPT10, MVP05, MLV00, PO03, RS06, RG05, RPG96, RPG98, VZ91, Van92, Wei92, ZMW17, VV88, VV89]. **Totally** [CKRU08, DK05, FGJ00, FHGJ06, GT04, HC15, Koe05, Koe07, Peñ98, ZY93].

Tournament [BFG23, FL02]. **Trace** [BK21, CH23a, FSS21, LWW15, NBS10, PCK22, SAGS21, WZ95, Wat92a, WZL21, Ber88]. **Trace-Sum** [WZL21]. **Traces** [OR93]. **Tracking** [FL19, MVV92]. **Tractability** [LRG23]. **Tractable** [LQ16]. **Train** [Krä19, LC15b, LC16, LRSV13]. **Trains** [HLQ09]. **Transfer** [Bar94, FN04, NNPQ23]. **Transform** [BF93, BK95, BG13, DL17a, For03, HR00, KO05, Kuz15, SB03]. **Transformation** [CCJ+00, CG15a, Le 19, Mai99, XE12]. **Transformations** [Dub00, IIM94, IT18, LM98a, SV05, Ste16b, Uhl18, WL12]. **Transforms** [BD95, FKST23, FGK+22, SKP11, Tur97, RS88]. **Transient** [EK17]. **Transients** [O'C02]. **Transition** [DRSZ07, EHW10, JJ03, LFW13, Spe98]. **Transitions** [DJK17, EK96]. **Transmission** [LF02b, Wat95]. **Transport** [Lu05, MX09]. **transposition** [JH88]. **Transputers** [vdSBvdV93]. **Traveling** [JNP21]. **Traveling-Salesman-Problem** [JNP21]. **Tree** [GG03, MSZ03, dF05, Liu88]. **Tree-Like** [MSZ03]. **Trees** [CL99, EL05, EL08, KU13, KNS97, KN98, Liu90, MP11, Nab01]. **Triadic** [rFO06]. **Triangle** [ZQ10]. **Triangular** [ABL94, BMF05, BCN95, BKK18, FSZ14, HY01, JTZ20, LM02, MV02, Næv93, OST09, PK93, PK94, Pes14, RW95, SHZ12, Vec03, VP93, VT98, vD99, CH88, KP92, Naz89]. **Triangularizable** [Mae98]. **Triangularization** [SS98]. **Triangularizations** [IIM94]. **Triangularizing** [TZ13]. **Tricyclic** [DL92]. **Tridiagonal** [BO96, BOCL97, BGT05b, BD98b, Bom00, BG94, CESC20, CM03, CW96, DG91b, DG91c, DRSZ07, Dhi98, DL92, ES08, rFO06, Fer97, Fer98, Gei91, GITT96, GKL18, Har05, Hig90a, HO92, HHH12, LS04, Meu92, Nab99, Par92, PL93, PDF16, Per91, Ple06, Tis04, VGV09, VH16, Wal95, Wil08, YP98, GE95b, Tsa94]. **Tridiagonal-Diagonal** [Tis04]. **Tridiagonality** [Bom00]. **Tridiagonalization** [Cav94, GIKT95, Pai10, PP11, SB05, GBCW89]. **Tridiagonalizing** [BS96]. **Tridiagonals** [Ral11]. **Trifocal** [BBBT20]. **Trigonometric** [AH16, BD95, KO05]. **Trigonometry** [EW20]. **Triple** [QCBZ21]. **Triples** [PR01]. **Triplets** [Drm00a, OYV22, Zha91]. **Tropical** [NST15]. **Trummer** [Lu95]. **Truncated** [BGT14, GTPI13, Le 19, MM09, SGX14, SH23, SY98, TMV18, ZZ01]. **Truncation** [DRV21]. **Truncations** [Mas16]. **Trust** [DS23, IAVD11, SW94]. **Trust-Region** [IAVD11]. **TSC** [PM06]. **Tucker** [DK13, EDK16, LRSV13, OST08, Sai16]. **Tukey** [SKP11]. **Tukey-Type** [SKP11]. **Tunable** [FH21]. **Tuples** [WZ23]. **Twice** [HN22, LS01]. **Twisted** [BBM21, WL12]. **Two** [ABL94, Bjö14, CE94, CZ02, DGIM06, DP09, DK13, EDK16, FI18, FB95, Fie96, FNV08, GW07, GT99, GS00b, HL23, HM04b, HP02, HKP05, Ji92, JH02, Kil99, LSB16, Not16, OYBV19, OYV22, Pál11, Ple00, PV17, RJ21, Sch95b, SWYM96, Sle09, Sou19, Ste91b, SB01, SJ92, TMNV10, WA07, WT11, XZ22, YLA97, Zha10b, ZH17]. **Two-Dimensional** [Ji92, Kil99, Sch95b]. **Two-Grid** [PV17, XZ22]. **Two-Level** [DK13, EDK16, Not16, TMNV10, WT11, LSB16, Sou19]. **Two-Parameter** [DP09, HP02, HKP05, Ji92, Ple00, RJ21]. **Two-Sided** [CZ02, FB95, Fie96, OYBV19, OYV22, SWYM96, ZH17]. **Two-Stage** [SJ92, SB01]. **Two-Stage-Splitting** [YLA97]. **Two-term** [GS00b]. **Two-Variable** [Pál11]. **Type** [AIM22, BEG+09, BBD11, BLAK91, BS16, DRTW91, DM05, FAT16, GR00, HP02, HKP05, Ito96, KO05, LUC18, LX06, LLZ23, LV17, MV08, MMS94, MSZ03, SKP11, Wal03, Wat98, WL12, ZHY16, ZK17, BL94, DK15, IM95, Kuz15, Saa06, ZH17].

Ulm [wVjBqJ11]. **Ulm-like** [wVjBqJ11]. **Ultrametric** [Fie00, MMS94, NV94]. **ULV** [BES05]. **Unbalanced** [ZYSY20]. **Unbounded** [CO99]. **Uncertain** [BOS16, EL97, SNC02]. **Uncertainties** [CGGS98, Wat01]. **Uncertainty** [BEBT07, Yan93]. **Uncontrollability** [BLO04, Gu00, GMO+06, Men08, Mit21]. **uncontrollable** [Sch95a]. **Uncorrelated** [CGH11]. **Uncoupled** [Zha93b, Hav89]. **Uncoupling** [Van08]. **Undamped** [JW11, QCCT17]. **Underdetermined** [DH93, Rum12, gSS97]. **Undersampled** [CGH11]. **Unfoldings** [RV12]. **Uni** [GMBS12]. **Uni-mode** [GMBS12]. **Unicity** [de 94a]. **Unified** [DGR23, FS97, He21, Mal03, MS18, WZ23]. **Uniform** [BL94, DS20a, GG14, HL06, IM94, Urs21, WZZ22]. **Uniformly** [CRS99, CRS01, DTGVL05]. **Unifying** [GTH19b, HPZ23, VD21, VKDD21]. **Unimodular** [AKP08, FR23, IT18, BV88]. **Unipathic** [MNST96]. **Uniqueness** [BB95, De 08b, DD13a, DD13b, DL15, DD20, FMX02, GMBS12, Her96, JK15, KK21, Mor12, SC10, SD15a, SD15b, SdA10, Ste10a, Ste11a, SL12]. **Unit** [Baz00, CDLP05, Guo98, JTZ20, Pai09]. **Unitarily** [Aru92, HM90, QZL05, Sai19, VJ07, Zha99]. **Unitary** [AYLR04, BDG20, BM94, BEGG07, BBGF00, BGH95, DW06, DZ01, GGbCC03, Kni04, KL98b, Li95, LS03, LPS08, NNF14, Pai09, PW14a, Sev03, SV05, Ste06, gS96, Tho94]. **Univariate** [FR23]. **Universal** [Ste23]. **Unknown** [FST+13]. **Unknowns** [CT93, Whi00]. **Unlifted** [BL21]. **unrestricted** [MT89]. **Unstable** [GP18, LOvdD02]. **Unstructured** [DFT92, Rum15]. **Unsymmetric** [AM95, ALP07, DD97, EL92, EL05, EL08, EL91, GL93, Gup02, Gut92, Gut94, Jia95, KU13, MO23, RS06, DY90]. **Unsymmetric-Pattern** [DD97]. **Unsymmetrized** [AP02]. **Unwinding** [AH14]. **Update** [Bar93a, CFG98, ES92, GGL04, XXC14, XBC22]. **Updates** [BKS18, BV00, EMC17, GR17b, LGI21, MSS19, SB92, ZPW18]. **Updating** [CCL09, EGK91, IK06, Kon00, LM06a, LLZ09, LZ05a, MTV10, MVV92, MVV93, Naz89, Ste93b, SV00, Sun95a, VS14, BK89]. **Upper** [AW05, BCN95, FG94, Lee95, Nab00, WD00]. **URV** [PE95]. **Use** [Ari00, BD95, DK99, EJK09, GW00, Swe93]. **Useful** [Pai09]. **User** [GL99]. **Using** [AS93, ADLK01, ALP07, ANT09, ACW17, ABN09, BD98a, BKS08, BI99, BBGL92, BEGM05, BCW12, CCB+20, DIS15, Fos03, FSV14, GL18, Gul95, He21, JMM14, LC16, LM98a, LXSdH20, LE02, Mac99, MSKC21, Nov11, Ose10, PYHK93, PP05a, PO03, RE13, SCBC21, SK20, SS17, TV09, WLV06, XK94, AL98b, HRS88, O'L90, Zab89]. **USSOR** [Nou96]. **UTV** [Jia22b]. **Uzawa** [LZ10].

V [ADC04]. **V-cycle** [ADC04]. **Validated** [KC09]. **Validation** [BG19a, EMC17, GBCW89]. **Valleys** [LRG23]. **Value** [ASA04, AMMS08, AGQS22, ABN09, BB08, BES15, Bar02, BM19, BGT14, CE12, CL09, CHH+15, CFG97, CDD00, DDV00a, DG91a, DV92a, De 94b, DD98, Dem99, DI19, DJ00, Drm00a, FL99, Fri05, GMN18, Gra10, GE95c, GGO13, HMP94, Hla23, HJP03, JS94, JN03, JN91, Kar11a, KGD23, Li98a, LS07, MVV92, MMH94, O'N05, PS94, PP05a, Rog05, SCBG05, SS06, gS00a, TM12, wVjBqJ11, WA07, Wat92b, WCB22, YB91, Zha91, JN89, WE89]. **Valued** [ALAK94, CP03c, Cla10, GdlI08, JW11, JLZ16, Kra95, KH13, Mat93a, QCT15, QCT16, Sid95]. **Values** [AKPP08, BGV10, BT17, BK90, CI95a, DP09, DPP22, DSD17, Fer98, GRK17, HHSW97, HDT10, HS00, HC15,

JN93, Kar11a, Kit95, KA07, KMS01, KMS03, Krä19, LC15b, LO20, Li93, LM02, LM18, MSZ20, MSZ21, RW95, Sil03, Tam98, Wu17, Wül05, XPL+18, XNB22, Zha97, Zha00, ZQ10, Bap89]. **Vandermonde** [ASA04, AK21, Baz00, BEG+09, Bez12, DK05, FH93, Hig90b, KS03, KRS19, Li06, Lu94, Lu95, Lu96, Lu98a, Pan16, Rei91, gS98a, ZZ98b]. **Vandermonde-Like** [KRS19, ZZ98b, Hig90b, Lu96, Rei91]. **Vanishing** [Hel95]. **Variable** [AV91, BMS06, GW07, Gre99, HZ01, KL08, LZ10, NY95, Pál11, DGIM06, MH95]. **Variable-Step** [AV91]. **Variables** [Ain17, BI99, CGGS99, CGSS01, CH93b, Hel00, MT89]. **Variant** [AG91a, MT89]. **Variants** [CLR21, GOV19, GTI11, KK07, PCK22, RT99, ZZLY02]. **variate** [GSCS15]. **Variation** [BDSC11, BM94, MSZ21]. **Variational** [Auc89, CFG97, CF02]. **Variations** [Li98a, Li98b]. **Varied** [Par05]. **Varieties** [YL16]. **Variety** [JT98]. **Various** [RVV17]. **Varying** [CT91, LNT18, Mal06]. **Vector** [AFPA07, BF05, BRZ06, BV95, CT15, Elt92, FI18, Fay95, GTI11, HR00, HQ16, IS11, JMO93, MMMM06b, MP11, NNT17, OW96, Sid95, SW97, SX11, VZ06, Wan15, KN94]. **Vector-Valued** [Sid95]. **Vectors** [Bar93b, BK21, LC15b, Pai09, PP11, PW14a, Ste21, Wu17, BN87]. **Vera** [GKRV90]. **Verification** [Voo12]. **Verifications** [Sch05]. **Verified** [FH10, Rum12, Rum22]. **Versal** [EEK97, EM00, GPM03]. **Version** [KDGG13, MSV19, Sim97]. **Versions** [BB07]. **versus** [Alt13, Bér09]. **Vertex** [GW22]. **Vertical** [MN97, QL99]. **Via** [Dax08, GOV19, Gow96, STT17, Van08, AGP19, AEGL19, AABK19, Bar94, BH90, BG13, BLNT13, BZ00, BMV20, CFT16, CGCDM13, CDG+07, CWY20, CHZ16, CDD00, wC03, CT88, DGGG22, DMW23, FGL21, FP16, GVV04, GMN18, GTH19b, GNS18, GP97, GGO13, HY01, IT18, KS22a, KS22b, LN22, Lew99, Lin19, LEMCD19, LMC22, LP11, LP13, Mae98, Mat95b, MW01, PR01, Pin19, SG21, SAGS21, SB11, TMV18, UCS17, XXCB14, XXG12, XX17, XC20, YXY20, YXS21, ZŠ94]. **Vibrating** [Lan07, TV09]. **Vibration** [HLQ09]. **Vibrations** [MMMM06a]. **Vibroacoustic** [QCCT17, ZL23]. **View** [BCR11, Hig03, Ost10]. **Viscosity** [TV09]. **Vishik** [MBO97]. **Volterra** [FG15]. **Volume** [BI99]. **Volumetric** [HHSW97]. **vs** [Toh97].

W [Zha95]. **W.** [Ikr97]. **Waldén** [GJTP12]. **Walk** [ES08]. **Walks** [AHN21, BMM20, DMS13, DRSZ07, KN99, PCB16]. **Wasserstein** [TP23]. **Watson** [HM20]. **Wave** [HL17, HDSC23, LW20b]. **Wavefront** [Bar08]. **Wavelet** [For03, Tur97]. **Wavelets** [GP16, Hel95, JRZ99, JJ03]. **Way** [BV90, Cho10, GTW00, GMBS12, LRA93, SdA10, Ste13, BPR20]. **Weak** [HV19]. **Weakly** [AB19b, CM93, SŠ91, SWYM96, CJL96b]. **Weierstrass** [BR19, dTDM08]. **Weighing** [NW02]. **Weight** [DV08b, For96]. **Weighted** [BN06b, BV01, DS18, DL17b, FI18, FS01, GW92, Gul95, HHSW97, HS13, HV97, KNS97, KN98, KT10a, SES95, SW98, WD00, YL08]. **Weighting** [MPS01, Whi89]. **Weights** [BHS23, GG11]. **Well** [AB19a, BBM02a, MX98]. **Well-Focused** [BBM02a]. **Weyr** [BR22]. **WGL** [YL08]. **Where** [EW20]. **Which** [BEGG07, Cao09, Kui00]. **Whose** [LO20, dF05, AdHN88]. **widths** [FMSS21]. **Wielandt** [MSV19]. **Wiener** [ET10, Guo01b, JDS03]. **Wilkinson** [FP20]. **Wise** [CH99]. **within** [HPS13, HPZ23, JNP21, LM98a]. **without** [DD07, YC97]. **Woodbury** [Rie92]. **Words** [JH02]. **Work** [LEMCD19]. **Works** [HPS+11]. **World** [Hig03]. **Worst** [FLT13]. **Worst-Case** [FLT13]. **Wrapped** [Ain17].

Xu [KZ10].

Young [HN90, Kol03, Lin11, VNVM14].

Zero [DG91c, Gow96, GP04, SD12, ZFW07, GKR89]. **Zero-Fill** [ZFW07]. **Zero-Finding** [SD12]. **Zeros** [DY10, Kit95, Lin03, TU91]. **Zolotarev** [Gaw19].

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