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$(-1, 1)$ [DMN12]. 1 [FR19, RS11]. 2 [HR19, HOR17a, TWW15]. 2/3 [BT15]. 3 [BKW10, CCZ13, EMR19, LCH12]. 5 [BKW10]. α [ABC15]. B [BCM17, MMMKV16]. C^0 [BNRS17, CCQ13, SH18, DLT12]. C^r [Mat13]. δ [YS13]. dG(1) [CLA19]. H [BPZ12, FKS18, FKS19, FLOP10, GMS19, dVBRS11]. $H(\mathrm{curl}; \Omega)$ [HLZ12]. $H(\mathrm{div})$ [dVBMR16]. $H(\mathbf{curl})$ [dVBMR16]. $H(\mathrm{curl}, \mathrm{div})$ [DLT13]. $H(\mathrm{div})$ [AT19]. $h/2$ [FLOP10]. H^1 [BY14, LC14]. H^2H^2 [Bör10]. $\mathbf{H}^2$ [LMcS17]. hp [BDGQ12, HM13, dVCMR18, dVMM19]. k [dVBRS11]. L [Pru14]. L^2 [Har18, LC14, Mak18, NW18]. L^∞ [Hac13, LC14, CC10b]. L^p [Li15]. L_2 [BY14, Wil19, DS11]. L_p [BLM11a]. M [JLL15, XL17]. **hp** [CNSV17]. $\mathbf{L^p}$ [CM18]. $\mathcal{H}$ [DHS17, FMP15]. $n = 5$ [HJZ14]. $\nabla \cdot \boldsymbol{B} = 0$ [HMX17]. p [EGLTP17, dVBRS11]. P_1 [LL10]. QR [CH19]. r [Dic12]. S^2 [BD12b]. T [CC13, CFL11]. θ [GAB13]. $\boldsymbol{H}(\mathrm{div})^*$ [CPS16]. W [LV13]. $W^{1,p}$ [Mir12].

-AFEM [CNSV17]. **-BEM** [HM13, GMS19]. **-coercivity** [CC13]. **-conforming** [AT19, dVBMR16]. **-D** [CCZ13, FR19, HR19]. **-designs** [CFL11]. **-discretization** [Har18, NW18]. **-elements** [LMcS17]. **-elliptic** [DLT13, HLZ12]. **-error** [CM18]. **-matrices** [FKS19, Bör10, FKS18]. **-matrix** [DHS17, FMP15, JLL15, XL17]. **-method** [GAB13]. **-methods** [LV13]. **-nonconforming** [CCQ13]. **-norm** [EGLTP17]. **-projection** [BY14]. **-refinement** [dVBRS11]. **-series** [BCM17, MMMKV16]. **-singularities** [YS13]. **-stability** [BY14]. **-stable** [Pru14].

1 [SB13a].

2 [SB13b].

A-posteriori [RW12]. **Absorbing** [ABK13]. **Abstract** [SDH+14, Mas16, FGP10b]. **Accelerated** [SX15b]. **Acceleration** [Sid11a, SCHH13]. **Accuracy** [HR14, BGR18, MR17]. **Accurate** [Koe19, XXL12b, XXL12a, BZ17, CCLM15, CGSW16, DWWW17, DK11, DH17, Lin17, NP15, XL17]. **acoustic** [KK15c, MP18b, dVMRR17]. **action** [BL13a]. **active** [GGGS19]. **actual** [NN11]. **adaptations** [DMG19]. **adapted** [EÖ17, Mir12]. **Adaptive** [AORS17, CHTV18, DM16, EPS17, FGH+16, FHPS19, Gan13, GG12, GMSS11, Git14, GY17, KSD11, Mir16, SV16, BC17, CGMM11, CG11, CPR13, CGMM14, CSW16, CPB17, CXH10, CCZ13, DS11, Dem16, Dem17, EMR19, FGHP17, FLOP10, Gal15, GK19a, HSX12, KdS18, KS11c, OB17, Pla15, Rei12, RS18, SZ13, SH18]. **adaptivity** [KK15a, Rad19, dVMM19]. **Additive** [LMR16, Bre13, DK16b, GS16]. **ADI** [BBKS18, HJS15, MOR17]. **ADI-type** [BBKS18]. **Adiabatic** [JM18]. **adjoint** [AN19, BBB17, CEM14, GGMO16]. **adjoints** [BMWB14]. **advection** [AH14, AH17, BGGH16, DS18c]. **advection-diffusion** [AH14]. **AFEM** [CNSV17]. **affine** [KR16, MMMKV16]. **aggregation** [PCCC18]. **ALE** [BKN13]. **algebra** [BCM17]. **algebraic** [AR16, BBK17, BM13, BBKS18, BMP10, Men11, Not16b, PSV18, XXL12a, XL17]. **Algorithm** [SCHH13, VVVF10, BCN19, BCPS10, BBKS18, CGSW16, CH19, Dic12, EMB10, HHYY14, HLS11, Ise11, JMM12, KLL19, MMMS10, OYV17, Rie19, SG11, ST16, Tu11]. **algorithms** [BLF19, BCGS11, CHTV18, DMG19, HH11, Kir11, NP15, Nie10, PT10, SX13, SX15a, SX15b, XL17]. **aliasing** [BT15]. **all-at-once** [Tak15]. **Allen** [BM11, CCS17]. **Almost** [WMS10, FHPS19, OTMS13, TOMS13]. **alternating** [HY15]. **alternative** [Pin18]. **Ampère** [BCMO16, Nei10, NZ19]. **analog** [BY19]. **Analysis** [ABER10, BD12a, BGJ18, BIM11, Ber16, CLLS19, DLT13, FKNP11, GGM14, GV15, GGK+19, GGRG15, HPS16, KP17, LOSV16, PS11, QRB11, RS11, RE14, Run14, SS18, SCHH13, TWZ17, XZ10, Zha16a, ABM18, AMORB16, AL17, ABC15, AG10, BDQ10, BL13a, BB12, BRK17, BJLZ15, BBD16, BDLM18, BL13b, BC15a, BDQ11, BKN13, BM17, Bre13, BDS13, CDNP16, CPS16, CGG19, CC19, CDL19, CP14, CS12, DES11, DS18c,

DWWW17, DM14, DHM19, DGS15, EH18, EH13, GMS19, GW19, GMP+14, GKN+18, GMT11, GSV19, HR12, HL16, HSD18, HS19a, HLZ12, HP17, HPS18, HKT14, HL18, KS11a, KPR14, LC14, LS16, LN18, LCWW17, LJS18, MOS11, Mak18, NGKN10, NvPZ10, Nou19, PS18, PGW18, RMS17, ST16, SB13a, SX13, TSGU13, TWW15, TT15, VGG14, Wen10]. **analysis** [Wil19, WS19, ZS17, ZDQ17, dHQS15, dVBRS11]. **Analytic** [CG17]. **and/of** [TWW15]. **angle** [HKK12]. **Anisotropic** [Mon19, BGN12, CCP13, CCZ13, Kop17, LN18, LHQ14, Mir16, SY17]. **anti** [AR19]. **anti-Gauss** [AR19]. **any** [ZZ15]. **application** [Adc10, BK12, BC15a, CEM14, Che12, CC13, CLM15, GV15, HSLZ19, HW18, Hor17b, HSZ13, NTT16]. **applications** [ABM18, AHR14, BL13a, BCPS10, BDQ11, HW13, JZ13, KKN14, Nie10, NTW18, NOS16, YS13, ZT12]. **applied** [FGP10a, FGP10b]. **Applying** [GGS15]. **approach** [BO19, BG17, CGMM11, CCGP17, CH18b, CM10, DS18c, FY11, GWCH10, GP11, GGGS19, Mak18, NPVW19, Not16b, OPS15, BEG14]. **approximability** [FMP15]. **Approximate** [BH11, BAK19, BCCH19, BKW10, Rus10]. **Approximating** [BV14, Pin18, Wan12]. **Approximation** [BMWB14, BS17, Bör10, BC16, BM17, BS19, CHW12, CMP13, vyKS14, ABB19, AP11, ABB15, BLM11a, BBL11, BY15, BO17, BGN12, BM11, Bar13b, BHK10, BKV15, BG12, BBD16, BDQ11, BLP19, BHL+19, CD11, CMR18, DMG19, DCC18, DU15, DHS17, DMMS11, Egg19, Eng14, EZ15, EH12, GT14, GK19a, GSY17, GGRG15, HSW17, HR10, KKR12, KOZ16, KK15c, KS11b, LSW11, LMMR19, LLY15, NTT16, NTW18, Nou19, Nov14, OMS13, PC13, RHM13, SY17, SG...12, Wac17, XCW10, ZT12]. **approximations** [AN19, BCS14a, Bal12, BFG13, BPS10, BBK17, BV12, BR17, BMO15, BEJ14, CCP13, CEM14, EK18, ER18, Fro18, GGMO16, GNS15, GEEF17, HR14, HR12, HJT14, HL18, KK15a, KR16, LM11, LHQ14, LM13, NS14, TWZ17]. **arbitrary** [Mir12, Mon19]. **argument** [Fuk10]. **arising** [BLM11b, BG16, DD16, Eng14, GMP+14, PG17]. **Arnold** [CGG19]. **Arnoldi** [BG12, ST16]. **Artificial** [BMGN18]. **assimilation** [BO18]. **associated** [BCD15, GK19b]. **assumption** [CGG16]. **assumptions** [CC19]. **Asymptotic** [FS14, HL19, OYV17, SH17, WZH13, ADBN16, BDF12, CGMM14, HJNS17]. **asymptotically** [Pla15, SV12]. **Asymptotics** [LT10, BLM11a]. **Asynchronous** [MSV17]. **atomistic** [LOSV16, MOS11, OLOV18]. **atomistic/continuum** [LOSV16, MOS11, OLOV18]. **attractors** [Pie18, ZT12]. **Augmented** [CC10a, BB12, Jin17, LM15]. **Automatic** [Pla15, BMWB14]. **auxiliary** [ZLL+12]. **average** [DH17, LMR16]. **Averaging** [Dal10, CLM17]. **axisymmetric** [BGN19].

B [RMS17]. **B-splines** [RMS17]. **Babuska** [Mak18]. **backscattering** [HHR11]. **Backward** [ST16, AL15, DLPV18, GMT11, LLW10]. **Balanced**

[Sin12, BL17, CDKLM18]. **Balancing** [Zam13]. **Banach** [FN12, JZ13, JZ14, JY16, KdS18, Ste15, WZ10, ZWJ19, dHQS15]. **band** [Eng14, GG12]. **barrier** [MOGO17]. **barycentric** [BDHK12, BRZ13, CH18b, Mas14, MdC17]. **based** [Bal12, BBK17, BKW10, CGG19, CHTV18, CS17, CH12, DS16, DSX16, EH18, FLOP10, FHN$^+$14, GS17, GGM14, GH14a, GH14b, GP11, HS19a, HT18, KT12, LA11, LFS16, MOS11, Mat13, NTW18, Nou19, OLOV18, RMS17, WX12, Wei11]. **bases** [BV12, MV15]. **basis** [CQR16, HSW17, PT14, RHM13, SV13]. **BDDC** [Sou13, Tu11]. **BDF** [BMWB14]. **BE** [GMSS11]. **beam** [DGBL$^+$15]. **Bear** [CLLS19]. **Beavers** [CGHW11]. **Bellman** [BMZ10, SS16]. **Beltrami** [BHL$^+$19]. **BEM** [HM13, Bal12, BBSV13, BGIS17, BN16, FFKP15, FHPS19, GMS19, GHS12, OB17, Wei11]. **BEM-based** [Wei11]. **BEM-FEM** [GHS12]. **bending** [Bar13b, Zha16a, dVM11]. **Benjamin** [BMGN18, DHKR16]. **Bernoulli** [Kre17]. **Bernstein** [Kir11, KT12, Kir17, PS16]. **Bessel** [Hor17b]. **best** [BY15, BO17, HL18]. **between** [CMR18, Fer13b, HU17, Jun15]. **Bézout** [NNT15]. **BGK** [ADBN16]. **bidiagonal** [Bar13a]. **bidomain** [Zam13]. **Bielak** [GHS12]. **bifurcations** [Chá11, HJNS17]. **biharmonic** [BAK19, CG14, PS13]. **binary** [YBTB14]. **Bingham** [CRS16]. **biology** [GT14]. **bioluminescence** [GWCH10]. **Biot** [AKYZ18]. **Birkhoff** [FGP10a, FGP10b]. **bisection** [CNX12]. **Bivariate** [EKAB16, Che12, NNT15]. **blended** [LOSV16]. **blending** [OLOV18]. **Block** [DLPV18, AR19, BLM11a, BS13, Hac16, Har15, LZ15, OYV17]. **block-Jacobi** [OYV17]. **block-structured** [Hac16]. **blocks** [Koe19]. **blow** [Cho18, HW18, ZS17]. **blow-up** [Cho18, HW18, ZS17]. **Bona** [BMGN18]. **both** [HHS15, HM16]. **Bouligand** [CN19]. **bound** [FLMP12, GMT11]. **bound-constrained** [GMT11]. **Boundary** [GMÖ$^+$18, HJHA17, Ste14, VGG14, Adc10, ABK13, BY19, BHT17, BIM11, BMGN18, BHL$^+$19, CWHLT15, CGS14, DU15, EÖ17, Era15, EOS17, FM18, FGH$^+$16, FGHP17, FL15, FH17, Gan13, GKL19, HK19a, HQ12, HT18, HK17, JL13b, JSW18, KOZ16, Kre17, LA11, LJS18, Mas16, OS14, OPS15, QRSZ19, SV13, Say13, SH17, SW11b, ST18, ZZ15, vyKS14]. **boundary-driven** [FH17]. **bounded** [Che12, KR16, MOR17, Wen10]. **bounds** [AV11, BBB17, BCCH19, BKUV17, CDM$^+$18, CG14, DS16, FGL14, Har18, HHS15, LN15, PS16, SB13a, SB13b, XCW10]. **Boussinesq** [OS19]. **box** [PT10]. **branches** [GL11]. **Bregman** [SH19]. **Brent** [WG13]. **Brinkman** [AMORB16, GGM14, GKSS13, LDQ11]. **Bubble** [BS10, GN14]. **Buchholz** [LT10]. **build** [Maz11a]. **bulk** [BHLZ16]. **bulk-surface** [BHLZ16]. **Burgers** [LP15].

c [Dic12]. **Cahn** [BM11, CCS17, CHW17, CP14, DWWW17, ER15, GL11, GWW14, LCWW17]. **calculation** [Hor17b]. **calculations** [Eng14]. **calculus** [Chr11, EHRS12]. **Camassa** [ADM19]. **canonical** [EH12]. **capillary** [KP17]. **capturing** [HM14]. **cardiac** [Zam13]. **Carlo** [BSZ11, LRS20, BC15a, BD12b, GGK$^+$19,

GKSS13, GKN+15, HANT16, HMOU16, LRS19, PGW18, TSGU13]. **case** [ABER10]. **Cauchy** [BR11]. **cbc** [Dic12]. **CCC** [BR17]. **cell** [CCP13, Era15, GGGS19, YWY14]. **cell-centered** [CCP13, Era15]. **cells** [HJHA17]. **centered** [CCP13, Era15, ZZ15]. **Central** [CKL14]. **Central-upwind** [CKL14]. **certain** [Smy10]. **CG** [ZBJ18]. **chain** [MOS11]. **chains** [MS19]. **changing** [CC13, DCC18]. **channel** [BHT17]. **characteristics** [SWS16]. **characterization** [Kim19]. **Chebyshev** [Mas14, Maz11b, XCW10]. **Chebyshevian** [Maz11a]. **chemistry** [BCS14a]. **circle** [HJT14]. **Circulant** [GKN+18]. **clarifier** [BKTT10]. **clarifier-thickener** [BKTT10]. **class** [BMN11, BB13, BBC+18, CWHLT15, DD16, NvPZ10, Not19, RS11, Ven11]. **classes** [iTSMM10]. **classical** [AN18, BS13, CG17, LMS19, SX15a]. **classification** [JO10]. **Clenshaw** [HS15]. **closed** [BGN12, BEG14, KLL19]. **clouds** [DM14]. **clusters** [Gal15, LZ15]. **co** [DL11]. **co-dimension** [DL11]. **coarse** [EMR19, SDH+14]. **coefficient** [HQ12, LS18]. **coefficients** [AY18, BD11, BSZ11, CC13, DCC18, GGK+19, GKN+15, GKN+18, mHZZ17, Ise11, Li15, LMR16, SS18, SS16, TSGU13, TWZ17]. **coercivity** [CC13]. **Collocation** [ST18, AR16, LSW12, Lui17, MNT13, Nak17, Nak26]. **combined** [SS15]. **common** [NNT15]. **commutator** [HK19b]. **commutator-free** [HK19b]. **compactly** [SV13]. **compactness** [HHX19]. **companion** [VVVF10]. **comparison** [BD12a, BHK10, BS19, LM15]. **complementarity** [GAB13]. **Complete** [HK19a]. **completion** [BGJ18, GK19a]. **complex** [BGHL14, Seg13, Zha16b]. **complexes** [CHH18]. **complexity** [Bel11]. **component** [Nou19]. **Componentwise** [NP15]. **composites** [PC13]. **composition** [CMMV14]. **compressed** [VD11]. **compressible** [AH17, CR12, FKM16, GMN19, Kar13, SS15, Wil19]. **compressor** [Str15]. **computable** [AV11]. **Computation** [MP15, Cho18, CCSS16, Fuk10, Fuk13, GL11, GST19, GP11, Ise11, JO10, Man13, Rie19, SG11, SB13b, WZH13]. **Computational** [CFL11, FHPS19]. **computations** [DK11, NP15]. **Computing** [ACWL14, NNT15, Seg13, ZLL+12, BL13b, EMB10, GG12, JLL15, KLS19, MV15]. **condensation** [Loz19]. **condition** [CGHW11, DP16, HKK12, HK19b, JL13a, KdS18, KOZ16, Nak12, PZ18]. **conditional** [Fuk13]. **conditions** [AHR14, ABK13, BMGN18, DU15, GKL19, HK19a, HW11, LA11, LJS18, vyKS14]. **conductivity** [HKQ18, PC13]. **cone** [GS13, KdS18]. **cone-constrained** [GS13]. **cones** [Mir16]. **confinement** [GY12]. **conformal** [GT19, KPR14]. **Conforming** [Wac17, DO17, GN14, KK15b, SZ13, AT19, dVBMR16]. **conjecture** [HJZ14]. **conjugate** [EGLTP17, PT10]. **connection** [Jun15]. **consecutive** [Dri12]. **conservation** [AGS10, BBC+18, BG16, BKTT10, GM14, HM14, MR17, Tow18]. **conservative** [EZ15, JP13]. **Consistency** [KSD10, Kla15]. **consistent** [ADF18, CEM14]. **constant** [AP11, BDHK12, FLZ19]. **constants** [OMS13, RHM13]. **Constrained** [Str15, AGS10, ABC15, CQR16, CHL13,

GS13, GMT11, HS19a, NPVW19, PG17, SG11]. **constraint** [Owe16]. **constraints** [EMB10, FLMP12, HHYY14, NW18, OW11, PT10, RW12, dHQS15]. **Constructing** [BV12, HHS15, ZBJ18]. **Construction** [AT19, DGSY17, BD11, DL11]. **contact** [BK12, BGIS17, CMR18, DH17, HR10, KSD10, KSD11, Kla15, Rad19, WHC14]. **contact-stabilized** [KSD11, Kla15]. **Continuation** [BEK11, Bel11]. **Continuous** [HW18, LL12, BRK17, CC13, DLT13, Li15, YBTB14]. **continuum** [Cal17, LOSV16, MOS11, OLOV18]. **control** [AORS17, ABM18, BM11, CQR16, DD16, GY17, HSLZ19, HFL12, JSW18, KK15a, KSD11, LV13, NV12, NPVW19, OPS15, OW11, RW12, SG11, SA10, Tak15]. **controllability** [BHL11]. **controlling** [DS11, Dem16]. **controls** [CHW12]. **convection** [ABH13, BBFP18, BBK17, BS12, BC12, BHLZ19, CJ14, FKNP11, FH17, HJT14, KKR12, LHQ14, TWW15]. **convection-diffusion** [BBFP18, BBK17, BS12, BC12, CJ14, FKNP11, HJT14, KKR12]. **convection-reaction-diffusion** [ABH13]. **Convergence** [AG10, BBD16, BC15a, BMZ10, BDS13, CNSV17, CPB17, CLA19, CXH10, CDL19, CS12, DFL16, DS11, Dem17, DWWW17, DHKR16, EH18, FKM16, FLOP10, GW19, GS17, GH14b, GLW19, HS19a, HQ12, Har15, HLZ12, HJS15, HKT14, HSX12, HL18, KdS18, KS11a, KLLG17, KPR14, LS18, LZ15, Nak17, NTT16, PGW18, Pie18, PCCC18, SCHH13, Tow18, Ais15, AR16, BL13a, BT15, BHK10, BG12, BR17, BC17, Cal17, CvN13, DE16, ER18, FM18, FGH$^+$16, FGHP17, GGS15, Gan13, GLS17, GY17, HL19, HKK12, HY15, HH10, KL18b, NN11, NZ19, ÖS13, OTMS13, OYV17, SW19, Sid11a, Sin12, SH19, SH18, SX13, SX15a, SX15b, TOMS13, Wan18, ZRK16, dVCMR18, Nak26]. **Convergent** [CR12, AKST14, ABAC16, CLM15, FLS10, GWW14, Kar13, KL17, KLL19, NKL21, Rie19, Sch16]. **Convex** [CLMS18, DKS13, HHR11, EÖ17, FN12, FLMP12, GNS15, GWW14, HHYY14, JZ14, JY16, LMSS17, Mir16, Wac17]. **convex-nonconvex** [LMSS17]. **convexity** [EMB10]. **convolution** [BBSV13, BLM11b, Hac11, LFS16]. **coordinates** [DS10]. **Cordes** [SS16]. **Coriolis** [CDKLM18]. **corner** [dVCMR18]. **corners** [FL15]. **corrected** [HS15, JSW18, Not16a]. **Correcting** [ABB19]. **Correction** [FKS19, LRS20, Nak26, NKL21, OZ23, BBK17, Fer13a]. **corrections** [CCP13]. **costs** [FHPS19]. **Coulomb** [GMSS11]. **counts** [GMS19]. **coupled** [BDG$^+$18, BHLZ16, CDL19, DO17, LVY14, OS14, PS17b, SzS12]. **Coupling** [OB17, ADF18, AN18, AG10, BDQ10, BLS15, Era15, EOS17, GHS12, GMSS11, HJHA17, KL17, NKL21]. **couplings** [FFKP15]. **Covariance** [DHS17]. **Crank** [KK15a, Wan18]. **critical** [PSV10]. **cross** [BKV15, BC16, KK11, Mur17]. **cross-diffusion** [Mur17]. **Crouzeix** [HM16, LMR16]. **crystals** [GG12]. **cubature** [Che12]. **cubic** [ABB15]. **cuboid** [CCQ13]. **cuboidal** [AT19]. **curl** [KK15b, Sun16]. **Curtis** [HS15]. **curvature** [BGN19, KLL19, ZLL$^+$12]. **Curve** [PS17b]. **curves** [BGN12, EKAB16]. **curvilinear** [ABB15]. **customized** [HHYY14]. **Cut**

[BHLZ16, YBTB14]. **CutFEM** [BHLZ19]. **cylindrical** [AP10].

d [TWW15, CCZ13, EMR19, FR19, HR19, HOR17a, LCH12, RS11]. **DAEs** [SB13a, SB13b]. **Damped** [EK18]. **damping** [CGK18, PSV10]. **Darcy** [BDQ10, BB12, BDG+18, BGG+16, BOS18, CGHW11, CGSW16, CS17, CHW17, DO17, GVY14, LDQ11, LVY14]. **Data** [BO18, AdST12, BGJ18, BMZ10, CD11, GSY17, HR12, HSW17, HW13, LC14, WE16, ZS14]. **Davidson** [Ais15]. **DDFV** [GKL19]. **de-aliasing** [BT15]. **DE-Sinc** [OTMS13, TOMS13]. **Decay** [KS11c, Pet12]. **decomposition** [AL17, ABAC16, Ber16, CGHW11, CH12, EH18, FN12, FLS10, HSZ13, NGKN10, PT12, SW11b, YWY14, Zha18, ZDQ17]. **decoupled** [CHW17, GGGS11]. **defined** [NS14]. **degenerate** [ABH13, CJ14, DE16, EH18, EKAB16, KKR12, LS18, Rei12, SX15a, SX15b]. **degree** [CHTV18, Dri12, HLS11]. **delamination** [OB17]. **delay** [HV12, WMS10]. **denoising** [AHR14]. **densities** [Lin17]. **density** [SSS12]. **dependent** [Ber16, HL16, SG...12, SS16]. **derivative** [AdST12, Nov14]. **Derivatives** [BCPS10, ADF18, Dal10]. **derived** [BC12]. **descent** [dHQS15]. **description** [AGK+14]. **Design** [BDF12, ADF18, Maz11a]. **designs** [CFL11, GP11]. **determinant** [SAI17]. **deterministic** [Rus10, TWZ17]. **DeTurck** [Fri15]. **developmental** [GT14]. **DG** [BS19, DGS15, Kar13]. **diagonal** [Har15]. **diagonalization** [GW19, Str15]. **diagonally** [DK11]. **difference** [AL15, BY19, DHKR16, Fro18, GK19b, HR14, HV12, KKR12, LVY14, MR17, Pru14, SzS12]. **different** [Dri12, HHNS16]. **differentiable** [DGSY17]. **differential** [ABB15, AR12, BLF19, BM13, Bör10, BV14, CMMV14, CH18a, CS12, DM14, Git14, GKL15, GLW19, HHB16, HHX19, HV12, Mas16, Rus10, SV12, SA10, Sti10, WZ10, WMS10]. **differential-algebraic** [BM13]. **Differentiation** [dGKL19, BMWB14, DS16, DS18a]. **diffuse** [DS18c]. **diffusion** [AH14, AH17, AV11, ABH13, BO19, BBFP18, BBK17, BGGH16, BS12, BC12, BCCH19, BEJ14, CLLS19, CCP13, CJ14, CM15, DS18c, DK16a, FKNP11, FGL14, FH17, GV19, GGGS11, HPS16, HJT14, KKR12, KS11b, Kop17, KLLG17, LS18, LHQ14, Mur17, Mus15, Pie18, PS17b, SG...12]. **diffusion-convection-reaction** [LHQ14]. **diffusive** [TWW15]. **digital** [HMOU16]. **dilation** [CCR14]. **dimension** [DL11, ZS14]. **dimensional** [ABB19, ABER10, ABK13, BGG+16, CCQ13, CH19, FGP10a, GL11, HS18, Pet12, Wan12]. **dimensionality** [Pet12]. **dimensionally** [BDQ11]. **dimensionally-heterogeneous** [BDQ11]. **dimensions** [BGGH16, DGS15, KS18a]. **Dirac** [AORS17]. **Direct** [Man13]. **direction** [HY15]. **directional** [BM17, Dal10]. **Dirichlet** [BY19, FL15, GMS19, JSW18, LN18, OPS15, vyKS14]. **discontinous** [BMZ10]. **discontinuities** [SKW19, Tow18]. **discontinuity** [DL11]. **Discontinuous** [AH14, AP10, HM13, HK17, LVY14, MR17, SS16, WHC14, YS13, BB12, BCS14b, BC15b, BCGS11, BKTT10, BS10, CP18, CBHW18, CM15, DM16, DK16b, FKNP11, HM14, HW18, HKXZ16, JL13b, KP17,

LS18, LMMR19, LP15, Loz19, MP18b, MNT13, Mus15, RSV13, SSS12, SA10, SH18, Wil19, ZS14, Zha16a]. **Discrete** [DGBL+15, GEEF17, JLZ18, KS18b, LV17, ABM18, BFG13, BIM11, BKN13, CLLS19, DFL16, DHM19, EZ15, GLS17, HR12, HHX19, HFK19, HSZ13, KK11, KL17, LA11, LM13, MOGO17, Mir16, NKL21, Pie18, PZ18, SW19, ZLL+12, Zha16b, ZS17, dGKL19]. **Discrete-time** [GEEF17]. **Discretising** [LS17]. **Discretization** [BCMO16, BGN19, BGG+16, CC15, DGS15, DK16b, FGP10a, Har18, HR19, HS18, KdS18, Kla15, KL18a, KPR14, LMR16, Man15a, NV12, NW18, RE14, RSV13, SV16, dVM11]. **discretizations** [BRK17, CCS17, FS17, HKXZ16, KL18b, LR17, Sch16]. **discretized** [BHL11, CPS16, FS19, HH11, PPS18]. **Discretizing** [Chá11]. **dislocation** [CCM12]. **dispersion** [JM18]. **dispersion-managed** [JM18]. **dispersive** [AY18]. **displacement** [CLLS19, CDL19, Fer13a, LM15]. **displacement-correction** [Fer13a]. **dissipative** [ADBN16, BEJ14, CMP13, Egg19]. **dissipativity** [GAB13]. **dissolution** [KPR14]. **distorted** [WXY12]. **distributional** [FY11]. **div** [BPZ12]. **divided** [MR17]. **domain** [AL17, ABAC16, Ber16, BG17, BGHL14, CGHW11, CH12, EH18, FLS10, HPS16, NS14, PT12, QRSZ19, Say13, SW11b, YWY14]. **domains** [AP10, FM18, FKM16, FL15, HPS16, LN18, Wen10]. **dominant** [DK11]. **Dörfler** [KS11c]. **double** [VVVF10, iTSMM10, TWW15]. **double-diffusive** [TWW15]. **doublets** [BLM18]. **doubling** [NP15, XL17]. **Douglas** [HHYY14, HY15]. **DP** [DGS15]. **DPG** [BDGQ12]. **drift** [BCCH19, LS18]. **driven** [FH17, GLW19, KLLG17]. **dual** [ABAC16]. **duplication** [Fuk13]. **dyadic** [BCD15]. **dynamic** [BGR18, KP17]. **dynamical** [Chá11, FS17, GAB13, KSD10]. **dynamics** [BGN16, CCM12, DGBL+15, FS17, NDL14, TWW15, Wor19, ZS12].

early [MOGO17]. **early-exercise** [MOGO17]. **Edge** [BBK17]. **Edge-based** [BBK17]. **effect** [BBL11]. **Effective** [CM13, CCM12]. **effects** [KP17, MdC17]. **Efficient** [BLF19, HHB16, Mir14, RSV13, SSS16, CGSW16, EH12, Hac11, KVW15, Wan12]. **Effortless** [SM16]. **eigendata** [BSCZ12]. **eigenpair** [JLL15]. **eigenproblem** [LMMR19]. **eigenproblems** [CEM14, SDH+14, SX15a, SX15b]. **eigenvalue** [Ais15, BSCZ12, BV17, BEK11, CGMM11, CG11, CGMM14, CG14, DBV11, DP16, GS13, Gal15, GGMO16, GGK+19, HL19, JMM12, Kim19, LLW10, LZ15, LLY15, Men11, Nak12, Sun16, SX13]. **eigenvalues** [BBB17, BAK19, BEK11, CDM+18, FPD12, Fro18, GHP17, HHS15, IN18, Koe19, MP15, SX15a, SX15b]. **eigenvectors** [CDM+18]. **eikonal** [DES11]. **elastic** [BGN12, CMR18]. **elasticity** [BGIS17, BDGQ12, DL15, FFKP15, GWX19, GN14, HKXZ16, LMMR19, LMcS17, Smy10]. **elastoplastic** [CLA19]. **elastoplasticity** [CSW16]. **elastostatics** [HR10]. **electric** [BN16, HHR11]. **electrical** [GS17, HJHA17, HKQ18, HM18]. **electromagnetic** [CCZ13]. **electronic** [KY12, SY17]. **electrorheological**

[BBD16]. **element** [AV12, AH14, AORS17, AKST14, AP11, ADM19, ABB15, BBL11, BPS10, BY14, BBK17, Bar13b, BHK10, BGJ18, BDG+18, BBD16, BPZ12, BHLZ16, BO18, BHL+19, CGPS17, CGH13, CGMM14, CPS16, CSW16, CPB17, CWHLT15, CXH10, CW12, CH18a, CHH18, CCSS16, DS11, Dem16, Dem17, DCC18, DWWW17, DKS13, DU15, DO17, DSX16, DLT13, EÖ17, ER18, ER15, Era15, EOS17, FM18, FGH+16, FGHP17, Gan13, GT14, GGM14, GG12, GVY14, GKSS13, GY17, GKN+15, GGRG15, GLW19, HKK12, HT18, HR10, HLZ12, HSX12, HHS15, HMX17, HH11, JP13, KOZ16, KK15a, KS18b, Kir11, KT12, KK15c, KLL19, LM11, LMS19, LV17, LA11, LMY18, LLY15, LCWW17, LMR16, LL10, LHQ14, Mak18, MSW13, Mat13, Nei10, NV12, OS14, OPS15, OR10, PS13, PC13, QRB11]. **element** [SS15, SG...12, SZ13, SS16, SW11b, Ste14, Ste10, Wac17, WX12, WXY12, ZBB14, Zha16b, ZRK16, dVBMR16, dVMRR17, dVCMR18, BSZ11]. **elementary** [EHRS12]. **elements** [AT19, BRK17, CCQ13, CGS14, CK16, CGK18, DLT12, EH13, GMÖ+18, GN14, HHNS16, HK17, HM16, KS18a, KK15b, KLLG17, KS11c, LL12, LMcS17, Mir12, Mon19, dVMM19]. **ELLAM** [CDL19]. **elliptic** [AV12, ABM18, BSZ11, Bör10, BS10, CDNP16, CCQ13, DK16a, DGS15, DK16b, DLT13, Fuk10, Fuk13, GV15, GGK+19, Git14, GY17, GKN+15, GKN+18, HQ12, HPS16, mHZZ17, HSLZ19, HS19b, HLZ12, HHS15, JL13b, KS18a, LMR16, NW18, NTT16, OPS15, PT14, Smy10, Sti10, TSGU13, XZ10, ZZ15]. **ellipticity** [OS14]. **embedded** [DFL16, HHB16]. **embedding** [GKN+18]. **enclosure** [KKN14]. **Energy** [JSW18, Kop17, Say13, CHW17, Dem16, FLMP12, LMY18, OPS15, ZS17, ZVKG11]. **Energy-norm** [Kop17]. **enhancement** [MR17]. **enrichment** [Sch11b]. **entries** [BV12]. **Entropy** [BEJ14, HM14, FH17, Wil19, ZS12]. **entropy-dissipative** [BEJ14]. **Entropy-stable** [BEJ14]. **epitaxy** [CW12]. **equation** [AY18, AKST14, ABH13, ABK13, ADM19, AP10, AN18, BFG13, BLS15, BO19, BD12a, BCST19, BY19, BDG+18, BN16, BMGN18, BDS13, BDF12, BEJ14, BO18, Cal17, CG14, CP14, Cho18, CCSS16, CMP13, CR12, DES11, DS18c, DHKR16, ER18, ER15, FS14, FL15, GL11, GGS15, GMÖ+18, GH14b, GWW14, HK19a, HT18, HS17, JM18, KK15a, KS11a, Kre17, LL12, LP15, MP18b, MNT13, Nei10, NZ19, OS14, OS19, PSV10, PT12, Pie18, QRSZ19, SW11b, VGG14, ZS14]. **equations** [AL15, AL17, AR16, AR12, BLF19, BZ17, BBK17, BM11, BGGH16, BB13, BBKS18, BDLM18, BC12, BMP10, BMZ10, Bör10, BGHL14, BHL11, BV14, BC17, CCP13, CG17, CP18, CHW12, CCFM17, CC19, CMMV14, CCLM15, CLM17, CQR16, CKL14, CDKLM18, CH12, CJ14, CS12, CLM15, DD16, DU15, DL15, DE16, DLT12, EH18, FGHP17, FH17, GY12, GMN19, GLS17, Git14, GK19b, GKL15, GLW19, HHNS16, HHB16, HR19, He13, HOR17a, HJS15, HP17, HPS18, HKT14, HJT14, HKXZ16, HJNS17, HS18, HV12, JLZ18, KKR12, Kar13, KOZ16, KS18b, KKN14, KK15c, KL17, KL18b, KNWW19, LA11, LCH12, LC14, Li15, LS16, LL10, MP18a, Man15a, Mas16, MOR17, Nak17, Nak26, NvPZ10, PS13, Pet12, PT14, PCCC18, Pru14, Ren17, RS11, RE14, Rus10, SV13]. **equations** [Say13, Sch10, SH17, SSS16, SWS16,

SS16, SV12, ST18, SA10, Sti10, TT15, Ver17, Ver10, WZ10, Wan12, Wil19, WMS10, XZ10, XXL12b, XXL12a, XL17, YS13, ZT12, ZS12, NKL21]. **equidistant** [BDHK12]. **equilibration** [CM13]. **equilibria** [GL11]. **equivariant** [MMMKV16]. **ergodic** [FS19, HY15]. **Error** [ADM19, ABC15, BCS14a, BM11, BRK17, BL13b, CCS17, CDNP16, CD11, CC15, DS16, DD16, FS19, GMN19, GK19b, GGGS11, GSV19, HS15, HP17, HPS18, LCWW17, LL10, OMS13, SZ13, XCW10, ZS14, AV12, AV11, AMN11, AMORB16, BLM11a, BB12, BDLM18, BKN13, BM17, BKUV17, CCM12, CGPS17, CM13, CGH13, CPS16, CGG19, Che12, CS17, CM18, CJ14, DS18c, DK16a, DWWW17, DSX16, FLOP10, GMS19, GGMO16, GM14, GMT11, HR12, HSV12, Har18, HZZ18, KKR12, KK15a, Kla15, Kop17, KVW15, LM11, LMS19, LLW10, LO14, LMY18, LN18, LM13, LJS18, MOS11, Mon19, NV12, NW18, NvPZ10, OW11, PS16, RW12, RHM13, ST16, SWS16, TT15, WX12, Wei11, YS13, ZS17, ZVKG11, dVMM19]. **errors** [ABB19, DS11, Dem16, DLPV18, FGH$^+$16, MdC17, PSV18]. **estimate** [HS15, KKR12, LL10, Mon19, Wei11]. **estimates** [AV12, AMN11, ADM19, BCS14a, CCM12, CCS17, CGPS17, CGH13, CD11, CC15, CHTV18, Che12, CM18, CJ14, DD16, DK16a, DWWW17, FS19, GMS19, GMN19, GGMO16, GNS15, GK19b, GGGS11, Hac16, HZZ18, KKN14, Kop17, KSZ13, LM11, LMY18, LM13, Mak18, MR17, NV12, NW18, OMS13, OW11, RW12, Say13, SWS16, Ste15, YS13, ZS14, ZS17, ZVKG11, dVBRS11]. **Estimating** [PSV18, Che16b]. **estimation** [DSX16, Hac13, HSV12, LMS19, LO14, Lin17, NPVW19, PGW18, RHM13, dVMM19]. **estimator** [CS17, Era15, KVW15]. **estimators** [BC15a, CM13, FLOP10, SAI17, WX12]. **Euclidean** [Man15b]. **Euler** [CvN13, GGGS11, He13, HP17, JT16, LS18, Pin18, Ren17, WZ10, Wil19]. **Eulerian** [NDL14]. **evaluation** [Bal12, SS11]. **evanescent** [AN18]. **EVD** [OYV17]. **even** [BCS14a, HLS11, OTMS13, TOMS13]. **even-tempered** [BCS14a]. **evolution** [CLA19, CLM17, Egg19, HP17, HPS18, JLZ18, KL18a, KL18b]. **Evolving** [ER15, GM14, KLLG17, KLL19, Man15a]. **exact** [DGBL$^+$15, Koe19]. **exactly** [HMX17, MMMKV16]. **examples** [GV19]. **exercise** [MOGO17]. **Existence** [BFG13, CFL11]. **expanding** [Wor19]. **expansion** [SH17]. **expansions** [LT10, MOGO17, SS11, WZH13]. **Explicit** [EH13, AL15, GMS19, He13, OMS13, SB13a, SB13b, ZS14]. **Exponential** [Pet12, dVCMR18, BM19, CCR14, DMN12, EK18, GV19, HS17, HK19b, KLS19, OS19, Pie18, iTSMM10, WMS10]. **exponential-fitting** [GV19]. **exponential-type** [HS17, OS19]. **exponents** [BL13b, BV14]. **Extended** [SCHH13, KS11a, MV15, dCM17, Maz11b]. **extensible** [Owe16]. **Extension** [AdST12]. **exterior** [ABK13, BBSV13, BLS15, KL17, NKL21]. **Extrapolated** [LM15]. **extremal** [LLY15].

factor [NN11]. **factoring** [BH11]. **factorization** [DK11, LGC14, RB11]. **family** [AHR14, BBC$^+$18, CDL19, OTMS13, Ste10, TOMS13]. **Far**

[dCMT16]. **Far-field** [dCMT16]. **Farin** [Mat13]. **Fast** [Bal12, FKS18, Fuk10, GST19, Kir11, KT12, Kir17, LGC14, PG17, SS11, Fuk13, GP11, HT18, Ise11, MMMS10, Mir14, Run14, WZH13, FKS19]. **Faster** [DMMS11]. **fat** [BIM11]. **FE** [GMSS11]. **Fejér** [Not16a]. **FEM** [BS19, BC17, CLLS19, CG11, CPR13, CRS16, CGG19, EPS17, FMP15, FFKP15, Gal15, GHS12, GGGS11, JSW18, Kar13, Sun16, Wei11]. **FEMs** [CDNP16, GLS17, mHZZ17, Li15, SWS16, Wan18]. **Fer** [RI15]. **FETI** [DGS15, PS11]. **Feynman** [FS19]. **Fickian** [BBFP18]. **fictitious** [BG17, JL13b]. **field** [BN16, BMO15, CCS17, DL11, FKS18, FKS19, dCMT16]. **fields** [Ber16, DHS17]. **Filippov** [DL11]. **film** [CW12, FLMP12]. **filtering** [NGKN10]. **finding** [LGL17, WG13]. **fine** [PZ18]. **Finite** [AGS10, AP11, ABB15, BPS10, Bar13b, BSZ11, BDG$^+$18, BHL$^+$19, LLY15, PC13, SG...12, SzS12, ZS17, AV12, AH14, AORS17, AKST14, ABH13, ADM19, AT19, BBL11, BY14, BBK17, BHK10, BRK17, BY19, BGJ18, BBD16, BC12, BPZ12, BDF12, BHLZ16, BO18, CCP13, CGH13, CGMM14, CPS16, CSW16, CPB17, CXH10, CW12, CH18a, CHH18, CCSS16, CK16, CGK18, DS11, Dem16, Dem17, DCC18, DWWW17, DKS13, DU15, DO17, DSX16, DLT13, DHKR16, ER18, ER15, Era15, EOS17, EH13, FGL14, FH17, Fro18, GT14, GGM14, GG12, GM14, GVY14, GKSS13, GY17, GKN$^+$15, GK19b, GGRG15, GLW19, GN14, HR14, HKK12, HZZ18, HR10, HLZ12, HW18, HHS15, HMX17, JP13, KKR12, KOZ16, KK15a, KS18a, KS18b, KK15b, Kir11, KT12, KK15c, KLLG17]. **finite** [KLL19, KS11c, LM11, LL12, LMS19, LV17, LA11, LCH12, LC14, LMY18, LVY14, LCWW17, LMR16, LL10, LHQ14, Mak18, Mir12, Mur17, Nei10, NV12, OS14, OPS15, OR10, Pet12, QRB11, SS15, SS18, SZ13, SS16, Ste10, Wac17, WX12, WXY12, XZ10, ZBB14, ZZ15, Zha16b, ZRK16, BHT17, BGHL14, FGP10a]. **finite-difference** [HR14]. **Finite-dimensional** [FGP10a]. **finite-element** [GGRG15]. **Finsler** [Mir14]. **First** [BHK10, NS14, BS12, Fuk10, MP18b, RS18]. **First-order** [BHK10, MP18b]. **fitting** [GV19, IN18, OTMS13, TOMS13]. **fixed** [EHRS12, HRS12]. **Fliess** [GEEF17]. **Floater** [dCM17]. **flow** [BGN12, BB12, BG16, BMO15, CRS16, CS17, DD16, DHM19, Fri15, GGM14, KP17, KLL19, KLS19, LDQ11, PS17b, SS15, YBTB14, ZLL$^+$12]. **flows** [AH17, BPS10, BGN19, BHT17, BCN19, BEG14, BGG$^+$16, CCS17, CHW17, GVY14, LVY14, RHM13]. **fluid** [AKYZ18, AG10, BJLZ15, BG17, DD16, Fer13a, GV15, LDQ11, NP15, SSS12]. **fluid-poroelastic** [AKYZ18]. **fluid-rigid** [SSS12]. **fluid-structure** [AG10, BG17, Fer13a, GV15]. **fluidic** [BGN16]. **fluids** [BBD16]. **flux** [BBK17, BHK10, BG16, BKTT10, DSX16, PSV18, Tow18, WXY12]. **flux-correction** [BBK17]. **fluxes** [CCSS16]. **Force** [OLOV18, MOS11]. **Force-based** [OLOV18, MOS11]. **forces** [CDKLM18]. **forcing** [RE14]. **form** [FGP10a, FGP10b, Har15]. **format** [EH12, GK19a]. **formation** [GT14]. **formats** [Nou19]. **forms** [ABB15, CH18a, Dem17, HHX19]. **formula** [Not16a, Pin18]. **formulae** [AL15, Not19, PS16]. **formulas**

[DS18a, iTSMM10]. **formulation** [AMN11, BB12, DGBL+15, EGH15, HJHA17, HFL12, MP18b]. **formulations** [BKN13]. **Fortin** [MSW13]. **forward** [RS11]. **foundation** [Smy10]. **four** [HK19b]. **Fourier** [Adc10, BZ17, BT15, CG17, GP11, KK11, NGKN10]. **fourth** [BMN11, BEJ14, CGH13, CCQ13, HH11, Zha18]. **fourth-order** [BEJ14, CGH13]. **fractional** [AN19, AdST12, BLF19, BO19, BLP19, CJ14, CM15, JLZ18, KY12, Mus15, Nov14]. **fracture** [DHM19]. **fractured** [BGG+16, CS17, LDQ11]. **framework** [CDM+18, HSV12, Man15b, Mas16, Olv12, YBTB14, Zha18]. **free** [BDGQ12, CG11, HK19b, Kre17, SAI17]. **frequencies** [CLM17]. **Frequency** [EÖ17, ABER10, BM17, CWHLT15, HL16, NGKN10, NDL14]. **Frequency-adapted** [EÖ17]. **Fresnel** [ACWL14]. **friction** [GMSS11]. **frictional** [BK12, BGIS17, CMR18, Rad19]. **Froissart** [BLM18]. **front** [BCS14b]. **full** [DGS15, KL18a, BEG14]. **Fully** [AV11, AL15, BFG13, BIM11, CLLS19, CDL19, GLS17, HR12, KL17, Nak17, Nak26, Nei10, NKL21]. **Function** [iTSMM10, ABB19, FY11, HSW17, Man13, SG11, SV12]. **functional** [BV14, BMO15, EGLTP17, Mas16, Rus10, WZ10, YWY14, ZVKG11]. **functionals** [BBL11, BCMO16, Che12, DKS13, HW13, SS11]. **functions** [BG12, BLM18, BGR18, BAK19, BS17, BPZ12, CHW12, Che12, DV11, DBV11, DGSY17, Fro18, Fuk13, GH14a, GT19, GN14, HMOU16, Hor17b, KY12, KR16, LT10, MMMS10, Maz11b, Mir16, NNT15, NTT16, Not19, OTMS13, PS16, PT14, PR13, SV13, SY17, Seg13, TOMS13, Wac17, WG13]. **Further** [TSGU13].

Gaffney [HHX19]. **gain** [BD11]. **Galerkin** [AH14, AMN11, ADM19, AP10, AR12, BBSV13, BB12, BS12, BCS14b, BC15b, BCGS11, BS10, CP18, CBHW18, CC13, CC10a, CM15, DM16, DK16b, EÖ17, EPS17, EGH15, FKNP11, FLOP10, Fer13b, GLS17, HM13, HK17, HM14, HW18, HKXZ16, JL13b, KP17, KNWW19, LMMR19, LV17, LMY18, LVY14, LP15, Loz19, MR17, MP18b, Mus15, RSV13, RMS17, SSS12, SV13, Say13, SS16, Ste15, Sti10, SH18, TT15, WHC14, Wan18, Wil19, Wor19, YS13, ZS14, Zha16a]. **gamma** [AHR14]. **gaps** [GG12]. **gas** [NDL14, ZS12]. **Gasca** [HJZ14]. **gauge** [HS13]. **Gauss** [BCD15, AR19, GST19, JZ13, Kal15, Man15a, PS16, SY17, dS18b]. **Gaussian** [BCS14a, DMN12]. **Gegenbauer** [Dri12]. **General** [DMG19, ABH13, CCR14, DKS13, FKM16, GWX16, HW13, JY16, Loz19, Olv12, Sid11a, SX13, WS19]. **generalising** [Man15b]. **Generalized** [AR19, AGK+14, BCN19, CH18a, HHX19, HM18, LFS16, MS19, ABC15, BJLZ15, BB13, Chá11, DBV11, DLT12, FN12, FY11, GV15, GS16, IG15, Nak12, PSV10, RMS17, SSS16, SDH+14, ZBB14]. **generalized-** [ABC15]. **generation** [FKS18, FKS19]. **generic** [CCP13]. **Geometric** [BR11, GM14, CM10, Maz11a]. **geometrically** [DGBL+15]. **geometries**

[RHM13]. **geometry** [CHW17, Dic12]. **Gilbert** [AKST14]. **Global** [Ais15, CK16, CGK18, EMB10, FGL14]. **globally** [PZ18]. **GMRES** [GGS15, Olv10]. **GMWB** [HFL12]. **Godunov** [Tow18]. **Golub** [Bar13a]. **good** [Maz11a, OS19]. **Gordon** [BZ17, BD12a, CCLM15, FS14]. **grade** [BJLZ15]. **graded** [BN16, BCGS11, CNX12]. **Gradient** [BGG+16, DL15, CPS16, EGLTP17, LMcS17, OW11, PT10, ZWJ19]. **gradients** [BGR18, CKL14]. **Gram** [BS13]. **Grassmann** [AV10]. **Greedy** [HSLZ19]. **green** [SZ13, BC16, FY11]. **Gregory** [FR19, JT16]. **Gregory-like** [FR19]. **grid** [Che16a, HT18, NTT16]. **grids** [BHK10, BCD15, CNX12, GWX16, LVY14, RW17, Zha16b]. **Gross** [AL17, HKT14]. **Grothendieck** [FLZ19]. **ground** [BFG13]. **group** [ABC15, DGBL+15, HHNS16]. **Guaranteed** [CDM+18, CG14, GGS15]. **Gummel** [BC12].

H [Bör10, Bör10]. **H-** [Bör10]. **half** [Fuk10]. **Halley** [Kal15]. **Hamilton** [BMZ10, Cal17, CLM15, GK19b, SS16]. **Hamiltonian** [BCM17, CCM12, CCFM17, CHL13, FGP10a, FGP10b, GKL15, HL16, KLS19]. **hanging** [SW11a]. **Hardy** [HHNS16]. **harmonic** [BPS10, CCZ13, Dem17, GH14a, HHNS16]. **heat** [BPS10, BDG+18, BDF12, BO18, HT18, QRSZ19, SzS12]. **Hele** [LCWW17, GGGS19]. **Helmholtz** [BKV15, BM17, GMS19, GGS15, HK19a, HSZ13, SW11b, Wan18]. **hemivariational** [HSD18]. **Herman** [LS17]. **Hermite** [BCS14a, CH18b, CM10, GST19, MS19, SY17]. **Hermitian** [BV17, MV15, OYV17]. **Hessian** [Fro18]. **heterogeneous** [AH14, BDQ11, LMR16]. **heuristic** [Jin17]. **hexahedra** [AT19, WXY12]. **hexahedral** [EH13]. **Hierarchical** [ZVKG11, EPS17, LO14, Mir16, SM16]. **High** [CCFM17, ABB19, AHR14, ABER10, ADBN16, BLF19, BPZ12, BM17, BDS13, CWHLT15, DL11, HL16, mHZZ17, HZZ18, HKT14, JL13b, KNWW19, NDL14, Ren17, RMS17, Run14, WS19, ZS12]. **high-dimensional** [ABB19]. **high-frequency** [ABER10, BM17]. **High-order** [CCFM17, AHR14, BDS13, HZZ18, HKT14, KNWW19, Ren17, WS19]. **Higher** [Nou19, SH19, ZBB14, BKN13, BGHL14, HU17, HK19b, HL18, SKW19]. **Higher-order** [Nou19, HU17]. **Highly** [CLM17, XL17, CMMV14, CCLM15]. **Highly-oscillatory** [CLM17]. **Hilbert** [JT11, NTT16, Olv12, WZH13]. **Hilbert-space-valued** [NTT16]. **Hilliard** [CHW17, DWWW17, LCWW17, BM11, CCS17, CP14, ER15, GL11, GWW14]. **Hölder** [CvN13]. **Holm** [ADM19]. **homogeneous** [FHN+14]. **homogenization** [AH17, AY18]. **homotopy** [CGMM11]. **Hood** [MSW13]. **Hopf** [Chá11]. **horizontal** [CKL14]. **Hörmander** [CGS14]. **Hormann** [dCM17]. **hp** [BGIS17, OB17]. **hp-BEM** [BGIS17, OB17]. **hull** [DKS13]. **Hybrid** [LRS19, BL13b, BGG+16, BKUV17, LSW11, LOSV16, LRS20]. **hybridizable** [CM15, SH18]. **hybridized** [GWX19]. **hydrostatic**

[GGRG15]. **hyperbolic**
[ADBN16, BDF12, CMP13, HP17, HPS18, KK11, MR17, YS13, ZS14].
hyperelastic [CR12]. **hypersingular** [CH12, PT12]. **hypotheses** [GHS12].

ideal [BKW10, WS19]. **identification** [HQ12, JZ13]. **Identifying** [HKQ18].
IGA [BS19, FGHP17]. **II**
[ABER10, BKW10, CG17, FGP10b, Not19, PS11, SX15b]. **Il'in** [GV19]. **ill**
[CN19, HH10, Kal15]. **ill-posed** [CN19, HH10, Kal15]. **image** [CLMS18].
imaginary [AL17]. **imaginary-time** [AL17]. **impedance**
[GS17, HHR11, HKQ18, HM18]. **implementation** [BKW10].
implementations [Rie19]. **Implicit** [VVVF10, AL15, AG10, CvN13, FGL14,
GMN19, He13, HJHA17, HP17, HPS18, KL18a, SS18, WZ10].
implicit-explicit [AL15]. **implicit-linear** [CvN13]. **implicit/explicit**
[He13]. **improved** [FR19, LJS18]. **Improving** [FS17]. **incomplete**
[Fuk10, RB11]. **incompressible** [BCN19, CCS17, Fer13a]. **Incremental**
[Fer13a]. **indefinite** [CDNP16, CXH10, DLT12, OMS13]. **indefiniteness**
[HN16]. **independent** [GGS15]. **index** [HANT16, SB13a, SB13b].
index-one [SB13a, SB13b]. **inequalities**
[AdST12, BK12, EH13, HSD18, NvPZ10, RW17, Ste14]. **inequality**
[BL13a, HS19a, HHX19, NW18]. **Inexact**
[JT11, CHTV18, FHPS19, JLL15, Jin12, SG11, SX13, ZBJ18]. **Inf**
[HW11, RHM13]. **Inf-sup** [HW11, RHM13]. **infinite**
[BM19, CH19, HHNS16, Man13]. **infinite-dimensional** [CH19]. **infinitely**
[DGSY17]. **inhomogeneous** [LLY15]. **initial**
[BMZ10, GW19, HR12, HW18, ZS14]. **initial-value** [GW19]. **integral**
[AR16, BY19, BN16, BLP19, BC16, BDS13, CH12, FGHP17, FL15, Fuk10,
HJHA17, Kre17, NvPZ10, PT12, QRSZ19, SV13, Say13, SH17, ST18, VGG14].
integral-equation [BDS13]. **integrals**
[ACWL14, Bal12, BLF19, Olv10, Pin18]. **integrands** [DNP14]. **integration**
[ABC15, BBL11, BM13, BD12b, HS19b, HMOU16, MMMS10, OMS13, Pla15,
Rus10, iTSMM10]. **integrator** [BZ17, HS17]. **integrators**
[EH18, HL15, HK19b, OS19, Ver17]. **integro** [GLW19]. **integro-differential**
[GLW19]. **interaction** [AKYZ18, AG10, Fer13a, GV15]. **interactions**
[BG17]. **interconnection** [HU17]. **interface**
[CGHW11, DS18c, DLT13, HLZ12, LR17, PS11, Run14]. **Interior**
[LMY18, LM13, BLS15, BNRS17, KP17, KS11b, KL17, NKL21, PG17, SG11].
interior-layer [KS11b]. **interlaced** [DGSY17]. **Interlacing** [Dri12].
interpolants [JT16, dCM17]. **Interpolation**
[GH14a, IG15, BLM11a, BY15, BO17, BM17, BDHK12, BRZ13, CH18b,
EKAB16, Mas14, MdC17, Mon19, NOS16, SM16]. **interpretation** [BR11].
intersection [dCMT16]. **Interval** [SB13a, SB13b]. **Intrinsic**
[CCSS16, HAG17, Sor10]. **invariant** [BEK11, Rie19]. **inverse**
[BSCZ12, BH11, DES11, GS13, HL19, Jin10, Jin17, KKN14, LO14, Man13,
SH19, ZWJ19, dHQS15]. **inverses** [FMP15]. **inversion** [Kir17]. **invert**

[ST16]. **inviscid** [BGHL14]. **involving** [AORS17, BHT17, BCMO16, YS13]. **IRGNM** [KdS18]. **irreducible** [JLL15, LGL17]. **isentropic** [Ren17]. **Isogeometric** [ZDQ17, EH13, GMP+14, dVBRS11]. **isometries** [Bar13b]. **isoparametric** [Mon19]. **isotropic** [BGN12]. **issues** [BB13]. **iterated** [JZ14, Man13, SH19]. **iteration** [AV10, BL13a, CN19, CGS14, GMS19, JLL15, LGL17, dHQS15]. **iterations** [ABER10, HL19, Jin12]. **Iterative** [HFL12, AHR14, BV17, CHTV18, CH18b, GST19, He13, Man15b]. **Iteratively** [HW13, JZ13, Kal15]. **Ivanov** [KdS18].

Jacobi [BMZ10, Ais15, Cal17, CLM15, GK19b, Har15, Man13, OYV17, SS16]. **Jacobi-Bellman** [SS16]. **Jacobi-type** [Har15]. **Jacobian** [Fuk13]. **joint** [Str15]. **Jordan** [Koe19]. **Joseph** [CGHW11]. **junction** [CLM15, GK19b]. **Justification** [CGG16].

Kac [FS19]. **Kahan** [Bar13a]. **Kármán** [BNRS17]. **karstic** [CHW17]. **Kato** [KL18b]. **KdV** [HS17]. **Keller** [ZS17]. **Kernel** [FHN+14, BM17, DS16, NTW18]. **kernel-based** [DS16, NTW18]. **kernels** [Che12, FY11]. **kind** [BK12, Fuk10, Mas14, Not16a]. **Kinetic** [BEG14, GV19]. **Kirchhoff** [LL12, SH18]. **Klein** [BD12a, BZ17, CCLM15, FS14]. **Kluk** [LS17]. **Koiter** [Zha16a]. **Korteweg** [PSV10]. **Kronecker** [BS17, DLPV18]. **Kronrod** [dS18b]. **Krylov** [KS11a, MV15]. **Kummer** [LT10]. **Kutta** [AMN11, BBSV13, BLM11b, GS16, HPS18, LFS16, Man15a, Ver10, WE16, ZS14].

labeling [YBTB14]. **Lagrange** [AKYZ18, BS12, BG17, EKAB16, Fer13b, HR10, Jun15, Ren17, SSS12]. **Lagrange-projection** [Ren17]. **Lagrangian** [Fer13b, Jin17, RS11]. **Laguerre** [GST19]. **Lamé** [BLS14]. **Lanczos** [Ais15, Bar13a, LZ15]. **Landau** [AKST14]. **Landweber** [CN19]. **Langevin** [FS17]. **Laplace** [BHL+19, CDM+18, vyKS14]. **Laplacian** [BLP19, DS10, GGS15]. **Large** [Pru14, AH17, Bar13b, BGR18, BBKS18, BS17, JLL15, LC14, Lin17, Ren17]. **largest** [GGS15]. **lateral** [PS17b]. **Lattice** [DNP14, GSY19, BD11, BFK+16, BKUV17, Dic12, DGSY17]. **Lavrentiev** [BGJ18]. **Lavrentiev-finite** [BGJ18]. **law** [BG16, Tow18]. **laws** [AGS10, BBC+18, BKTT10, GM14, HM14, MR17]. **layer** [CCZ13, KS11b]. **layers** [BHT17]. **LDU** [DK11]. **least** [BGR18, BC17, CPB17, DMMS11, IN18, JL13a, RS18]. **least-squares** [BGR18, BC17, IN18]. **Lebesgue** [BDHK12]. **Legendre** [BCD15, Ise11, Lui17]. **lemniscates** [HN16]. **level** [BK12, BSZ11, GT14, GKSS13, LCH12, Tu11, dHQS15]. **Levenberg** [BGR18, HH10, Jin10, JY16]. **lexicographic** [HHB16]. **Lie** [ABC15, BCM17, DGBL+15]. **Lifschitz** [AKST14]. **like** [EGLTP17, FR19, GW19, GGGS19, Ren17, SX15a, SX15b]. **limit**

[AN18, BD12a, BZ17, Cal17, CG17, FS14, GV19]. **linear** [AL15, AL17, AP10, BBL11, BGIS17, BM13, BDGQ12, CDNP16, CHW12, Che12, CvN13, DL15, DE16, GWX19, GAB13, GGGS11, HHYY14, HHB16, HKXZ16, JMM12, KK15a, KKN14, KK15c, KL18b, LL12, LMcS17, LM15, LHQ14, Mur17, Sid11a, Sin12, Smy10, XZ10, ZS14]. **linearization** [Chr11, HM18]. **linearizations** [DLPV18]. **linearized** [BMGN18, NDL14]. **Linearly** [KL18a, AL15, PCCC18]. **Liouville** [RI15]. **Lipschitz** [Li15]. **Lissajous** [EKAB16]. **Lobatto** [BCD15]. **Local** [BBB17, BDLM18, FM18, HH11, SX13, SX15a, SX15b, BV12, BG16, Dem16, DH17, HS19b, LP15, Sch11b]. **localizing** [PSV18]. **locally** [AGS10, JP13]. **Locating** [Men11]. **location** [DV11]. **locking** [BDGQ12]. **locking-free** [BDGQ12]. **log** [SAI17]. **log-determinant** [SAI17]. **logarithmic** [BCST19, BM11]. **lognormal** [GKN$^+$15, GKN$^+$18, HS19b]. **lognormal-parametric** [HS19b]. **Long** [HL16, TWW15, CGSW16, HOR17a, HS18, Wan12]. **Long-term** [HL16]. **Long-time** [TWW15, CGSW16, HOR17a, HS18]. **Love** [LL12]. **Low** [BB13, GKL15, BBKS18, CP18, CC19, Hac16, Nou19, SSS16]. **low-order** [CP18]. **low-rank** [BBKS18, Hac16, Nou19, SSS16]. **lower** [CG14, HHS15]. **LU** [LGC14]. **Lur'e** [MOR17]. **Lyapunov** [BB13, BL13b, BV14, KS11a, SSS16].

M [XXL12b, XXL12a]. **M-matrix** [XXL12b, XXL12a]. **MAC** [GMN19]. **MacCamy** [GHS12]. **Maclaurin** [JT16, Pin18]. **macro** [Mat13]. **macro-element** [Mat13]. **made** [Lin17]. **Maeztu** [HJZ14]. **magnetohydrodynamics** [WS19]. **Mahony** [BMGN18]. **majorization** [LMSS17]. **majorization-minimization** [LMSS17]. **managed** [JM18]. **manifold** [GSY17]. **manifold-valued** [GSY17]. **manifolds** [Har18, HRS12, HAG17, Man15b]. **map** [BPS10]. **mapping** [HPS16]. **maps** [BPS10, GT19, Har18, ZLL$^+$12]. **marching** [BCPS10, Mir14]. **marginal** [BCN19]. **marking** [KS11c]. **Marquardt** [BGR18, HH10, Jin10, JY16]. **Maruyama** [LS18]. **mass** [GGGS11, Kir17]. **massively** [DK16b]. **matched** [CCZ13]. **matching** [YWY14]. **materials** [LLY15, SzS12]. **Mathematical** [Smy10]. **matrices** [VVVF10, BS17, BM19, Bör10, DK11, DP16, FMP15, FKS18, GMP$^+$14, Hac16, Koe19, LGC14, Lin17, Man13, MV15, OYV17, RB11, RMS17, Sid11b, FKS19]. **matrix** [BG12, BMP10, CCR14, CCGP17, Che16b, DHS17, DLPV18, DHM19, FMP15, FPD12, FLZ19, GKL15, HLS11, HAG17, JLL15, Kir17, KLS19, Men11, OR10, SAI17, Str15, XXL12b, XXL12a, XL17, ZBJ18]. **matrix-free** [SAI17]. **Max** [GNS15, YBTB14]. **max-flow** [YBTB14]. **Max-norm** [GNS15]. **maximal** [JLZ18, KS18b, LV17, Li15]. **Maximum** [DK16a, HZZ18, Li15, LHQ14, DKS13, HKK12, Pru14]. **Maximum-norm** [DK16a, Li15]. **Maximum-norms** [HZZ18]. **Maxwell** [NKL21, BBSV13, DLT12, HJS15, KL17, LS16]. **mean** [DFL16, KLL19]. **mean-variance** [DFL16]. **means** [Rus10]. **Meany** [BL13a]. **measure**

[SG...12, dGKL19]. **measure-valued** [SG...12]. **measures** [AORS17, LRS19, LRS20]. **mechanical** [ABC15]. **media** [BBFP18, BGG+16, CLLS19, CS17, CDL19, GGM14, KP17, KPR14, LDQ11, SS15]. **Median** [Nie10]. **meets** [HANT16]. **Meixner** [JJT13]. **membranes** [BGN16]. **meromorphic** [DV11]. **Mesh** [DCC18, Rad19, Ber16, GMÖ+18, JP13, MLLR14, PZ18]. **mesh-dependent** [Ber16]. **meshes** [ABH13, ABB15, BN16, BCGS11, BDF12, DH17, GGRG15, HZZ18, HM13, Kop17, LS16, LN18, Loz19, Mak18, Mir12, SW11a, Wei11, WS19, YWY14, ZZ15]. **Meshfree** [Fro18, Nak17, Nak26]. **meshless** [KNWW19, Sch10]. **metamaterial** [LS16]. **method** [AH14, AH17, AKYZ18, ABH13, AR16, ABAC16, BZ17, BT15, BGN16, BSZ11, BG12, BGR18, Bel11, BIM11, Ber16, BBC+18, BL13b, BGHL14, BDGQ12, BNRS17, BDS13, BS10, CEM14, CGPS17, CGMM14, CSW16, CP18, CWHLT15, CW12, CCZ13, CQR16, CH12, CM15, DS11, DWWW17, DO17, DH17, DK16b, DLT13, ER15, EOS17, EH12, EGLTP17, FM18, FKM16, FKNP11, FL15, FGL14, FLS10, FR19, GY12, GHP17, GW19, GGM14, Gau18, GV15, GKSS13, GY17, GKL19, GWX16, GAB13, GSV19, HL16, HKK12, HPS16, HT18, HR19, HY15, HOR17a, HR10, HKXZ16, HSX12, HL18, HH11, Jin10, JZ13, JY16, Jin17, JL13b, Kal15, KdS18, Kar13, KOZ16, KS18b, Kim19, KSD11, Kla15, KS11a, KNWW19, LS18, LCH12, LZ15, LMY18, LP15, LCWW17, LMR16]. **method** [Loz19, LL10, LJS18, Man15b, MLLR14, MOR17, MP18b, MNT13, Mur17, Nei10, NZ19, NDL14, OR10, PS17a, PS18, PT12, PCCC18, QRB11, RS18, Rus10, SSS12, Sau17, SV13, Sch11a, Sch11b, SV12, Sti10, SH18, Tak15, TT15, Wac17, WZ10, WXY12, WG13, YS13, YWY14, ZS14, ZBB14, Zha16a, ZBJ18, dVMRR17, dVCMR18, BHT17]. **methods** [AV12, Ais15, AMN11, AORS17, AHR14, AL17, ADM19, AP10, ABC15, BK12, BL13a, BD12a, BCST19, BHK10, BMWB14, BGJ18, BB13, BR11, BS12, BDG+18, BV17, BCGS11, Bre13, BLS14, BOS18, BHLZ16, BO18, CGHW11, CG17, CGH13, CPB17, CBHW18, CMMV14, CXH10, CNX12, CC13, CCSS16, CJ14, CC10b, CS12, CHL13, DM16, Dem16, Dem17, DE16, DSX16, EÖ17, EMR19, EGH15, Era15, FGP10a, FGP10b, FGH+16, FGHP17, Gan13, GG12, GGK+19, GVY14, Git14, GWX19, GKN+15, GS16, HR14, HS19a, Har15, HLZ12, HP17, HPS18, HKT14, HW13, HW18, HHS15, HMX17, HFL12, HV12, JP13, JT11, Jun15, KSD10, LV13, LMS19, LRS19, LRS20, LV17, LA11, LC14, LOSV16, LVY14, LFS16, LM15, MSV17, Man15b, MMMKV16, MR17, Mus15, Nak17, Nak26, NTW18, OS14]. **methods** [OTMS13, OZ17, OZ23, PS11, Pru14, Rei12, RE14, RSV13, RMS17, Run14, Sch10, SZ13, SS16, SW11b, Ste14, SzS12, SX15a, SX15b, TOMS13, TSGU13, Ver10, WX12, WHC14, Wil19, Wor19, XZ10, Zam13, ZRK16, Zha18, ZWJ19, ZS17, dVBMR16]. **metric** [ZLL+12]. **metrics** [BCPS10, Mir14]. **metropolized** [FS17]. **MFS** [Smy10]. **MHD** [BKW10, BL17, HMX17]. **micromagnetics** [FLMP12]. **midpoint** [JM18]. **mimetic** [LVY14, dVM11]. **min** [YBTB14]. **min-cut** [YBTB14]. **Mindlin** [BC15b, PS17a, dVM11]. **Minimal** [DS18a, CD11, SW19]. **minimisers** [DKS13]. **minimization**

[EGLTP17, FLMP12, FLS10, HHYY14, LMSS17, YWY14]. **minimum** [ZS12]. **minmax** [BV17]. **miscible** [CLLS19, CDL19]. **misfit** [HW13]. **Mixed** [CK16, CGK18, LMMR19, AMORB16, AT19, BGIS17, BHK10, BRK17, BEG14, BKUV17, CDNP16, CGG19, CW12, DO17, DSX16, ER18, GGM14, GWX19, GN14, KK15c, KY12, LM11, LCWW17, Ste10, ST18, Sti10, Sun16, WXY12]. **model** [AKYZ18, BBD16, CDL19, DHM19, GT14, GGM14, GGGS11, GGGS19, KPR14, LDQ11, Rad19, Sin12, Zam13]. **Modeling** [BDQ11, BG16, HJHA17, QRSZ19]. **modelling** [BKTT10]. **models** [BBFP18, CCS17, CK16, CGK18, HMX17, MOS11, SKW19]. **Modified** [BS12, NGKN10, Ver17, dS18b, Adc10, ACWL14, SSS12, SWS16, WG13]. **moisture** [SzS12]. **Molodensky** [CGS14]. **Monge** [BCMO16, Nei10, NZ19]. **Monotone** [CCP13, BMZ10]. **monotonicity** [GS17]. **monotonicity-based** [GS17]. **Monro** [DMG19]. **Monte** [LRS20, BSZ11, BC15a, BD12b, GGK$^+$19, GKSS13, GKN$^+$15, HANT16, HMOU16, LRS19, PGW18, TSGU13]. **Morley** [HSX12, HM16, HH11, Nei10, PS13]. **Mortar** [GVY14, GSV19, WX12]. **motion** [DL11, GGGS19]. **moving** [DS18c]. **Muckenhoupt** [NOS16]. **Multi** [BSZ11, CMMV14, HANT16, LP11, BHK10, BCN19, BL17, GKSS13, LCH12, dHQS15]. **Multi-index** [HANT16]. **Multi-level** [BSZ11, GKSS13, LCH12, dHQS15]. **multi-marginal** [BCN19]. **Multi-parameter** [LP11]. **multi-point** [BHK10]. **Multi-revolution** [CMMV14]. **multidimensional** [LS18]. **multifidelity** [PGW18]. **Multigrid** [BFK$^+$16, BCGS11, BLS14, BOS18, GWX16, HKXZ16, NN11, Not16b, Tak15]. **multilattices** [OLOV18]. **Multilevel** [CQR16, Sch11a, BC15a, CNX12, DMG19, GWX19, TSGU13]. **multilinear** [NTW18]. **multiple** [AH14, ABER10, CLM17, Che12, Nak12]. **multiplication** [FLZ19]. **multiplicative** [Bre13, CvN13]. **multiplicity** [Men11]. **multiplier** [AKYZ18, BG17, HR10, Jun15]. **multipliers** [HY15]. **multipoint** [DSX16, WXY12]. **Multirate** [GS16]. **Multiscale** [LSW12, MP18a, Wen10, AH14, AH17, BZ17, EMR19, EGH15, GVY14, LDQ11, PS11]. **multispectral** [GWCH10]. **Multistep** [SCHH13, CHL13]. **Multivalued** [ZT12]. **Multivariate** [Adc10, CCR14, HMOU16, Sor10]. **multiwave** [BKW10]. **Mumford** [SKW19]. **Muscl** [CC10b].

Nash [CGS14]. **natural** [CRS16, CPB17, PS18]. **Navier** [DWWW17, BDQ10, DO17, FKM16, GMN19, GNS15, GKL19, HR19, He13, HOR17a, HJNS17, Kar13, LA11, LCH12, LC14, LL10, SWS16, Wan12, ZT12]. **nearest** [Men11]. **nearly** [GWX16]. **nearness** [GKL15]. **necessary** [HKK12]. **negative** [YS13]. **negative-order** [YS13]. **Nested** [BCD15, Sou13, BV12, BKV15, BC16, BM17]. **nets** [HMOU16]. **network** [PC13]. **networks** [EK18]. **Neumann** [CD11, Zam13]. **neutral** [Mas16, WZ10]. **Newmark** [KSD10, KSD11, Kla15]. **Newton** [EH12, HW13, JT11, Jin12, JZ13, Kal15, Kim19, LGL17, Man15b, SX13, SX15a, SX15b, ZBJ18]. **Newton-Halley** [Kal15]. **Newton-like** [SX15a, SX15b]. **Newton-type** [HW13, SX13]. **Nicolson** [KK15a, Wan18].

Nitsche [CH12, CMR18, GSV19, JL13b, Jun15, LR17, LJS18, MLLR14]. **Nitsche-based** [CH12]. **Noda** [JLL15, LGL17]. **Nodal** [CHH18, AMN11]. **node** [EKAB16]. **nodes** [BDHK12, MdC17]. **noise** [CvN13, GLW19, ZRK16]. **noisy** [HSW17]. **Non** [BBFP18, CEM14, HK19b, AP10, BV12, BG16, BCM17, BMZ10, BEG14, CGMM11, CDNP16, CLMS18, CCR14, CCGP17, Che12, Che16a, CP14, CN19, Dri12, DL15, DE16, EOS17, EKAB16, FS14, GGMO16, GSY19, HY15, LCH12, LS16, WE16, YWY14]. **non-consecutive** [Dri12]. **Non-consistent** [CEM14]. **non-convex** [CLMS18]. **non-cylindrical** [AP10]. **non-degenerate** [EKAB16]. **non-ergodic** [HY15]. **Non-Fickian** [BBFP18]. **non-linear** [DL15, DE16]. **non-local** [BV12, BG16]. **non-matching** [YWY14]. **non-monotone** [BMZ10]. **non-orthogonal** [YWY14]. **non-periodic** [GSY19]. **non-permeable** [CP14]. **non-product** [Che12]. **non-relativistic** [FS14]. **non-rooted** [BCM17]. **Non-satisfiability** [HK19b]. **non-self-adjoint** [GGMO16]. **non-selfadjoint** [CGMM11, CDNP16]. **non-singular** [LCH12]. **non-smooth** [CN19, WE16]. **non-staggered** [Che16a]. **non-stationary** [CCR14, CCGP17]. **non-symmetric** [EOS17]. **non-uniform** [LS16]. **nonconforming** [CPR13, CGH13, CDNP16, CRS16, CXH10, CCQ13, Era15, HHS15, LMcS17, LL10, Nei10, SS15, SZ13]. **nonconstant** [BPS10]. **Nonconvex** [LMSS17, CWHLT15, GLS17, PT10]. **nondominated** [Cal17]. **Nonlinear** [CBHW18, AV12, BFG13, BT15, BBK17, BGR18, BC12, BV17, BEK11, CG17, CCLM15, Cho18, CGK18, FN12, FFKP15, FKNP11, GLS17, GMSS11, HH10, HW18, HFK19, JM18, JMM12, Jin10, Kal15, KKN14, LA11, MR17, Mur17, Nak17, Nak26, Nei10, SS11, SzS12, SX13, SX15a, SX15b, WZ10, Wan18, dHQS15]. **nonlocal** [GWW14]. **nonmatching** [DH17]. **nonmonotone** [AV12, PZ18]. **Nonnegative** [BSCZ12, Koe19, LN15, LGL17, ZBJ18]. **nonobtuse** [Dal10]. **nonorthogonal** [Str15]. **nonoverlapping** [ABAC16, DK16b]. **nonperiodic** [DNP14]. **nonrelativistic** [BD12a, BZ17]. **nonsmooth** [LMSS17, RE14]. **nonstandard** [Ste10]. **Nonstationary** [JZ14, HT18]. **nonsymmetric** [CXH10, FFKP15, LGC14, RB11]. **norm** [CPS16, DK16a, EGLTP17, FLZ19, GNS15, Kop17, Li15, Pru14, YS13]. **normal** [FGP10a, FGP10b]. **norms** [AdST12, HZZ18, Mir12, PS18]. **note** [BY15, CM18]. **novel** [GWCH10]. **number** [JL13a]. **numbers** [DP16, Nak12]. **Numerical** [AH17, BDQ10, BBSV13, BM13, BLP19, Cal17, CC19, DV11, DES11, DM14, DHM19, FLMP12, Fri15, HSD18, NDL14, Nov14, RI15, Rus10, AV12, AN18, BBL11, BLS15, BD12a, BCST19, BGN16, BKW10, BD12b, CD11, CCLM15, CHW17, CP14, CJ14, CC10a, CR12, DS16, DS18a, DE16, FKM16, GGGS19, HS19a, HMOU16, HJT14, KKN14, LP11, MP15, MMMS10, Mas16, PSV18, PSV10, RSV13, Ven11, WMS10, ZS17]. **numerically** [Olv12]. **numerics** [CLM17, LT10, TWW15]. **Nyström** [BDS13, FL15].

objects [Rie19]. **observability** [EZ15]. **observers** [HR12]. **obstacle**

[BC15a, CM18, ZVKG11]. **obstacles** [BCS14b, CWHLT15, CC10a]. **Oliker** [NZ19]. **once** [Tak15]. **One** [BK12, HL18, OS14, SB13a, SB13b, ZS14]. **One-** [BK12]. **one-dimension** [ZS14]. **one-equation** [OS14]. **only** [Pin18]. **Ono** [DHKR16]. **onto** [BY14]. **open** [BGN12]. **operator** [BMN11, BAK19, BCMO16, BFK$^+$16, BHL$^+$19, Eng14, LO14, MSW13, Nov14, Sch10]. **operators** [AN19, ABM18, BLM11b, BBB17, BV12, Bör10, BC16, BR17, DM14, FY11, Git14, GEEF17, HFK19, HHS15, KKN14, KT12, MS19, Wor19, vyKS14]. **Optimal** [CPR13, CNX12, FGHP17, HMOU16, LR17, LC14, Rei12, SA10, AORS17, ADF18, BC17, CRS16, CSW16, CQR16, DFL16, DD16, FGH$^+$16, FHPS19, Gal15, GY17, GWX19, GWX16, HSLZ19, JSW18, LV13, NV12, NPVW19, NTT16, OW11, Pla15, RS18, RW12, SG11, SH18, TWZ17, dGKL19]. **optimality** [CNSV17, CXH10, DS11, Dem16, Dem17, GY17, HSX12, Jin12]. **Optimally** [Mir12]. **Optimization** [AY18, GV15, GP11, GMT11, LMSS17, NW18, PG17, Str15]. **Optimized** [BGGH16, BPZ12, MSV17]. **options** [MOGO17]. **order** [AHR14, AdST12, ADBN16, BLF19, BMN11, BHK10, BS12, BPZ12, BKN13, BGHL14, BDS13, BEJ14, BKTT10, CGH13, CDNP16, CP18, CCFM17, CCQ13, CGSW16, CS12, DWWW17, HU17, mHZZ17, HZZ18, HMOU16, HKT14, HK19b, HL18, HH11, Jin12, JL13b, KS18a, KY12, KNWW19, Mir12, MP18b, MNT13, NN11, NS14, Nou19, RS18, Ren17, Run14, SV12, SH19, SKW19, Wan12, WS19, YS13, ZS12, ZS14, ZBB14, ZZ15, ZRK16, Zha18]. **ordinary** [AR12, HHB16]. **orthogonal** [DBV11, ÖS13, PR13, YWY14, ZDQ17]. **Osborn** [Mak18]. **oscillation** [CG11]. **oscillation-free** [CG11]. **oscillatory** [AN18, CMMV14, CCLM15, CLM17, Olv10, WZH13]. **OSLC** [Tow18]. **other** [FHN$^+$14, Man15b]. **outflow** [GKL19]. **over-penalized** [BC15b]. **overdamped** [FS17]. **overdetermined** [Str15]. **overlap** [BFK$^+$16, MSV17]. **Overlapping** [EMR19, FLS10, MLLR14]. **overlaps** [SDH$^+$14]. **Overrelaxation** [LM15].

P1 [KOZ16]. **P1/P1** [KOZ16]. **Padé** [BRZ13]. **Padé-type** [BRZ13]. **pair** [LGL17, Zha16b]. **pairs** [BEK11, Che16b]. **Palindromic** [HLS11, LLW10]. **parabolic** [AH17, AL15, ABH13, BRK17, BHL11, BS10, CC19, DE16, EH18, HFK19, KS18b, KKN14, KNWW19, LM11, LV17, Li15, LM13, MP18a, Nak17, Nak26, NV12, Pru14, Rei12, RSV13, Sti10, ZDQ17]. **parabolic-elliptic** [Sti10]. **paraboloids** [dCMT16]. **parallel** [DK16b, HH11]. **parallelepiped** [KK15b]. **parameter** [JZ13, LP11, NPVW19]. **parameterized** [BEK11, DP16, TWZ17]. **parameters** [dGKL19]. **Parametric** [BGN12, EH13, HHB16, HS19b]. **parametrized** [RHM13]. **Part** [FGP10a, FGP10b, PS11, SB13a, SB13b]. **partial** [BSCZ12, Bör10, Git14, GLW19, HV12, Rus10, Sti10]. **particle** [PC13, PCCC18, Sch11a, Sch11b]. **particle-partition** [Sch11a, Sch11b].

partition [Sch11a, Sch11b]. **partitions** [BLM11a]. **Pathwise** [CvN13]. **pattern** [GT14]. **PCG** [FHPS19]. **PDE** [BO19, GKN+18, NPVW19, PG17, Sin12]. **PDE-constrained** [NPVW19, PG17]. **PDEs** [FGP10a, FGP10b, GKN+15, HS19b, KS18a, LSW12, Lui17, NTT16, OR10, PZ18, Rei12, SDH+14, TSGU13, TWZ17, WE16, ZRK16, BSZ11, PS11]. **penalization** [vyKS14]. **penalized** [BC15b, LL10]. **Penalty** [DU15, KOZ16, BNRS17, HS19a, HR19, JZ14, KP17]. **penalty-projection** [HR19]. **perfectly** [CCZ13]. **periodic** [AY18, CMP13, GW19, GSY19, GWW14, HMOU16, HJNS17, MOS11]. **periodic-like** [GW19]. **permeable** [CP14]. **Perron** [LGL17]. **Perturbation** [DK11]. **perturbed** [AV11, DK16a, KS11b, Kop17, SH17]. **Petrov** [CP18, CBHW18, EGH15, HK17, Ste15]. **Phase** [BMO15, CCS17, CS17, CHW17, DHM19, HHNS16, Hor17b, KP17, SS15, SV12]. **Phase-field** [BMO15, CCS17]. **photonic** [Eng14, GG12]. **Piecewise** [KR16, NOS16, CHW12, LL12]. **pipes** [BEG14]. **Pitaevskii** [AL17, HKT14]. **placement** [NPVW19]. **plane** [GN14, IG15]. **plate** [BNRS17, LL12, dVM11]. **plates** [BC15b, PS17a, SH18]. **POD** [Sin12]. **point** [BHK10, BLS14, BOS18, DM14, FGH+16, HW11, KSZ13, PG17, PPS18, SG11, Sou13, Tu11, ZWJ19]. **points** [DFL16, EKAB16, Mas14, XCW10]. **Pointwise** [NZ19, NW18, OW11]. **Poisson** [CCFM17, CCSS16, HW13, LP15, RS11]. **polarization** [AGK+14]. **polefinding** [IN18]. **poles** [DV11]. **Polyak** [DMG19]. **polygon** [GLS17]. **polygonal** [LVY14, Wei11]. **polyhedra** [GNS15]. **polyhedral** [BN16, FM18, LN18, LVY14]. **polynomial** [BD11, Bel11, CHTV18, DGSY17, LLW10, MS19, NOS16, SV12, TWZ17]. **polynomial-degree-robust** [CHTV18]. **Polynomials** [HN16, CCR14, DLPV18, Dri12, Eng14, HLS11, JO10, JJT13, Kir11, KT12, LT10, Not19, ÖS13, ST18, dS18b]. **poroelastic** [AKYZ18]. **porous** [BBFP18, BGG+16, CLLS19, CS17, CDL19, GGM14, KP17, KPR14, LDQ11, SS15]. **posed** [CN19, HH10, Kal15, Sch16]. **posedness** [BG16]. **positive** [AN19, BM13, MOR17, WS19]. **positivity** [HK19b, JLL15]. **post** [ER18]. **post-processing** [ER18]. **posteriori** [AV11, AMN11, AMORB16, BB12, CCM12, CDM+18, CGPS17, CM13, CGH13, CPS16, CGG19, CHTV18, CS17, DK16a, DSX16, Era15, HSV12, KK15a, KKN14, Kop17, KVW15, LM11, LMS19, LO14, LM13, NvPZ10, RW12, RHM13, WX12, dVMM19]. **postprocessing** [CM13]. **potential** [ABK13, BM11, LO14]. **potentials** [GY12, SV16]. **power** [HL18, Pet12]. **powers** [AN19]. **precipitation** [KPR14]. **Precise** [Fuk13, AKST14]. **Preconditioned** [PT10, LM15]. **preconditioner** [DGS15]. **preconditioners** [LR17, PPS18]. **Preconditioning** [BMN11, BFK+16, GGS15, LSW11, Sch11b]. **prescribed** [ZBJ18]. **presence** [dVCMR18]. **Preserving** [WZ10, BDF12, Egg19, FS14, GAB13, HMX17, HLS11, JLL15, KLS19]. **prespecified** [Men11]. **pressure** [LMS19]. **pressure-robust** [LMS19]. **Pricing** [MOGO17, HFL12]. **primal** [ABAC16, Loz19]. **primal-dual**

[ABAC16]. **primitive** [BGHL14, HS18, Pet12]. **principal** [Nou19]. **principle** [DKS13, LHQ14, ZS12]. **priori** [AV12, AMORB16, BKN13, CM18, LN18, LJS18, MOS11, NV12, NW18, OW11]. **probability** [LRS19, LRS20]. **problem** [AORS17, AMORB16, BJLZ15, BY19, BDG+18, BHLZ19, CPR13, CRS16, CD11, CC15, CHTV18, CCQ13, CH18a, CM18, CN19, CGS14, DES11, DBV11, DO17, DLT13, FL15, GMS19, GKL19, GGRG15, HSV12, HQ12, HFL12, JMM12, JL13a, KS11b, KVW15, Kre17, LN18, LLY15, MLLR14, Nak12, OB17, QRB11, Sou13, ST18, Sun16, Tak15, Tu11, WHC14, Zha16a, Zha16b, dVM11, dVMRR17, dCMT16, GKSS13]. **problems** [AV12, AH14, AH17, Adc10, AV11, Ais15, ADF18, ABER10, AG10, BSCZ12, BBSV13, BLS15, BMN11, BGIS17, BT15, BRK17, BKV15, BGR18, BGJ18, BS12, BV17, BEK11, BC15a, BDQ11, BLS14, BOS18, BDS13, BS10, BHLZ16, CGMM11, CG11, CGH13, CGMM14, CDNP16, CXH10, CCZ13, CQR16, CC13, CM15, DD16, DK16a, DCC18, DGS15, DK16b, EÖ17, Egg19, EMR19, EMB10, FN12, FFKP15, FKNP11, FGL14, GS13, GW19, GGMO16, GV15, GGK+19, GMSS11, GY17, GKL15, HL19, HS19a, HPS16, mHZZ17, HSLZ19, HR10, HLZ12, HH10, HW18, HW11, HH11, Jin10, JZ13, Jin17, JL13b, JSW18, Kal15, Kim19, KKN14, KSD10, Kop17, KSZ13, LM11, LR17, LLW10, LMR16, LHQ14, LM13, Mas16, Mus15, NV12, NW18, NPVW19, NTW18, Not16b, OS14, OPS15, Olv12]. **problems** [OW11, PG17, PPS18, PT10, QRSZ19, Rad19, RI15, RSV13, RW12, Sch16, SH19, SX13, YBTB14, ZZ15, Zha18, ZWJ19, ZDQ17, ZVKG11, dHQS15]. **procedure** [LA11]. **processes** [Ven11]. **processing** [ER18]. **product** [Che12, DS10, HS19b, SS11]. **program** [HHB16]. **programming** [PG17]. **projected** [dHQS15]. **projection** [AG10, BY14, BV17, HR19, Ren17]. **projections** [GH14a, Ste15]. **prolongation** [NN11]. **Prony** [Sau17]. **proofs** [CFL11]. **propagation** [BLM11b, BCS14b, HR14]. **propagator** [LS17]. **Proper** [FN12, ZDQ17]. **properties** [ABB15, BHL11, Che12, FS17, FS19, GAB13, HFK19, IG15, KSZ13, OR10, Wan12]. **property** [BY15, BV17, DKS13, OTMS13, TOMS13]. **Provably** [Rie19, WS19]. **Prussner** [NZ19]. **pseudo** [HKT14]. **pseudo-spectral** [HKT14]. **pseudodifferential** [PT14]. **pseudospectral** [BZ17]. **pseudostress** [GGM14]. **pseudostress-based** [GGM14]. **punctual** [BDLM18].

QCD [BFK+16]. **QMC** [GKN+18, HS19b]. **QR** [VVVF10]. **QR-algorithm** [VVVF10]. **quad** [Sun16]. **quad-curl** [Sun16]. **Quadratic** [BR17, BMP10, Eng14, FLMP12, OYV17, PG17, XZ10]. **quadratization** [HLS11]. **quadrature** [AV12, AR19, BBSV13, BLM11b, BC16, DMN12, FR19, FHN+14, HS15, KT12, LFS16, Not16a, Not19, OMS13, Owe16, PS16, Pla15, dS18b]. **quadrature-based** [KT12]. **quadratures** [GST19]. **quadrilateral** [HZZ18, Mon19, PS13, ZZ15, Zha16b]. **quadrilaterals** [WXY12]. **Qualitative** [HFK19]. **Quantized** [KS18a]. **quantum** [BCS14a, BEJ14]. **Quasi** [BD12b, Dem16, GKN+15, Maz11b, SH18, AL15, BM19, CRS16,

CXH10, DBV11, DS11, Dem17, GGK+19, HM13, HMOU16, KL18b, NTT16, SM16, TWZ17]. **quasi-interpolation** [SM16]. **quasi-linear** [AL15, KL18b]. **Quasi-Monte** [BD12b, GKN+15, GGK+19, HMOU16]. **Quasi-optimal** [SH18, CRS16, NTT16, TWZ17]. **Quasi-optimality** [Dem16, CXH10, DS11, Dem17]. **quasi-orthogonal** [DBV11]. **quasi-Toeplitz** [BM19]. **quasi-uniform** [HM13]. **quasiconformal** [ZLL+12]. **quasilinear** [CD11, CC19, DD16, HP17, HPS18]. **quasiseparable** [DP16]. **quasistatic** [WHC14]. **quaternionic** [JO10]. **queue** [NP15]. **quotient** [AV10].

Rachford [HHYY14, HY15]. **Radau** [PS16]. **RADI** [BBKS18]. **Radial** [HSW17, PT14]. **radiation** [HK19a]. **radii** [BPS10]. **radius** [LN15]. **Radon** [GH14a]. **Random** [Dic12, OZ17, AR12, BBC+18, BC15a, DHS17, FKS18, FKS19, Git14, GKN+15, HPS16, MNT13, NTT16, TSGU13, OZ23]. **Randomized** [Lin17, SAI17]. **rank** [BB13, BBKS18, BKUV17, EHRS12, GK19a, GKL15, Hac16, HRS12, HL18, Nou19, SSS16]. **rank-1** [BKUV17]. **rank-adaptive** [GK19a]. **rate** [AR16, HY15, HL18, SH18]. **rates** [BC17, Cal17, Gan13, HQ12, KS11c, NZ19, SH19]. **Rational** [AN19, BG12, BLM18, BDHK12, BRZ13, CH18b, DBV11, GT19, GN14, IN18, MMMS10, PR13]. **Raviart** [HM16, LMR16]. **raw** [DM14]. **Rayleigh** [AV10, BJLZ15, GHP17]. **RBF** [LSW12]. **reaction** [AV11, ABH13, BGGH16, DK16a, FGL14, KS11b, Kop17, LHQ14, Pie18]. **reaction-diffusion** [AV11, DK16a, KS11b, Kop17, Pie18]. **real** [HU17, Kim19, MOR17]. **realizable** [ZBJ18]. **realization** [LP11, RSV13]. **Reconstructing** [HR12]. **reconstruction** [GS17]. **reconstructions** [PSV18]. **recovery** [DV11]. **rectangles** [CGH13]. **rectangular** [JP13, LS16]. **Recurrence** [PR13]. **recurrences** [MV15]. **recursive** [Hac16]. **red** [SZ13]. **red-green** [SZ13]. **Reduced** [RHM13, CQR16, Zha18]. **reduction** [Bar13a, SZ13, Sin12]. **Refined** [LMS19, PPS18]. **refinement** [SZ13, dVBRS11]. **refinements** [GMÖ+18]. **reflector** [dCMT16]. **Regge** [Chr11]. **regime** [BD12a, BZ17, FS14, NDL14]. **regions** [AN18]. **Regular** [Zha18, Che16b, Dal10]. **Regularity** [CCGP17, LN18, CG17, CD11, CC19, DHS17, JLZ18, KS18b, KY12, LV17, Li15, Pru14, dGKL19]. **Regularization** [ZWJ19, GS17, HQ12, HKQ18, JT11, Jin12, JZ14, JY16, Jin17, LA11, LP11, OB17, SH19]. **Regularized** [BCST19, EH12, HW13, Jin10, JZ13, Kal15]. **regularizing** [HH10]. **Reissner** [BC15b, PS17a, dVM11]. **related** [BB13, BR11, BGHL14, FL15, Not19]. **relation** [BBK17]. **relations** [PR13]. **relationship** [Fer13b]. **relative** [FH17]. **relativistic** [FS14]. **relaxation** [ADF18, AL17, BGGH16, BKW10, GW19]. **Relaxing** [GHS12]. **reliable** [GST19, KVW15]. **remarks** [BO17]. **reordering** [OZ17, OZ23]. **Reorthogonalization** [Bar13a]. **Reorthogonalized** [BS13]. **Representation** [GT19, HAG17]. **representations** [EPS17, VD11]. **represented** [EH12]. **Reproducing** [FY11]. **Reproduction** [CCR14]. **requirements** [DCC18]. **Residual**

[CGG19, DSX16, Wei11, CS17, KVW15, WX12]. **Residual-based** [CGG19, DSX16, CS17, WX12]. **residual-type** [KVW15]. **residue** [DV11]. **resolution** [BGHL14]. **respect** [BCPS10, dGKL19]. **restarted** [Ais15]. **Restarting** [BV17]. **resultants** [NNT15]. **results** [KSD10]. **retarded** [BV14, SV13, SV16]. **reverse** [BMWB14]. **revolution** [CMMV14]. **Rham** [CHH18]. **Riccati** [BBKS18, BMP10, XXL12a, XL17]. **Ricci** [Fri15]. **Riemann** [BKW10, Olv12]. **Riemannian** [Har18, ZBJ18]. **rigid** [SSS12]. **Rigorous** [GL11]. **Ritz** [GHP17]. **Robbins** [DMG19]. **Robin** [CGHW11, LJS18]. **Robust** [GGMO16, RB11, AV11, CDM+18, CHTV18, Dic12, HKXZ16, LMS19, LMcS17, Ren17, SDH+14, Tak15]. **rod** [CR12]. **roles** [RHM13]. **rooted** [BCM17]. **rotating** [BHT17]. **rotational** [HKT14]. **roto** [CP19]. **roto-translational** [CP19]. **rough** [DHS17, SS18]. **rounding** [MdC17]. **row** [BL13a]. **row-action** [BL13a]. **rule** [HS15, JM18, Jin17]. **rules** [ACWL14, AR19, BD11, BD12b, DMN12, Dic12, DNP14, DGSY17, GSY19, GMT11, HMOU16, Owe16, dS18b]. **Runge** [Man15a, AMN11, BBSV13, BLM11b, GS16, HPS18, LFS16, Ver10, WE16, ZS14]. **Ruppert** [DMG19].

Sacker [BV14]. **saddle** [BLS14, BOS18, HW11, KSZ13, PPS18, Sou13, Tu11]. **saddle-point** [PPS18, Sou13]. **same** [OTMS13, TOMS13]. **Sampling** [RW17, AdST12, BBC+18, BKUV17, DFL16, HANT16, LRS19, LRS20]. **Sard** [Che12]. **satisfiability** [HK19b]. **saturation** [BY15, CGMM14, CGG16]. **scalar** [ABER10, MR17, NS14, Tow18]. **scale** [BBKS18]. **scales** [AH14, JT11]. **Scattered** [GSY17, HSW17]. **scattering** [ABER10, BDS13, CWHLT15, CCZ13, CC10a, EÖ17]. **Scharfetter** [BC12]. **Scheidegger** [CLLS19]. **scheme** [AKST14, AMORB16, AG10, BC12, BMZ10, BCS14b, BL17, Che16a, CLM15, CvN13, FH17, GMN19, GWW14, GK19b, GGGS11, He13, HJHA17, HH10, HS18, KP17, LS16, Ren17, SS15, SS18, Tow18, Ven11, Wan12, YWY14]. **schemes** [AGS10, ADBN16, BBK17, BC15b, BDF12, BKTT10, Cal17, CCR14, CCLM15, CHW17, CDL19, CKL14, CDKLM18, CC10a, CR12, DL15, DHKR16, EZ15, FS14, Fer13a, FLOP10, Fer13b, GM14, GV19, HZZ18, HM14, JLZ18, MS19, PSV10, RS11, WS19, ZS12, ZZ15]. **Schmidt** [BS13]. **Schoenberg** [BR17]. **Schrödinger** [ABK13, AL17, AP10, AN18, BFG13, BZ17, BCST19, CG17, CCLM15, GY12, GH14b, JM18, KK15a, LO14, Wan18]. **Schwarz** [AL17, BK12, BGGH16, Bre13, DK16b, EMR19, GV15, LMR16, MSV17]. **SDEs** [LS18, NS14]. **SE** [OTMS13, TOMS13]. **Second** [BKTT10, BK12, BJLZ15, BS12, CDNP16, CS12, DWWW17, KS18a, Mas14, MNT13, Not16a, SV12, Wan12]. **second-grade** [BJLZ15]. **Second-order** [BKTT10, CDNP16, CS12, KS18a, SV12]. **Segel** [ZS17]. **segmentation** [CLMS18]. **selecting** [DL11]. **self** [AN19, BBB17, CEM14, GGMO16]. **self-adjoint** [AN19, BBB17, CEM14]. **selfadjoint** [CGMM11, CDNP16]. **Sell** [BV14]. **Semi** [LA11, AdST12, AN18, AG10, BM19, CG17, CvN13,

HR12, HJHA17, Pie18, RS11, SB13a, SB13b, dGKL19, Fer13b]. **semi-classical** [AN18, CG17]. **Semi-discrete** [LA11, HR12, Pie18, dGKL19]. **semi-explicit** [SB13a, SB13b]. **semi-implicit** [AG10, HJHA17]. **semi-infinite** [BM19]. **semi-Lagrangian** [RS11]. **semi-linear** [CvN13]. **semi-norms** [AdST12]. **semiclassical** [GH14b]. **semidiscretizations** [Say13, WE16]. **semigroups** [FS19]. **semilinear** [CHW12, FGP10a, FGP10b, KS11b, KNWW19, NV12, WE16]. **Sensitivity** [FPD12]. **sensor** [NPVW19]. **separable** [HHYY14]. **separation** [Che16b]. **sequences** [Dri12, Sid11a]. **serial** [OYV17]. **series** [Adc10, BCM17, MMMKV16]. **several** [BL13a, Sau17, SX13]. **Shah** [SKW19]. **shallow** [BL17, CKL14, CDKLM18, TT15]. **Shanks** [Sid11a, SCHH13]. **Shannon** [MOGO17]. **shape** [AGK+14, ADF18, GS17]. **Sharp** [BLM11a]. **Shaw** [GGGS19, LCWW17]. **Shaw-like** [GGGS19]. **shear** [BC15b]. **shell** [Zha16a]. **shift** [VVVF10, GGS15, ST16]. **shift-and-invert** [ST16]. **Shifted** [Olv10, GGS15]. **shock** [HM14]. **Short** [MV15]. **shortcomings** [BT15]. **shortening** [PS17b]. **sided** [AV10, BBB17, JO10]. **sign** [CC13, DCC18]. **sign-changing** [DCC18]. **signals** [SKW19]. **Signorini** [KVW15]. **signs** [HHNS16]. **similarity** [VD11]. **simple** [FLOP10, Ise11]. **simplices** [BPZ12]. **Simplicial** [HS13, Kir11, KT12, Kir17, XZ10]. **Simpson** [Pla15]. **Simultaneous** [LM15, Sid11b]. **Sinc** [OMS13, OTMS13, TOMS13]. **single** [CS17]. **single-phase** [CS17]. **singular** [AR16, Bal12, FGHP17, HU17, HFL12, LCH12]. **singularities** [YS13, dVCMR18]. **singularly** [AV11, DK16a, KS11b, Kop17, SH17]. **Sinkhorn** [BCN19]. **Sliding** [DL11]. **slip** [DU15, KOZ16, LA11]. **small** [BD11, CC10a]. **smallest** [JLL15]. **smooth** [CH18a, CN19, DNP14, GY12, GL11, SV13, WE16]. **Smoothing** [NN11, SKW19]. **smoothness** [BKUV17, RMS17]. **Sobolev** [AP11, AdST12, FY11, GSY19, KY12, NOS16, Wen10]. **Solution** [BY19, BBSV13, Bör10, CC10a, HL16, HHB16, HFL12, Mas16, OB17, PG17, RI15, Rus10, SSS16]. **solution-dependent** [HL16]. **solutions** [BCCH19, Cho18, CMP13, EMB10, FGL14, GLW19, HJNS17, KKN14, KS11b, LCH12, Pet12, PZ18, SB13a, SB13b, WMS10, XXL12b, XXL12a]. **solvable** [CHW17]. **solve** [Bel11, SV12]. **solver** [BKW10, FHPS19]. **solvers** [GWX19]. **Solving** [GS13, Jin10, Kal15, LSW12, Olv12, PT12, WHC14]. **Some** [BO17, GV19, LN15, WX12, dVBRS11, BR11, CXH10, Rus10]. **SOR** [OZ17, OZ23]. **SOR-type** [OZ17, OZ23]. **sorting** [Cal17]. **source** [BDLM18, SG. . . 12]. **space** [BO19, BRK17, BHL11, FKNP11, HHNS16, HT18, HM14, KdS18, Lui17, Man15b, MP18b, NV12, NTT16, OPS15, Rei12, SG11, Ste15, Tow18, WZ10]. **space-fractional** [BO19]. **space-time** [HT18, MP18b]. **space/time** [BHL11]. **space/time-discretized** [BHL11]. **spaces** [BY14, BKUV17, EMR19, EGLTP17, FN12, FY11, FHN+14, GSY19, JZ13, JZ14, JY16, KY12, Maz11a, Maz11b, NOS16, SW11a, SM16, SDH+14, Wen10, ZWJ19, dHQS15]. **spacetime** [HS13]. **Sparse**

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