A Complete Bibliography of Publications in *Numerische Mathematik* (2020–2029)

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Title word cross-reference

1 [LW21]. 2 [BD21]. ^{k} [LLMP24]. α [BS24]. B [DP20]. C^0 [BySTZ21, LZ20]. E [Kri20]. ℓ^1 [MH21]. h [LSW22, MCT20]. $H(\mathrm{div})$ [QZ24]. $H(\mathrm{curl})$ [CW20]. $H(\mathrm{div})$ [CW20]. H^1 [CW20, FS20]. H^2 [AP21]. J [AHP21]. L^2 [HKP20]. L^∞ [PR23]. $\mathbf{Q}$ [BNW20]. $\mathcal{H}$ [FMP22]. $\mathcal{H}^2$ [BBF22]. Ω [NP21b]. p [CFEV21, DFTW20, DHW23, Loi20, Zen23]. Q^2 [LZ20]. QR [BDG20]. s [CIV21]. T [Hal21].

-bases [DP20]. **-coercivity** [Hal21]. **-compatibility** [Hal21]. **-conforming** [QZ24]. **-FEM** [LSW22]. **-Laplace** [DHW23]. **-Laplacian** [Loi20]. **-matrix** [BBF22, FMP22]. **-method** [AHP21]. **-Mosolov** [BS24]. **-Poisson** [DFTW20]. **-quasi-norm** [Zen23]. **-regularization** [MH21]. **-robust** [CFEV21]. **-schemes** [Kri20]. **-stable** [NP21b]. **-tensor** [BNW20]. **-term** [CIV21]. **-version** [MCT20].

2D [DBR22, Ji23].

3D [Fun22, Ji23].

4 [Cia22].

accuracy [AHV24]. **acoustic** [CCWG+24, CWHMB21, ER20, Lei22]. **activation** [LLMP24]. **adapted** [GJT20]. **Adaptive** [CP24, CGT24, EMPS20, BC24, BBF22, BGIP23, CT22, CLX21, FPT20, HPSV21, LY22, MP21, PS22, Sei22]. **adaptivity** [MP23]. **adjoint** [BKR21]. **ADMM** [GSY20]. **advection** [CHHM22]. **Alfeld** [CGGH24]. **algebra** [HMSS24]. **algebraic** [BGJR23, HPSV21]. **algebraically** [JK22]. **algorithm** [BC24, Ber20, CLL+22, FP22, HLW20, KLL21, LO20, NSD20, Shi24, LO21]. **algorithms** [BAMR22, HJK21, HPSV21, HHMX21, LL21b, Loi20]. **Allen** [CP23]. **alternating** [HK22b]. **Ampère** [Ber20, BySTZ21, GT24]. **Analysis** [CP23, HMW23, Liu21, XY21, BB22, Ber21, BCD20, BMS23b, BDK+20, BDG22, CKP22, CNRS23, CJT21, CHL21a, Cia22, CZ21, CK20, EG23, EGK22, FRZ21, GQS23, GF22, HL20a, HK22b, HHMX21, JWL22, Lei22, MSSCT21, MP21, MP23, Nat20a, Nat20b, OS22, SS23a, SSVS21, SMS20, Sog24, Sun22]. **analytical** [AA21]. **anisotropic** [BL24, HvR24, Kop20]. **ANOVA** [LPU23]. **anti** [dAFR20]. **anti-Gauss** [dAFR20]. **any** [BGM22a]. **application** [BCG20, DJC20, HL21a, HL21b, KKK+22a, Lei22, RLK20, XY21]. **applications** [JNPS23, LL21b, WZL22]. **applied** [Le 23]. **approach** [ALP23, CMNS24, CDE20, DES21, EF21, FLMM20, GSY20, JL20, JK20, MSSCT21]. **approaches** [CHHM22]. **approximating** [Tro22]. **Approximation** [MRT20, APR22, AB21, AK22, ABNP21, BDS24, BCG20, BD21, BDK+20, CMR21, CFDI24, CIV21, Cia22, DJC20, FHS20, GWSF24, GN21, Hal21, HK22a, KKK+22a, KNV21, KW23, KS24, KN21, LL21a, LLMP24, MCT20, MNR22, MH21, NP21a, OS22, PS24, SMS20, SSW20, Sei22, Shi24, TNW21, Wan21, ZJN21]. **approximations** [AHV24, AN20, BBF22, CCZ20, CP23, FMP22, GT24, HKP20, JNPS23, MSSCT21, SS22]. **arbitrary** [LL21a, SMS20]. **artificial** [HL22]. **assimilation** [BGM22b]. **Asymptotic** [BMS23b, KLMNS22, RS24, CHY23, EG23, FRZ21, HK22a, LSV21]. **asymptotic-preserving** [CHY23, LSV21]. **asymptotics** [XL20]. **Audusse** [GJT20]. **augmented** [BCD20]. **augmented-wave** [BCD20]. **autonomous** [BOS22]. **auxiliary** [CMS20]. **averaged** [DHW23]. **aware** [HI23]. **axisymmetric** [BBMRB21].

back [JL20]. **back-and-forth** [JL20]. **backward** [BPR21]. **Bakushinkii** [HJP20]. **balanced** [FLNS21]. **Banach** [Rea24]. **barotropic** [BCG20]. **Barron** [LLMP24]. **barycentric** [FCH22a, FCH22b]. **based** [BF24, BGJR23, BHL22, CW20, CZ21, HJK21, Ji23, KKK+22a, KW23, MSSCT21, MP21, SSW20, Sei22]. **bases** [CIV21, DP20, HvR24]. **basis**

[AK22, DS22, Pag21]. **BayesCG** [RICO23]. **Bayesian** [HK22a, SSW20]. **BDDC** [Huy22]. **behaviour** [CHHM22]. **Bellman** [BPR21, CCDS23]. **Beltrami** [Guo20]. **BEM** [FMP22]. **bending** [BR20, FHS20]. **bending-torsion** [BR20]. **Bernstein** [AK22]. **best** [CIV21, Wan21]. **Beyond** [HJP20]. **bidomain** [Huy22]. **bilinear** [BGW23]. **Bingham** [CS23a, GL22]. **Biot** [CLY22]. **block** [AK20, Tro22]. **blocks** [AK20]. **blow** [MT20]. **blow-up** [MT20]. **Boltzmann** [BGM22a]. **Boris** [HLW20, Shi24]. **bound** [BL22, LSW22]. **Boundary** [CWHMB21, Sei22, ADGS23, CCWG+24, CCDS23, CWS24, DLO20, EBL22, EOR22, GN21, GL20, GÖSS20, GSUT21, HK23, HvR24, HL21a, HL21b, HSS+20, JK20, KK20, KH20, KPP+21, KN21, Lei22, MCT20, Mat22, MP23, Nab21, SMS22, WM21, XY21]. **bounded** [CIV21, Li21]. **Bounds** [AK22, CEP21, CP24, CGT24, FS24, GLW21, HI23, KS24, LV22]. **Bounds-constrained** [AK22]. **bounds-satisfying** [KS24]. **Boussinesq** [XRV21]. **Brass** [Szo24]. **Brillouin** [CEG+20]. **Brinkman** [BBMRB21]. **Brockett** [BBFR21]. **Budget** [XN23]. **Budget-limited** [XN23]. **Bulk** [FMS21, CDE20]. **Bulk-surface** [FMS21]. **BV** [GJT20].

Caccioppoli [FMP22]. **Caccioppoli-type** [FMP22]. **Cahn** [ABNP21, BK22b, CP23, Nab21]. **calculations** [HMW23]. **Carlo** [LRS20, GV23, GKK+24, LRS19, LSV21, RS24, SSW20]. **cause** [DV24]. **cells** [Ber21]. **change** [KPW20]. **changing** [Cia22]. **characteristic** [CS23b]. **charged** [HLW20, HL20a, HLS22, Shi24]. **charged-particle** [HLW20, HL20a, HLS22, Shi24]. **chemistry** [BDP22]. **Chorin** [KS20]. **Circuits** [BCLD24]. **class** [HK22b, KLMNS22]. **closed** [EGK22, KLL21]. **cluster** [HMW23]. **clustering** [TNW21]. **clusters** [DBR22]. **coarse** [Nat20a, Nat20b]. **coefficient** [Cia22]. **coefficients** [EMPS20, JLZ20, NN21]. **Coercive** [CWS24, CMR21]. **Coercivity** [CWS22, CWS23, DHL20, Hal21]. **Cohen** [CHL21a]. **coherent** [CFDI24]. **collocation** [DP20, GSH23]. **compactifications** [MT20]. **compatibility** [Hal21]. **complement** [SNO20]. **complements** [DBR22]. **Complete** [HK23]. **completion** [ZJN21]. **complex** [CGGH24, TLO22a, TLO22b]. **complexes** [HLMZ24]. **complexity** [BGIP23, MMRV24]. **compressible** [FLMS23, KLMNS22, KN21, MNR22, SS22, Sun22]. **Compression** [HvR24]. **computable** [LV22]. **Computation** [BRS23, ERSS20, KH20]. **computational** [BGIP23, BKR21]. **computations** [Uhl24]. **Computing** [MS20, BAMR22, GSH23]. **Concentration** [CHY23]. **condition** [Mat22, XY21, ZJK23]. **conditioning** [DV24]. **conditions** [CCDS23, DLO20, EOR22, HK23, HL21b, JK20, KH20, KN21, Lei22, Nab21, ON22, HL21a]. **cones** [CW20]. **conforming** [AP21, CW20, GK20, HLMZ24, QZ24, ZZ22]. **consensus** [HJK21]. **consensus-based** [HJK21]. **conservation** [AHV24, CMNS24, GJT20, GTV22, GL20]. **Conservative** [CJT21]. **constrained** [AK22, BNW20, GSTU20, GSY20, GKK+24, Jin22, RS24]. **constraint** [CZ22, WS21]. **constraints** [DV24, GF22]. **Construction**

[KN21, AB21, BBF22]. **Continuous** [BGM22b, LLL24, MS20]. **continuous-time** [MS20]. **continuum** [GH21]. **control** [AN20, BBFR21, BGW23, BCGT23, CMR21, CP23, FK23, GT24, GSY20, GKK+24, HSS+20, NSAD24, PK22, VZ22, Win20]. **controls** [MRT20]. **convection** [BNO20, BNO22, CS23b, JK22, Liu21]. **convection-diffusion** [BNO20]. **convection-diffusion-reaction** [JK22]. **convection-dominated** [BNO22]. **converge** [Wan21]. **Convergence** [BD21, CFS20, CS20, FPT20, FRZ21, GJT20, GGS22, HJK21, HPSV21, Jin22, BMS23a, BPR21, CP24, CK20, DS21, FS20, GF22, GL20, GSTU20, HT22, Har21, HLO20, JWL22, KS20, PS22, Sag22, SS23a, SSW20]. **Convergent** [CT22, CZ22, KL17, KLL21, NKL21]. **convex** [ATW22, BySTZ21, CT22, OS22]. **convexity** [BySTZ21]. **convolution** [BF24, JK20, MR21]. **Corners** [DNT21, HK23]. **Corrected** [WM21]. **Correction** [CWS23, CH21, FCH22b, HL21a, HW21a, LO21, LRS20, Nat20a, NKL21, OZ23, TLO22a, LL21b]. **COS** [Jun24]. **cost** [HPSV21]. **could** [Fun22]. **coupled** [BB22, BDG22, HMW23, WZL22, YL24, ZJK23]. **coupling** [BKR21, DS21, KL17, NKL21, ON22]. **couplings** [FMP22]. **CP** [ZJN21]. **crack** [CZB22]. **cross** [CFS20, CP22, Sei22]. **cross-diffusion** [CFS20]. **cross-points** [CP22]. **Crouzeix** [BOS22, BW21, Guo20, Ji23]. **crystal** [CLL+22]. **crystals** [BNW20]. **cube** [NP21a]. **cubed** [BBC23]. **cubic** [LW21]. **cuboid** [HLMZ24]. **curvature** [EGK22, GN21, HL22]. **curves** [AA21]. **cuspidal** [AL20]. **cut** [BHL20]. **CutFEM** [BHL22, LLL24, LL24].

D [BD21, LW21]. **Darcy** [BB22]. **data** [BGM22b, DES21, GH21]. **decay** [DHL20, PS21, XL20]. **decomposition** [BS21, BMS23b, DNT21, DJC20, DBR22, GGS22, Nat20a, Nat20b, NN21]. **deep** [BTU22]. **definite** [FLNS21]. **degenerating** [KKK22b]. **degree** [LL21a]. **Dekker** [LO21, LO20]. **deluxe** [Huy22]. **densities** [Sag22]. **density** [LLW24]. **dependent** [BFM22, CMNS24, CS23a, GSH23, JLZ20, NKL22]. **derivation** [CFEV21, CJT21]. **derivative** [LLMP24]. **derivatives** [CCDS23, Win20]. **Detection** [NSAD24]. **deterministic** [HI23]. **develop** [Fun22]. **Development** [CHL21a]. **DG** [MSSCT21]. **Difference** [BGM22a, HH20, LZ20, Sog24]. **differential** [BGJR23, KS24]. **differential-algebraic** [BGJR23]. **differentiation** [BPR21]. **diffusion** [BMS23a, BNO20, BNO22, CCZ20, CFS20, CHHM22, CS23b, DS22, EGK22, FLNS21, JK22, Liu21, NN21, Rie23]. **Diffusion-dominated** [BNO20]. **diffusive** [LSV21]. **dilation** [CWHPV23]. **dimensional** [AN20, CGGH24, CH20, CH21, CZB22, GWSF24, GH21, JZZ22, KW23, Liu21, MP23, Yse20]. **dimensions** [FMS21, WM21, Yse24]. **Direct** [ATW22, ABMS21, Liu21, NSAD24, SNO20]. **direction** [HK22b]. **Dirichlet** [CWS24, HSS+20, Win20, XY21]. **Dirichlet-to-Neumann** [XY21]. **Discontinuous** [AN20, ABMS21, BBJP20, CS23b, DRG+20, GK20, GLW21, GTV22, HK22b, HHMX21, HSS+20, LL24, LLS24, Liu21, WS21]. **discrete** [BDG22, CGGH24, DHL20, ERSS20, GLW21, GSTU20, HJK21, HKP20,

Har21, HK22b, HH20, Ji23, KL17, Kri20, Kri21, LZ20, LW21, NKL21, SMdD22, XRV21]. **discretisations** [CS23a]. **discretization** [DHW23, HL21a, HL21b, HK22b, LLS24, PK22]. **discretizations** [Huy22]. **discretized** [HvR24, Uhl24]. **dispersive** [CJT21, EOR22]. **displacement** [ABMS21, BGM22b, Sun22]. **dissipation** [CZ22]. **dissipative** [HH20, SX21]. **distance** [MS20]. **distributed** [FK23]. **distribution** [HJP20, XN23]. **div** [ZZ22]. **div-conforming** [ZZ22]. **divdiv** [HLMZ24]. **Divergence** [GK20]. **Divergence-conforming** [GK20]. **does** [Wan21]. **Domain** [BS21, ADGS23, AL20, BMS23b, CDE20, DNT21, DBR22, GÖSS20, GGS22, KK20, KH20, Nat20a, Nat20b]. **domains** [AA24, BDP22, BySTZ21, BFM22, CWS22, CWS23, CWHPV23, CWS24, CDE20, DS21, HK23, HHK+24]. **dominated** [BNO20, BNO22]. **Double** [Rie23, CWHPV23]. **double-layer** [CWHPV23]. **DPG** [FHS20, FHN22]. **dqds** [FP22]. **Drift** [Shi24]. **driven** [CZ22]. **DtN** [LY22]. **dual** [BK22a, Jin22]. **dynamic** [BGJR23, HL21a, HL21b, Nab21]. **Dynamical** [Pag21, GQS23, KNV21]. **dynamics** [BTU22, FS24, HLW20, HL20a, HLS22, Pöt23, Shi24].

E-schemes [Kri21]. **edge** [Cia22, DBR22]. **effect** [AJH21]. **Efficient** [CFDI24, Loi20, NP21a, BKR21, CZ21, KPW20]. **eigenfunctions** [LV22]. **eigenspaces** [GSH23]. **eigenvalue** [AHP21, AL20, CP24, CGT24, FP22, GK20, Hal21, RDYL21]. **eigenvalues** [CEP21, Tro22]. **elastic** [ABMS21, BR20, DBR22, GN21, LY22]. **elasticity** [CGGH24, HHMX21]. **elastodynamics** [ADGS23, DRG+20]. **electrical** [GH21]. **electrode** [GH21]. **electromagnetic** [Cia22, NKL22]. **electronic** [HMW23]. **element** [AJH21, BOS22, BL24, BW21, BGIP23, Ber21, BPP24, BHL20, BNO20, BHL22, BNO22, CCWG+24, CCZ20, CLY22, CWHMB21, CMS20, CLX21, CHL21a, CH20, CH21, CZB22, DST22, EBL22, ER20, EGN24, FHKP24, FMS21, GÖSS20, GBS24, Guo20, HKP20, HL22, HLMZ24, JWL22, Ji23, KK20, KS24, KKK22b, KLL21, KPP+21, LZ20, LY22, MCT20, NN21, PK22, Sei22, XY21]. **Elements** [NSAD24, ADGS23, AP21, ATW22, CW20, Cia22, FK23, GK20, GL22, HW21a, HW21b, ZZ22]. **elliptic** [CEP21, CKP22, CNP22, CMR21, CLX21, CDE20, Har21, HL20b, HW21a, HW21b, HSS+20, MP23, NN21, RS24, SSVS21, SNO20]. **Energy** [MNR22, BL24, CH20, CH21, EG23, HH20, LCO24, SX21, Win20]. **energy-dissipative** [HH20]. **enforcing** [BySTZ21]. **enriched** [HW21a, HW21b, YL24]. **ensemble** [BBFR21, CHL+21b, PS22]. **entropic** [GKK+24]. **Entropy** [GF22, Kri20, Kri21, BRS23, BS21, BCG20, CMNS24, GJT20]. **enumeration** [Chk24]. **Equation** [BKR21, ABNP21, BBJP20, BySTZ21, BNO20, BNO22, CFEV21, CP23, FS24, GT24, GGS22, Guo20, HK23, JZZ22, KH20, Le 23, LM21, LW21, MR21, MRT20, Nab21, PK22, SS23a, Sei22, XY21]. **Equation-free** [BKR21]. **equations** [dAFR20, AA21, AN20, BBMRB21, Ber20, BK22b, BPR21, BCG20, BD21, BFM22, CHY23, CCDS23, CMR21, CHHM22, CWS22, CWS23, CWS24,

CDE20, DHL20, FPT20, FLNS21, Fun22, HMW23, HL21a, HL21b, HH20, KNV21, KS24, KL17, KLMNS22, KN21, Lei22, Li21, Liu21, Mat22, Pöt23, QZ24, SX21, Sog24, TLO22a, TLO22b, WM21, WS21, Yse20, Yse24, NKL21]. **equilibrated** [CCZ20]. **Error** [BK22a, BTU22, HK22b, Win20, XRV21, AM22, BS24, BL22, BCGT23, BK22b, BDG22, CCZ20, CKP22, CFEV21, CMS20, CH20, CH21, FLMS23, FS24, GT24, GLW21, GTV22, GÖSS20, HJK21, HKP20, HI23, HK22a, HL20b, KK20, Kop20, KV21, KPP+21, LSW22, Lei22, LV22, MP21, MP23, Nab21, SSVS21, SMS20, SMS22]. **essential** [CWS22, CWS23]. **estimate** [GÖSS20, Nab21]. **estimates** [AM22, BS24, BK22a, BPP24, BK22b, BTU22, CFEV21, CMS20, CH20, CH21, EG23, FMP22, FLMS23, GTV22, HJK21, HKP20, HK22a, HL20b, KK20, Kop20, KPP+21, SMS20, SMS22, Win20, XRV21]. **estimation** [KV21, SNO20]. **estimator** [CCZ20]. **estimators** [BRS23]. **Euler** [BCG20, FLMM20, KLMNS22, LM21]. **Eulerian** [BFM22]. **European** [Jun24]. **evolution** [CLL+22, LL24]. **evolutionary** [FPT20]. **Evolving** [HL22, BK22b, KLL21]. **Exact** [SMdD22]. **existence** [Li21, SNO20]. **expansion** [Yse20]. **expansions** [XL20]. **Explicit** [SMS20, HL21a, HL21b, SMS22]. **Exponential** [BMS23a, FS20, TNW21, CS23b, DHL20, FS24, Rie23]. **extended** [BHL22]. **exterior** [AA24, KL17, NKL21]. **Extremal** [DP20]. **extreme** [Tro22].

families [ZZ22]. **family** [HLMZ24]. **Fast** [BDG20, KKK+22a, LPU23, PS24, BC24, JL20]. **faster** [Wan21]. **FastTwoSum** [LO21, LO20]. **FEM**} [BS24, BMS23a, BNW20, CNRS23, EMPS20, FMP22, FS20, LSW22, NN21]. **FEM-BEM** [FMP22]. **FEMs** [CNP22, GQS23, Sun22]. **ferromagnetic** [BCLD24]. **FFT** [CZ21]. **Fiber** [RDYL21]. **field** [BB22, HLW20, HL20a]. **field-of-values** [BB22]. **fields** [Cia22, CK20]. **filling** [CZ22]. **filtered** [FPT20, HLW20]. **filtering** [BC24, CHL+21b, CZ21]. **filters** [BBMRB21]. **Finite** [BGM22a, CH20, HKP20, AHV24, AP21, ATW22, AJH21, BOS22, BL24, BW21, BGIP23, Ber21, BHL20, BNO20, BHL22, BNO22, CCZ20, CGT20, CZ22, CFS20, CLY22, CHHM22, CMS20, CLX21, CHL21a, Cia22, CZB22, ER20, EGN24, FLMM20, FLMS23, FHKP24, FK23, GF22, GK20, GL20, GL22, HW21a, HW21b, HH20, HL22, HLMZ24, JWL22, Ji23, KK20, KS24, KKK22b, KLL21, LZ20, LY22, Nab21, NN21, PK22, Sog24, XY21, ZZ22, CH21, NSAD24]. **finite-element** [CMS20]. **finite-volume** [Nab21]. **First** [Füh20, DRG+20, FPT20]. **First-order** [Füh20]. **Fisher** [BBJP20]. **fixed** [SS23a]. **floating** [HI23]. **flow** [EGK22, GN21, GL22, HL22, KLL21, PS24, ZJK23]. **flows** [BL24, BCG20, CGT20, CMS20, GSTU20, MNR22]. **fluid** [BTU22, BDG22, SS22, ZJK23]. **fluid-structure** [BDG22, SS22]. **fluids** [OS22, SS22]. **flux** [CLY22, GJT20, GTV22]. **Fokker** [JZZ22, DHL20, NSD20]. **forcing** [JZZ22]. **form** [AK20, DRG+20].

Formulation [GL20, BGM22a, Ber21, FHS20, QZ24, SNO20]. **forth** [JL20]. **Fortin** [DST22]. **forward** [Sag22]. **FOSLS** [GS24]. **four** [CNRS23]. **Fourier** [XY21]. **fourth** [CNRS23]. **fourth-order** [CNRS23]. **fractal** [CCWG+24, CWHMB21, JK20]. **fractional** [BMS23a, DS22, FLNS21, NSD20, Rie23]. **fractured** [BHL20]. **fragmentation** [SS23a]. **framework** [AA21, BGW23, HT22, VZ22]. **Fredholm** [dAFR20]. **free** [BCGT23, BKR21, JWL22, Le 23]. **frequency** [CFDI24, EBL22, LSW22]. **friction** [ZJK23]. **friction-type** [ZJK23]. **full** [HMW23]. **full-coupled** [HMW23]. **Fully** [BDG22, LV22, GLW21, HK22b, HH20, Huy22, KL17, Kri20, Kri21, LW21, NKL21, XRV21, YL24]. **fully-coupled** [YL24]. **fully-discrete** [GLW21, Kri20, Kri21]. **function** [GWSF24, LLMP24]. **Functional** [KPP+21]. **functionals** [APR22, MMV22]. **Functions** [PS21, APR22, Ji23, XL20, Yse20]. **fundamental** [AA24].

Galerkin [AN20, BBJP20, CWS22, CWS23, CS23b, DRG+20, EBL22, EMPS20, GK20, GLW21, Hal21, HK22b, HHMX21, HSS+20, LLS24, Liu21, PK22, WS21, YL24]. **gap** [BOS22]. **gas** [EG23]. **Gauss** [APR22, dAFR20, BF24]. **Gaussian** [BL22, CFDI24]. **GenEO** [MCT20]. **General** [RLK20, BJPV20, KN21]. **generalization** [Szo24]. **generalized** [CK20, CZB22, FHKP24, IGS21]. **generating** [Van23]. **generic** [AB21]. **geometric** [BL24, Ber20]. **geometry** [Shi24]. **Gevrey** [FS20]. **global** [Har21]. **Goal** [BGIP23]. **Goal-oriented** [BGIP23]. **Godunov** [GJT20, GTV22]. **Gordon** [FS24]. **grad** [ZZ22]. **graded** [ADGS23]. **gradient** [CGT20, CMS20, CLL+22, Jin22]. **Grid** [Le 23]. **Grid-free** [Le 23]. **grids** [AB21, KW23]. **Gross** [AHP21]. **group** [CS20]. **growth** [BDS24]. **Guaranteed** [CEP21, CP24, CGT24, CFEV21, GT24]. **guarantees** [CIV21].

Hamilton [BPR21, CCDS23, FPT20]. **Hamiltonian** [BGJR23, Pag21]. **Hanke** [Rea24]. **hard** [EBL22]. **harmonic** [CIV21]. **harmonics** [BBC23]. **Hausdorff** [CCWG+24]. **Hausdorff-measure** [CCWG+24]. **HDG** [QZ24, SSVS21]. **heat** [TLO22a, TLO22b]. **Helmholtz** [AA21, CFEV21, CFDI24, DNT21, GGS22, HK23, LSW22, XY21]. **HHO** [BCGT23]. **hierarchical** [EMPS20, Sei22]. **High** [KW23, KS24, AP21, AB21, CEP21, CGT24, CFDI24, CLX21, EBL22, GWSF24, JZZ22, LSW22, MP23, Yse24]. **High-dimensional** [KW23, GWSF24, MP23]. **high-frequency** [CFDI24, EBL22]. **High-order** [KS24, CEP21, CGT24, CLX21]. **Higher** [ADGS23, CCZ20, CT22, NN21, Yse20]. **Higher-order** [ADGS23, CT22, NN21]. **Hilliard** [ABNP21, BK22b, Nab21]. **Hilliard-type** [BK22b]. **Hölder** [CK20]. **holomorphic** [Hal21]. **homogeneous** [MT20]. **homogenisation** [BKR21]. **homotopy** [RDYL21]. **Hood** [DST22]. **Hopf** [KS20]. **hp** [GLW21, ADGS23, BMS23a, BS24, FS20]. **hp-discontinuous** [GLW21]. **hp-FEM**} [BS24, FS20]. **Hybrid**

[LRS19, BJPV20, CEP21, CT22, CGT24, CHHM22, DBR22, PK22, LRS20]. **hybridizable** [HSS+20]. **hyperbolic** [CMNS24, LPU23, ON22]. **hypersingular** [MCT20]. **hypocoercivity** [DHL20].

II [BNO22, CIV21, HK23, LL24]. **IIA** [AM22]. **ill** [DV24, Jin22, PS22]. **ill-conditioning** [DV24]. **ill-posed** [Jin22, PS22]. **illposed** [PR23]. **image** [JNPS23]. **immersed** [JWL22, Ji23]. **impedance** [GH21]. **implementation** [LZ20, ON22]. **implementations** [CZ21]. **implicit** [HL21a, HL21b, HK22b, Huy22, KLMNS22, LM21]. **implicit-explicit** [HL21a, HL21b]. **implies** [Li21]. **Improved** [FLMS23, FS24, GS24, KMZ23, JLZ20]. **improvements** [AK21]. **including** [HPSV21, Mat22]. **Incomplete** [JZ20]. **incompressible** [BDG22, GQS23, MSSCT21, PS24, Sog24]. **indefinite** [CKP22, CNP22]. **independent** [BBF22]. **inequalities** [KS24, Kri20, Kri21]. **inexact** [Nat20a, Nat20b]. **inflow** [KN21]. **inflow/outflow** [KN21]. **information** [ABMS21]. **inhomogeneous** [Sog24]. **initial** [RLK20]. **initial-value** [RLK20]. **inspired** [ES24, FLMM20]. **instability** [MS20]. **instationary** [EG23]. **integral** [dAFR20, AA21, CWS22, CWS23, CWS24, HvR24, WM21]. **integration** [GKK+24, KPW20, vdBBS24]. **integrator** [FS24, HL20a, LW21]. **integrators** [CS20, HLS22, MV20]. **integrodifference** [Pöt23]. **interacting** [CFS20]. **interaction** [BDG22, EGK22]. **interactions** [SS22]. **interface** [ABNP21, CLX21, HW21a, HW21b, ZJK23]. **Interior** [BPP24, BySTZ21, KL17, NKL21]. **internal** [ABMS21, NSD20]. **Interpolation** [BBC23, SS23b, BGW23, FCH22a, FCH22b, GWSF24, IGS21, KKK+22a, KMZ23, SMS22]. **introduction** [Uhl24]. **invariant** [CWHPV23]. **inverse** [BNO20, BNO22, DES21, HJP20, Har21, HK22a, SSW20, SNO20]. **inverses** [FMP22]. **inversion** [ABMS21, PS22]. **investigation** [BBFR21]. **involving** [APR22, SS22]. **ion** [Ber21, GF22]. **isogeometric** [BDK+20, DS21, SMS20]. **isotropic** [FS20]. **iteration** [BGJR23, DFTW20, DJC20, Rea24]. **iterations** [BDG20]. **Iterative** [MMRV24, BC24, CZ21, HPSV21, JZ20, PR23, Yse24].

Jacobi [BPR21, CCDS23, FPT20]. **joined** [DBR22]. **junctions** [EGN24].

Kacanov [DFTW20]. **Kalman** [CHL+21b, PS22]. **Kernel** [BBF22, HMSS24, KKK+22a, KW23]. **kernel-based** [KKK+22a, KW23]. **Kernel-independent** [BBF22]. **kind** [dAFR20, CWS22, CWS23, CWS24]. **knowing** [HJP20]. **KPP** [BBJP20]. **Krylov** [AK21, BRS23, Huy22, PS21, RICO23, Tro22]. **Krylov-BDDC** [Huy22]. **Kutta** [BF24, MR21].

Lack [ALP23]. **Lagrangian** [CCDS23, SMdD22]. **Landweber** [Rea24]. **Laplace** [AA21, CWS24, DHW23, Guo20, HK22a, SSW20, Yse20, Yse24]. **Laplace-based** [SSW20]. **Laplace-like** [Yse20, Yse24]. **Laplacian** [Loi20].

Large [HLS22, BRS23, MP21]. **Large-stepsize** [HLS22]. **Lattice** [Chk24, BGM22a, KKK+22a]. **lattice-point** [KKK+22a]. **Lavrentiev** [BOS22]. **laws** [AHV24, CMNS24, GJT20, GTV22, GL20]. **Lawson** [FS24, HLO20]. **Lawson-type** [FS24]. **layer** [CWHPV23, DRG+20, LLMP24]. **layers** [CS23b, NKL22]. **leak** [ZJK23]. **learning** [BTU22, XN23]. **Least** [FK23, Füh20, LM21]. **Least-squares** [FK23, Füh20, LM21]. **Legendre** [Wan21]. **Leray** [KS20]. **level** [Ji23, MCT20, Nat20a, Nat20b, PS24, SSW20]. **Lie** [CS20]. **like** [DJC20, Yse20, Yse24]. **limit** [ABNP21, LSV21]. **limited** [XL20, XN23]. **linear** [ABMS21, ALP23, BGJR23, BK22b, CKP22, CNP22, CHHM22, Chk24, EOR22, FCH22a, FCH22b, GSY20, HJP20, HK22b, HHMX21, Jin22, KK20, MMV22, PS22, PR23, SSVS21, VZ22]. **linear-quadratic** [VZ22]. **linearization** [HPSV21, Zen23]. **linearized** [SNO20]. **linearly** [KLMNS22]. **Lipschitz** [CWS22, CWS23, CWHPV23, CWS24]. **liquid** [BNW20]. **Lithium** [Ber21]. **Lithium-ion** [Ber21]. **local** [BC24, CS23b, LLW24]. **Locality** [LLW24]. **localization** [HM24]. **localized** [FHKP24]. **locally** [CWHPV23]. **locally-dilation-invariant** [CWHPV23]. **lognormal** [EMPS20]. **Long** [CHHM22, HL20a, FS24]. **Long-term** [HL20a]. **Long-time** [CHHM22, FS24]. **loosely** [BDG22]. **Lotka** [CHY23]. **low** [BDG20, BCG20, BV22, JNPS23, KNV21, KMZ23, LW21, MMRV24]. **low-rank** [BV22, KMZ23]. **low-regularity** [LW21]. **Lower** [Kop20, CEP21, CP24, CGT24]. **lowest** [CKP22]. **lowest-order** [CKP22]. **lumped** [ER20].

MAC [FLMS23]. **Mach** [BCG20]. **magnetic** [HLW20, HL20a]. **magnetized** [FRZ21]. **magnetohydrodynamics** [GQS23]. **makes** [MV20]. **manifolds** [GN21]. **mapping** [CDE20]. **mass** [ER20]. **mass-lumped** [ER20]. **matched** [DRG+20]. **matching** [LL21b]. **Matérn** [CK20]. **Mathematical** [Nat20b, Sog24, Nat20a]. **matrices** [AK21, BRS23, BDG20, DP20, PS21, Sei22]. **matrix** [APR22, BBF22, BV22, FMP22, HMSS24, MS20, MSSCT21, NP21b, Uhl24]. **matrix-theoretic** [MSSCT21]. **Maximal** [MH21, AM22]. **Maximizing** [WZL22]. **maximum** [BDP22, LZ20]. **Maxwell** [NKL21, AJH21, KL17]. **MDFEM** [NN21]. **mean** [EGK22, HL22]. **means** [dAFR20]. **measure** [CCWG+24, ERSS20, GKK+24]. **measurements** [GH21]. **measures** [LRS19, LRS20]. **mechanics** [SMdD22]. **media** [BHL20, Sun22]. **medium** [BGM22b]. **meets** [LPU23]. **mesh** [GBS24, LLL24, LL24, Li21]. **mesh-robust** [GBS24]. **meshes** [ADGS23, BJPV20, HLMZ24, Kop20, LLL24, LL24]. **method** [AHP21, AA24, AK21, BOS22, BL24, BC24, BJPV20, BL22, BPP24, BCD20, BySTZ21, BHL20, BNO20, BNO22, CCWG+24, CEP21, CGT24, CLY22, CWS22, CWS23, CLX21, CHL21a, CS23b, CZB22, DS22, DS21, DRG+20, ER20, EOR22, EGN24, FHKP24, FMS21, Füh20, FHN22, GL20, GÖSS20, GSH23, HMW23, HW21a, HW21b, HSS+20, JL20, Ji23, Jin22, Jun24, KK20,

KS20, LLS21, Le 23, LM21, LZ20, LY22, LSV21, Mat22, MP21, NN21, RDYL21, SSVS21, Sog24, YL24, Yse24, ZJN21]. **methods** [AM22, BF24, BGIP23, BRS23, BTU22, CWHMB21, CP22, DNT21, EBL22, ES24, GLW21, GGS22, HLO20, HL22, KW23, KPP+21, LRS19, LRS20, Liu21, MN24, Nat20a, Nat20b, OZ17, OZ23, Pag21, QZ24, RLK20, RS24, SSW20, Sei22, Tro22, WS21, XY21, Zen23, Zha21, ZJK23]. **metric** [ERSS20]. **MHD** [WS21]. **Mimicking** [GH21]. **Mindlin** [FHS20]. **minimization** [BK22a, CT22, Zen23]. **Minimum** [LL21b, LCO24]. **Minimum-correction** [LL21b]. **miscible** [Sun22]. **Mixed** [GL22, PK22, ATW22, BJPV20, CNP22, CLY22, ER20, GQS23, Sun22]. **model** [BR20, Ber21, BNW20, BHL20, CLY22, CHL21a, Cia22, DES21, FHS20, Huy22, YL24]. **modelling** [BBMRB21]. **models** [CZ22, HM24, OS22]. **modes** [DBR22]. **modified** [SS23a, Shi24]. **Moment** [MN24, CMNS24, LL21b]. **Moment-SoS** [MN24]. **Monge** [Ber20, BySTZ21, GT24]. **Monk** [CHL21a]. **monotone** [CMR21]. **monotonicity** [LZ20]. **Monte** [LRS20, GV23, GKK+24, LRS19, LSV21, RS24, SSW20]. **mortar** [DS21]. **Mosolov** [BS24]. **motion** [LLL24]. **much** [Wan21]. **Mullins** [EGN24]. **multi** [EGN24, Liu21]. **multi-dimensional** [Liu21]. **multi-phase** [EGN24]. **multicomponent** [MNR22]. **multidimensional** [JNPS23, WS21]. **multifidelity** [XN23]. **Multilevel** [CHL+21b, GV23, KW23, LSV21]. **multiparameter** [RDYL21]. **Multipatch** [BDK+20]. **multiple** [DS21, HLS22]. **multipoint** [CLY22]. **Multiresolution** [HMSS24]. **multiscale** [BJPV20]. **multistep** [RLK20]. **Multivariate** [NN21, NP21a].

nanowires [BCLD24]. **Navier** [AN20, BBMRB21, BD21, FLMS23, Fun22, KN21, LM21, Li21, Mat22, MSSCT21, QZ24, Sog24]. **NCVEM** [CKP22]. **near** [ABNP21]. **Nearest** [NP21b]. **negative** [MMV22]. **nematic** [BNW20]. **Nernst** [HH20, SX21, GF22]. **nestedness** [LL21a]. **network** [HM24]. **networks** [LLMP24, Uhl24]. **Neumann** [BRS23, KK20, XY21]. **neural** [Uhl24]. **Newton** [Huy22]. **node** [TNW21]. **noise** [HJP20, SSW20]. **noise-level-robustness** [SSW20]. **Non** [HK22a, BOS22, BK22b, BFM22, CNP22, CMR21, CH20, CH21, Fun22, Huy22, ON22, PR23]. **Non-asymptotic** [HK22a]. **non-autonomous** [BOS22]. **non-coercive** [CMR21]. **non-energy** [CH20, CH21]. **non-linear** [BK22b, PR23]. **non-monotone** [CMR21]. **non-selfadjoint** [CNP22]. **non-stationary** [BFM22]. **non-stiff** [ON22]. **non-symmetric** [Huy22]. **nonequilibrium** [MNR22]. **nonholonomic** [MV20, SMdD22]. **Nonlinear** [DJC20, CHHM22, HPSV21, Lei22, LW21, TLO22a, TLO22b, XRV21]. **nonlocal** [AHV24]. **Nonnegative** [JNPS23]. **nonsmooth** [NSAD24]. **nonsymmetric** [FP22]. **norm** [DL23, Zen23]. **normal** [Win20]. **norms** [CWS22, CWS23, CH20, CH21, MMV22]. **note** [LO20, LO21]. **nuclear** [DL23]. **number** [BCG20, Jun24]. **Numerical** [ABNP21, BDS24, BR20, Ber21, CEG+20, CMR21, CZ21, DL23, EGK22,

GN21, MT20, NSD20, Pöt23, Zha21, AA21, ALP23, BBFR21, BCD20, BCG20, BD21, CJT21, DV24, FCH22a, FCH22b, GSTU20, GSY20, KH20, KN21, Li21, SS22, SNO20, ZJK23]. **numerics** [TLO22a, TLO22b]. **NURBS** [DS21].

oblique [CCDS23]. **obstacle** [Füh20, HKP20]. **one** [Cia22]. **only** [ABMS21]. **open** [AA21]. **Operator** [BGJR23, AK21, CWHPV23, DST22, DES21, ES24, GSUT21, MCT20, SNO20]. **operators** [AK20, BAMR22, CEG+20, CEP21, DS22, GSH23, HPSV21, HvR24, SS23b]. **Optimal** [CMS20, GSUT21, XL20, AN20, BBFR21, BGIP23, Ber20, BS21, BMS23b, CP24, CJT21, CP23, DP20, DS21, ERSS20, FK23, GSY20, GKK+24, HPSV21, HT22, JL20, JWL22, MN24, NSAD24, PK22, VZ22]. **Optimization** [DLO20, BDP22, ES24, GV23, HJK21, MSA23, NP21b, RS24]. **optimized** [CP22, DNT21]. **option** [Jun24]. **order** [ADGS23, AP21, AB21, BBMRB21, BPR21, CCZ20, CEP21, CT22, CKP22, CNP22, CNRS23, CGT24, CLX21, DRG+20, FPT20, Füh20, HL21a, HL21b, JLZ20, KS24, NN21, ZJN21]. **oriented** [BGIP23]. **orthogonal** [Van23, XL20]. **Orthogonality** [BW21]. **orthonormal** [CIV21]. **orthotropic** [BDS24]. **Oscillation** [KV21]. **outflow** [KN21]. **overlapping** [GGS22, LLL24, LL24].

P2D [Ber21]. **Panov** [GTV22]. **Panov-type** [GTV22]. **Parabolic** [GKK+24, AM22, Ber20, BPR21, CHY23, GS24, GLW21, GSY20, KNV21, MP23, SS23b, vdBBS24]. **ParaDiag** [KMZ23]. **parallel** [EF21, GGS22]. **parallel-in-time** [EF21]. **parameter** [CMNS24, GSH23, JWL22]. **parameter-dependent** [CMNS24, GSH23]. **parameters** [ABMS21]. **parametric** [BL24, JZZ22]. **Part** [CJT21, Cia22]. **partial** [KS24]. **partially** [JWL22]. **particle** [HLW20, HL20a, HLS22, Le 23, LSV21, Shi24]. **partitions** [KKK22b]. **patch** [BKR21]. **path** [LCO24]. **PDE** [GKK+24, RS24]. **PDE-constrained** [GKK+24, RS24]. **PDEs** [CNP22, EF21, FMS21, GS24, HSS+20, NN21, TNW21, vdBBS24]. **penalized** [JWL22]. **penalty** [BySTZ21]. **perfectly** [DRG+20]. **periodic** [BAMR22, CEG+20, HHK+24, KKK+22a, LW21, Zha21]. **Perthame** [GJT20]. **perturbed** [CS23b, KH20]. **Petrov** [PK22]. **phase** [EGN24]. **physical** [WS21]. **physical-constraint-preserving** [WS21]. **Physics** [YL24]. **Physics-preserving** [YL24]. **pipe** [GL22]. **Pitaevskii** [AHP21]. **pivot** [SS23a]. **Planck** [GF22, DHL20, HH20, JZZ22, NSD20, SX21]. **Plane** [IGS21, TLO22a, TLO22b]. **plasmas** [FRZ21]. **plate** [FHS20]. **plus** [BDG20]. **PML** [CHL21a]. **point** [HI23, KKK+22a]. **points** [CP22]. **Pointwise** [KK20]. **Poisson** [DFTW20, GF22, HH20, Le 23, SX21]. **polar** [DJC20]. **polygon** [CW20]. **polygon-based** [CW20]. **polygonal** [BJPV20, BySTZ21]. **polygons** [BMS23a]. **polyhedra** [OS22]. **polyhedral** [CWS22, CWS23]. **polynomial** [AK22, Loi20, Wan21, XL20]. **polynomials** [MS20, Van23]. **poroelasticity** [YL24]. **porous** [BGM22b, Sun22]. **port** [BGJR23].

port-Hamiltonian [BGJR23]. **posed** [CDE20, Jin22, PS22]. **positive** [FLNS21]. **positivity** [HH20, SX21]. **positivity-preserving** [HH20]. **possibly** [Fun22]. **posteriori** [AM22, BS24, BCGT23, CCZ20, CKP22, CFEV21, GLW21, GÖSS20, Kop20, KV21, KPP+21, LV22, MP21, MP23, SSVS21]. **potential** [MRT20]. **power** [DJC20]. **power-like** [DJC20]. **Precision** [HI23]. **Precision-aware** [HI23]. **preconditioner** [AK20]. **preconditioners** [AA21]. **Preconditioning** [AP21, BB22, FLNS21, GSUT21, MCT20, MSSCT21]. **predictive** [Uhl24]. **preliminary** [BCD20]. **PRESB** [AK20]. **preserving** [BL24, BBJP20, BNW20, CHY23, EGN24, FRZ21, HH20, LSV21, SX21, WS21, YL24]. **pressure** [BHL20, GBS24, Mat22, PS24]. **pressure-wired** [GBS24]. **pricing** [Jun24]. **principle** [LZ20]. **prior** [RICO23]. **priori** [BS24, CKP22, CNRS23, HL20b, SSVS21]. **prisms** [CW20]. **probabilistic** [HI23]. **probability** [BDP22, LRS19, LRS20, Sag22]. **problem** [AHP21, AN20, AL20, BS24, BB22, CS23a, CWS24, CS23b, CH20, CP23, DNT21, DV24, DFTW20, EGN24, FP22, Füh20, HKP20, Har21, LLS24, LY22, CH21]. **problems** [AA24, AJH21, BOS22, BDS24, BK22a, BBFR21, BNO20, BNO22, CCZ20, CKP22, CNRS23, CMR21, CLX21, CZB22, DES21, EBL22, EOR22, FK23, GN21, GK20, GLW21, GSUT21, GSY20, Hal21, HJP20, HK22a, HL20b, HLO20, HK22b, HW21b, Jin22, JK22, KK20, MP23, MN24, ON22, PS22, PS24, PR23, RLK20, RDYL21, Sag22, SSVS21, SSW20, SNO20, SS23b, Uhl24, Win20, XN23, Zha21, HW21a]. **processes** [CHL+21b]. **product** [CIV21, RDYL21]. **programming** [Chk24]. **Projection** [MMV22, KS20, Mat22, Wan21]. **projector** [BCD20, KNV21]. **projector-splitting** [KNV21]. **projectors** [SMS22]. **proof** [SNO20]. **propagation** [BL22, ER20, JK20]. **properties** [AK20, DP20, IGS21, KNV21, KLMNS22, PS21, RICO23, RS24, SMS22]. **Provably** [ON22, WS21]. **Proximal** [Zen23, CLL+22]. **proximal-gradient** [CLL+22]. **pseudo** [EOR22]. **pseudo-spectral** [EOR22]. **pseudodifferential** [GSUT21]. **Publisher** [FCH22b].

QMC [NN21]. **quadratic** [CNRS23, MS20, VZ22]. **quadrature** [APR22, dAFR20, AJH21, BF24, CEG+20, JK20, MR21, Rie23, TNW21]. **quadrilaterals** [ATW22]. **quantification** [HHK+24, KKK+22a, Sag22]. **quantum** [BDP22]. **Quasi** [GWSF24, GV23, GKK+24, HPSV21, MT20, Zen23]. **quasi-homogeneous** [MT20]. **Quasi-interpolation** [GWSF24]. **quasi-Monte** [GV23, GKK+24]. **quasi-optimal** [HPSV21].

Radau [AM22]. **radiation** [HK23]. **Random** [OZ17, AB21, CDE20, HHK+24, KNV21, NN21, OZ23]. **Randomized** [Tro22, ES24, VZ22]. **rank** [BDG20, BV22, JNPS23, KNV21, KMZ23, ZJN21]. **Rate** [SS23a]. **rates** [BD21, CP24, DS21, GS24, Jin22, MH21, PS22, XL20]. **Rational**

[APR22, BRS23, FCH22a, FCH22b, PS21, TNW21]. **Raus** [Rea24]. **Raviart** [BOS22, BW21, Guo20, Ji23]. **reaction** [JK22]. **real** [FP22]. **recovery** [ABMS21, BV22, Sun22]. **reduced** [DS22, Pag21]. **reduction** [DES21]. **reference** [HMW23]. **reflections** [LLS21]. **regime** [BNO20, BNO22]. **region** [MSA23]. **regions** [DLO20]. **regression** [LPU23]. **regularising** [HJP20]. **regularities** [XL20]. **Regularity** [CK20, AM22, FS20, JLZ20, LW21]. **regularization** [MMV22, MH21, MMRV24, PR23, Win20]. **regularized** [BK22a, BS21, HKP20, HL20b]. **regularizers** [MMRV24]. **Reissner** [FHS20]. **related** [MSSCT21]. **relations** [BW21, CJT21]. **relative** [EG23, GH21, LSW22]. **relative-error** [LSW22]. **relativistic** [WS21]. **relaxation** [BCG20, MNR22, RLK20]. **Relaxed** [DFTW20]. **ReLU** [LLMP24]. **reordering** [OZ17, OZ23]. **representations** [EMPS20]. **resampled** [BC24]. **residual** [GÖSS20]. **Resolution** [LM21]. **respect** [Nat20a, Nat20b]. **results** [AA21, BCD20]. **Rham** [BDK+20]. **Riemannian** [GN21, MSA23, NP21b]. **rigid** [DBR22]. **Rigorous** [TLO22b, TLO22a]. **risk** [GKK+24]. **Ritz** [SMS22]. **Ritz-type** [SMS22]. **roadmap** [IGS21]. **Robin** [BDG22, Har21]. **Robust** [CCZ20, CP22, CFEV21, GBS24]. **robustness** [Nat20a, Nat20b, SSW20]. **rods** [BR20]. **rough** [MMV22]. **rule** [Rea24]. **rules** [APR22, dAFR20, AJH21, WM21]. **Runge** [BF24, MR21].

sampling [LRS19, LRS20]. **satisfying** [BCG20, KS24]. **scalar** [CMS20, CH20, CH21, GTV22]. **scales** [HLS22]. **scattering** [AA24, CCWG+24, CWHMB21, EBL22, LY22, NKL22, Zha21]. **Schatten** [Zen23]. **scheme** [BGM22a, BBJP20, BKR21, BDG22, CHY23, CCDS23, CGT20, CZ22, CFS20, ES24, FLMM20, GJT20, GTV22, GSTU20, HL21a, HL21b, HH20, KNV21, LM21, Nab21, XRV21]. **schemes** [AB21, BBMRB21, BPR21, BFM22, CT22, CHHM22, CMS20, CJT21, FPT20, FLMS23, FRZ21, GF22, JK22, Kri20, Kri21, KLMNS22, LSV21, RLK20, SX21]. **Schmeisser** [Szo24]. **Schrödinger** [CEG+20, LW21]. **Schur** [DBR22, SNO20]. **Schwarz** [CP22]. **Scott** [GBS24]. **screens** [CCWG+24, CWHMB21]. **SDE** [MP21]. **Second** [BBMRB21, dAFR20, BPR21, CKP22, CNP22, CNRS23, CWS22, CWS23, CWS24, HL21a, HL21b, JLZ20, LL21b]. **second-kind** [CWS22, CWS23, CWS24]. **second-moment** [LL21b]. **Second-order** [BBMRB21, CKP22, CNP22, CNRS23, HL21a, HL21b, JLZ20]. **Sekerka** [EGN24]. **self** [BKR21]. **self-adjoint** [BKR21]. **selfadjoint** [CNP22]. **semi** [CCDS23, SSVS21]. **semi-Lagrangian** [CCDS23]. **semi-linear** [SSVS21]. **semigroups** [AB21]. **semilinear** [CNRS23, CMR21, HLO20, HL21a, HL21b, vdBBS24]. **Sensitivity** [BV22]. **separable** [Yse20]. **sequel** [Kri21]. **sequence** [BDK+20]. **serendipity** [ATW22]. **series** [XY21]. **set** [Ji23]. **SGFEM** [CZB22]. **shallow** [FHN22]. **Shape** [BDP22, DLO20]. **sharp** [ABNP21, HW21a, HW21b, LSW22]. **shells** [FHN22]. **sign** [Cia22]. **sign-changing** [Cia22]. **Signorini** [CH21, CH20]. **simple** [LLL24, LL24]. **simulations** [DHL20]. **sine** [FS24]. **sine-Gordon**

[FS24]. **single** [HMW23]. **singular** [BK22a]. **singularities** [FS20, TNW21]. **singularly** [CS23b, KH20]. **Sinkhorn** [Ber20]. **size** [Li21]. **sliced** [BL22]. **small** [Li21]. **smooth** [Fun22, KK20, Li21]. **smoothness** [SMS20]. **Sobolev** [CK20, Van23]. **Solution**
[dAFR20, BR20, GJT20, JZ20, KS20, Li21, PS24, Yse24]. **solutions** [AA24, AJH21, BK22a, CMNS24, CFDI24, Fun22, KN21, MT20, SNO20, Yse20]. **solver** [HPSV21]. **solvers** [Huy22]. **solves** [Nat20b, Nat20a]. **Solving** [MSA23, Loi20]. **some** [OS22]. **SOR** [OZ17, OZ23]. **SOR-type** [OZ17, OZ23]. **SoS** [MN24]. **sound** [EBL22]. **sound-hard** [EBL22]. **Space** [LLL24, LL24, DHW23, FMS21, GS24, NSD20, PS21, Yse24]. **Space-time** [LLL24, LL24, DHW23, GS24, NSD20]. **spaces**
[BW21, BHL22, CK20, ERSS20, LLMP24, MH21, OS22, Rea24]. **spacetimes** [GL20]. **Sparse** [CIV21, KW23]. **spatial** [GJT20, HM24]. **spatio** [CHL+21b]. **spatio-temporal** [CHL+21b]. **species** [CFS20]. **spectra** [BAMR22]. **Spectral** [EBL22, Sag22, BMS23a, BB22, EOR22, MSSCT21, XRV21]. **spectrally** [MSSCT21]. **spectrum** [CWHPV23, DBR22]. **speed** [BCG20]. **sphere** [BBC23, HT22]. **spherical** [BBC23]. **spline** [SMS20, SMS22]. **splines** [LL21a]. **splits** [CGGH24]. **splitting**
[BGJR23, EOR22, ES24, KNV21, VZ22]. **square** [AK20]. **squares** [Füh20, FK23, LM21]. **Stability** [BK22b, BPR21, CNP22, EG23, GT24, KNV21, LCO24, BDG22, DL23, FCH22a, FCH22b, Har21, SS23a]. **Stabilization** [BC24, BCGT23]. **Stabilization-free** [BCGT23]. **stabilized** [BNO20, BNO22, JK22]. **Stable**
[CZB22, KL17, DNT21, DRG+20, NP21b, NKL21]. **staggered** [MSSCT21]. **state** [GSY20]. **states** [CFDI24, LLW24, NSD20]. **stationary** [BFM22]. **Statistical** [RICO23]. **Steklov** [AL20]. **stepping** [BFM22, JLZ20, MP21]. **stepsize** [HLS22]. **Stieltjes** [APR22]. **stiff** [HLO20, ON22]. **Stochastic** [GSH23, ABNP21, BD21, DHW23, EMPS20, ES24]. **Stokes**
[AN20, AK21, BBMRB21, BB22, BD21, BFM22, CLY22, FLMS23, Fun22, GK20, GBS24, KN21, LLS24, LM21, Li21, Mat22, MSSCT21, QZ24, Sog24]. **Stokes-Brinkman** [BBMRB21]. **Strang** [EOR22]. **stress**
[CLY22, HHMX21, QZ24]. **stress-flux** [CLY22]. **stress-velocity** [QZ24]. **strong** [HLW20, HL20a]. **strongly** [FRZ21]. **structure**
[BL24, BBJP20, BNW20, BDG22, EGN24, HMW23, SS22]. **structure-preserving** [BL24, BBJP20, BNW20, EGN24]. **structured** [BGW23]. **Subdiffusion** [JLZ20, JZ20]. **subject** [BNO20, BNO22]. **sublinear** [CIV21]. **sublinear-time** [CIV21]. **submanifolds** [LRS19, LRS20]. **subproblems** [MSA23]. **sum** [WZL22]. **summation** [HI23]. **Super** [HM24, FHKP24]. **Super-localization** [HM24]. **super-localized** [FHKP24]. **superconvergence** [MR21]. **superconvergent** [HSS+20]. **Superior** [AK20]. **superstable** [ALP23]. **supporting** [DLO20]. **Surface** [Guo20, BL24, CDE20, CLL+22, FMS21]. **surfaces** [BK22b, EGK22, KLL21]. **Switch** [NSAD24]. **symmetric** [FLNS21, HHMX21, Huy22]. **system** [BCG20, CFS20, DHW23, FLMM20, FLMS23, GF22, NSD20]. **systems**

[BGJR23, BGW23, FLNS21, FMS21, MP21, NSAD24, Pag21, XRV21].

T [LL21a]. **T-splines** [LL21a]. **tangential** [BGW23, HL22]. **Taylor** [DST22]. **technique** [SS23a, Sun22]. **techniques** [BB22]. **telegraph** [KH20]. **temporal** [CHL+21b]. **tensor** [BNW20, DL23, DJC20, EMPS20, HHMX21, JNPS23, ZJN21]. **term** [CIV21, HL20a, JZZ22]. **terms** [Jun24]. **tetrahedral** [KKK22b]. **thawed** [BL22]. **their** [IGS21, PS21]. **theorem** [Szo24]. **theoretic** [MSSCT21]. **theoretical** [BCD20]. **theory** [LL21b]. **thermal** [MNR22]. **thermo** [YL24]. **thermo-poroelasticity** [YL24]. **thin** [NKL22]. **third** [ZJN21]. **third-order** [ZJN21]. **Thomas** [BW21]. **Three** [ZZ22, AN20, CGGH24, CZB22, WM21]. **three-dimensional** [AN20, CGGH24, CZB22]. **Time** [NKL22, ADGS23, BL22, BFM22, CS23a, CHHM22, CIV21, DHW23, DHL20, EF21, FS24, GS24, GÖSS20, HJK21, HLS22, HL21a, HL21b, Huy22, JLZ20, LLL24, LL24, Loi20, MS20, MP21, NSD20, TLO22b, Uhl24, VZ22, TLO22a]. **Time-dependent** [NKL22, BFM22, CS23a, JLZ20]. **time-discrete** [HJK21]. **time-domain** [GÖSS20]. **time-sliced** [BL22]. **time-splitting** [VZ22]. **time-stepping** [BFM22, MP21]. **time-varying** [Uhl24]. **timestepping** [GLW21]. **tomography** [GH21]. **topology** [BDP22]. **toroidal** [Shi24]. **torsion** [BR20]. **total** [BK22a, GSTU20, Mat22]. **total-variation** [BK22a]. **trace** [BRS23]. **traces** [BDK+20, WZL22, Yse20]. **trajectories** [ALP23]. **transforms** [CIV21]. **transmission** [Har21]. **Transparent** [JK20, KH20, EOR22]. **transport** [BBMRB21, Ber20, BS21, BMS23b, EG23, ERSS20, HT22, JL20, MN24]. **trapezoidal** [WM21]. **treatment** [CP22]. **trees** [JK20]. **Trefftz** [LLS24]. **triangles** [AP21]. **tridiagonal** [FP22]. **triple** [EGN24, FP22]. **trust** [MSA23]. **Two** [CS23a, LLMP24, MCT20, AK20, BCG20, CH20, CH21, FLMM20, FMS21, GH21, GF22, Nat20a, Nat20b, NSD20, PS24]. **two-by-two** [AK20]. **two-dimensional** [CH20, CH21, GH21]. **Two-layer** [LLMP24]. **Two-level** [MCT20, Nat20a, Nat20b, PS24]. **two-space** [FMS21]. **two-speed** [BCG20]. **type** [AK21, BK22b, EF21, FMP22, FS24, GTV22, HK22b, Lei22, OZ17, OZ23, SMS22, ZJK23].

ultraweak [FHS20]. **unbounded** [KH20]. **Uncertainty** [HHK+24, GV23, GKK+24, KKK+22a, RS24, Sag22]. **Unconditionally** [SX21]. **unfitted** [CLX21, SSVS21]. **uniaxially** [BNW20]. **Unified** [CNRS23, Lei22]. **uniform** [FS24, NN21]. **unifying** [BGW23]. **Uniqueness** [Har21]. **unitary** [BDG20]. **Universal** [BAMR22]. **updates** [KMZ23]. **using** [AB21, AK22, GKK+24, HHK+24, HW21a, HW21b, MSA23, NN21, SNO20]. **Uzawa** [AK21].

Validated [vdBBS24]. **validation** [MT20]. **value** [GN21, KK20, MP23, RLK20]. **valued** [DES21]. **values** [BB22]. **variable** [CMS20]. **variables** [HHK+24, KPW20]. **variation** [BK22a, GSTU20].

Variational [BCD20, AJH21, BOS22, BDS24, CGT20, HL20a, KS24, Win20]. **variations** [BC24]. **varying** [Uhl24]. **velocities** [FLMM20]. **velocity** [HL22, QZ24]. **version** [GBS24, MCT20]. **versions** [ADGS23]. **very** [Yse24]. **veto** [HJP20]. **via** [AM22, BRS23, BKR21, Chk24, EG23, KS24, KMZ23, KPW20, KN21, NP21b]. **virtual** [BPP24, FMS21]. **viscoelasticity** [ALP23]. **Vlasov** [JZZ22, Le 23]. **Vogelius** [GBS24]. **Voigt** [AN20]. **Volterra** [CHY23]. **volume** [AHV24, CGT20, CZ22, CFS20, CHHM22, FLMM20, FLMS23, GF22, GL20, Nab21].

Wasserstein [CGT20]. **water** [BBMRB21]. **Wave** [AA24, BCD20, CJT21, ER20, EF21, HL21a, HL21b, HK22b, JK20, Lei22, LY22, MR21, MRT20, PK22, Sei22]. **wave-type** [EF21, HK22b, Lei22]. **waveguides** [Zha21]. **wavelet** [HvR24, LPU23]. **Waves** [IGS21]. **weak** [Hal21, KS20, KN21, MP21, ON22]. **weakly** [KLMNS22]. **weighted** [KPW20, Le 23, OS22]. **Which** [DV24]. **Whittle** [CK20]. **Willmore** [HL22, KLL21]. **windowed** [LLW24]. **wired** [GBS24]. **without** [HJP20, SNO20]. **work** [MV20].

Zhang [Uhl24]. **zone** [CEG+20].

References

Alouges:2021:NPL

[AA21] François Alouges and Martin Averseng. New preconditioners for the Laplace and Helmholtz integral equations on open curves: analytical framework and numerical results. *Numerische Mathematik*, 148(2):255–292, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01189-5`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01189-5.pdf`.

Alves:2024:WSP

[AA24] Carlos J. S. Alves and Pedro R. S. Antunes. Wave scattering problems in exterior domains with the method of fundamental solutions. *Numerische Mathematik*, 156(2):375–394, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01395-x`.

Alfonsi:2021:GCH

[AB21] Aurélien Alfonsi and Vlad Bally. A generic construction for high order approximation schemes of semigroups using random

grids. *Numerische Mathematik*, 148(4):743–793, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01219-2`.

Ammari:2021:DLI

[ABMS21] Habib Ammari, Elie Bretin, Pierre Millien, and Laurent Seppecher. A direct linear inversion for discontinuous elastic parameters recovery from internal displacement information only. *Numerische Mathematik*, 147(1):189–226, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01164-6`.

Antonopoulou:2021:NAS

[ABNP21] Dimitra Antonopoulou, Lubomír Banas, Robert Nürnberg, and Andreas Prohl. Numerical approximation of the stochastic Cahn–Hilliard equation near the sharp interface limit. *Numerische Mathematik*, 147(3):505–551, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01179-7`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01179-7.pdf`.

Aimi:2023:HOT

[ADGS23] Alessandra Aimi, Giulia Di Credico, Heiko Gimperlein, and Ernst P. Stephan. Higher-order time domain boundary elements for elastodynamics: graded meshes and *hp* versions. *Numerische Mathematik*, 154(1–2):35–101, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01355-x`.

Altmann:2021:MGP

[AHP21] Robert Altmann, Patrick Henning, and Daniel Peterseim. The J-method for the Gross–Pitaevskii eigenvalue problem. *Numerische Mathematik*, 148(3):575–610, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01216-5`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01216-5.pdf`.

Aggarwal:2024:AFV

[AHV24] Aekta Aggarwal, Helge Holden, and Ganesh Vaidya. On the accuracy of the finite volume approximations to nonlocal conservation

laws. *Numerische Mathematik*, 156(1):237–271, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01388-2`.

Aylwin:2021:EQR

[AJH21] Rubén Aylwin and Carlos Jerez-Hanckes. The effect of quadrature rules on finite element solutions of Maxwell variational problems. *Numerische Mathematik*, 147(4):903–936, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01186-8`.

Axelsson:2020:SPP

[AK20] Owe Axelsson and János Karátson. Superior properties of the PRESB preconditioner for operators on two-by-two block form with square blocks. *Numerische Mathematik*, 146(2):335–368, October 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01143-x`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01143-x.pdf`.

Axelsson:2021:KIU

[AK21] Owe Axelsson and János Karátson. Krylov improvements of the Uzawa method for Stokes type operator matrices. *Numerische Mathematik*, 148(3):611–631, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01208-5`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01208-5.pdf`.

Allen:2022:BCP

[AK22] Larry Allen and Robert C. Kirby. Bounds-constrained polynomial approximation using the Bernstein basis. *Numerische Mathematik*, 152(1):101–126, September 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01311-1`.

Armentano:2020:SEP

[AL20] María G. Armentano and Ariel L. Lombardi. The Steklov eigenvalue problem in a cuspidal domain. *Numerische Mathematik*, 144(2):237–270, February 2020. CODEN NUMMA7. ISSN

0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-019-01092-0.

Antonietti:2023:LST

[ALP23] Paola F. Antonietti, Lorenzo Liverani, and Vittorino Pata. Lack of superstable trajectories in linear viscoelasticity: a numerical approach. *Numerische Mathematik*, 153(4):611–633, April 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01351-1.

Akrivis:2022:PEE

[AM22] Georgios Akrivis and Charalambos G. Makridakis. A posteriori error estimates for Radau IIA methods via maximal parabolic regularity. *Numerische Mathematik*, 150(3):691–717, March 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01271-6.

Anh:2020:DGA

[AN20] Cung The Anh and Tran Minh Nguyet. Discontinuous Galerkin approximations for an optimal control problem of three-dimensional Navier–Stokes–Voigt equations. *Numerische Mathematik*, 145(4):727–769, August 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01132-0.

Ainsworth:2021:PHO

[AP21] Mark Ainsworth and Charles Parker. Preconditioning high order H^2 conforming finite elements on triangles. *Numerische Mathematik*, 148(2):223–254, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01206-7.

Alahmadi:2022:RGQ

[APR22] J. Alahmadi, M. Pranić, and L. Reichel. Rational Gauss quadrature rules for the approximation of matrix functionals involving Stieltjes functions. *Numerische Mathematik*, 151(2):443–473, June 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01293-0.

Arbogast:2022:DSM

[ATW22] Todd Arbogast, Zhen Tao, and Chuning Wang. Direct serendipity and mixed finite elements on convex quadrilaterals. *Numerische Mathematik*, 150(4):929–974, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01274-3`.

Ben-Artzi:2022:UAC

[BAMR22] Jonathan Ben-Artzi, Marco Marletta, and Frank Rösler. Universal algorithms for computing spectra of periodic operators. *Numerische Mathematik*, 150(3):719–767, March 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-021-01265-w`.

Beik:2022:PTC

[BB22] Fatemeh Panjeh Ali Beik and Michele Benzi. Preconditioning techniques for the coupled Stokes–Darcy problem: spectral and field-of-values analysis. *Numerische Mathematik*, 150(2):257–298, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01267-8; https://link.springer.com/content/pdf/10.1007/s00211-021-01267-8.pdf`.

Bellet:2023:ICS

[BBC23] Jean-Baptiste Bellet, Matthieu Brachet, and Jean-Pierre Croisille. Interpolation on the cubed sphere with spherical harmonics. *Numerische Mathematik*, 153(2–3):249–278, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01340-w`.

Bauer:2022:KIA

[BBF22] M. Bauer, M. Bebendorf, and B. Feist. Kernel-independent adaptive construction of $\mathcal{H}^2$-matrix approximations. *Numerische Mathematik*, 150(1):1–32, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01255-y; https://link.springer.com/content/pdf/10.1007/s00211-021-01255-y.pdf`.

Bartsch:2021:NIB

[BBFR21] Jan Bartsch, Alfio Borzì, Francesco Fanelli, and Souvik Roy. A numerical investigation of Brockett's ensemble optimal control problems. *Numerische Mathematik*, 149(1):1–42, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01223-6`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01223-6.pdf`.

Bonizzoni:2020:SPD

[BBJP20] Francesca Bonizzoni, Marcel Braukhoff, Ansgar Jüngel, and Ilaria Perugia. A structure-preserving discontinuous Galerkin scheme for the Fisher–KPP equation. *Numerische Mathematik*, 146(1):119–157, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01136-w`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01136-w.pdf`.

Baird:2021:SOS

[BBMRB21] Graham Baird, Raimund Bürger, Paul E. Méndez, and Ricardo Ruiz-Baier. Second-order schemes for axisymmetric Navier–Stokes-Brinkman and transport equations modelling water filters. *Numerische Mathematik*, 147(2):431–479, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01169-1`.

Barbarino:2024:SVA

[BC24] Giovanni Barbarino and Antonio Cicone. Stabilization and variations to the adaptive local iterative filtering algorithm: the fast resampled iterative filtering method. *Numerische Mathematik*, 156 (2):395–433, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01394-y`.

Blanc:2020:VPA

[BCD20] X. Blanc, E. Cancès, and M.-S. Dupuy. Variational projector augmented-wave method: theoretical analysis and preliminary numerical results. *Numerische Mathematik*, 144(2):271–321, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01082-2`.

Bouchut:2020:EST

[BCG20] François Bouchut, Christophe Chalons, and Sébastien Guisset. An entropy satisfying two-speed relaxation system for the barotropic Euler equations: application to the numerical approximation of low Mach number flows. *Numerische Mathematik*, 145(1):35–76, May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01111-5`.

Bertrand:2023:SFH

[BCGT23] Fleurianne Bertrand, Carsten Carstensen, Benedikt Gräßle, and Ngoc Tien Tran. Stabilization-free HHO a posteriori error control. *Numerische Mathematik*, 154(3–4):369–408, August 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01366-8`.

Bokoch:2024:CFN

[BCLD24] Sergiy M. Bokoch, Gilles Carbou, Stéphane Labbé, and Stéphane Despréaux. Circuits of ferromagnetic nanowires. *Numerische Mathematik*, 156(4):1511–1540, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01426-7`.

Breit:2021:CRN

[BD21] Dominic Breit and Alan Dodgson. Convergence rates for the numerical approximation of the 2D stochastic Navier–Stokes equations. *Numerische Mathematik*, 147(3):553–578, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01181-z`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01181-z.pdf`.

Bevilacqua:2020:FIU

[BDG20] Roberto Bevilacqua, Gianna M. Del Corso, and Luca Gemignani. Fast QR iterations for unitary plus low rank matrices. *Numerische Mathematik*, 144(1):23–53, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01080-4`.

Burman:2022:FDL

[BDG22] Erik Burman, Rebecca Durst, and Johnny Guzmán. Fully discrete loosely coupled Robin–Robin scheme for incompressible fluid-structure interaction: stability and error analysis. *Numerische Mathematik*, 151(4):807–840, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01295-y`.

Buffa:2020:MAR

[BDK+20] Annalisa Buffa, Jürgen Dölz, Stefan Kurz, Sebastian Schöps, Rafael Vázquez, and Felix Wolf. Multipatch approximation of the de Rham sequence and its traces in isogeometric analysis. *Numerische Mathematik*, 144(1):201–236, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01079-x`.

Braida:2022:STO

[BDP22] B. Braida, J. Dalphin, and Y. Privat. Shape and topology optimization for maximum probability domains in quantum chemistry. *Numerische Mathematik*, 151(4):1017–1064, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01305-z`.

Balci:2024:NAV

[BDS24] Anna Kh. Balci, Lars Diening, and Abner J. Salgado. Numerical approximation of variational problems with orthotropic growth. *Numerische Mathematik*, 156(5):1751–1779, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01432-9`.

Berman:2020:SAP

[Ber20] Robert J. Berman. The Sinkhorn algorithm, parabolic optimal transport and geometric Monge–Ampère equations. *Numerische Mathematik*, 145(4):771–836, August 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01127-x`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01127-x.pdf`.

Bermejo:2021:NAF

[Ber21] R. Bermejo. Numerical analysis of a finite element formulation of the P2D model for lithium-ion cells. *Numerische Mathematik*, 149(3):463–505, November 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01235-2`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01235-2.pdf`.

Banjai:2024:RKC

[BF24] Lehel Banjai and Matteo Ferrari. Runge–Kutta convolution quadrature based on Gauss methods. *Numerische Mathematik*, 156(5):1719–1750, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01429-4`.

Burman:2022:ETS

[BFM22] Erik Burman, Stefan Frei, and Andre Massing. Eulerian time-stepping schemes for the non-stationary Stokes equations on time-dependent domains. *Numerische Mathematik*, 150(2):423–478, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01264-x`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01264-x.pdf`.

Becker:2023:GOA

[BGIP23] Roland Becker, Gregor Gantner, Michael Innerberger, and Dirk Praetorius. Goal-oriented adaptive finite element methods with optimal computational complexity. *Numerische Mathematik*, 153 (1):111–140, January 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01334-8`.

Bartel:2023:OSB

[BGJR23] Andreas Bartel, Michael Günther, Birgit Jacob, and Timo Reis. Operator splitting based dynamic iteration for linear differential-algebraic port-Hamiltonian systems. *Numerische Mathematik*, 155(1–2):1–34, October 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01369-5`.

Bellotti:2022:FDF

[BGM22a] Thomas Bellotti, Benjamin Graille, and Marc Massot. Finite difference formulation of any lattice Boltzmann scheme. *Numerische Mathematik*, 152(1):1–40, September 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01302-2`.

Bessaih:2022:CDA

[BGM22b] H. Bessaih, V. Ginting, and B. McCaskill. Continuous data assimilation for displacement in a porous medium. *Numerische Mathematik*, 151(4):927–962, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01306-y`.

Benner:2023:UFT

[BGW23] Peter Benner, Serkan Gugercin, and Steffen W. R. Werner. A unifying framework for tangential interpolation of structured bilinear control systems. *Numerische Mathematik*, 155(3–4):445–483, December 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01380-w`.

Burman:2020:CFE

[BHL20] Erik Burman, Peter Hansbo, and Mats G. Larson. A cut finite element method for a model of pressure in fractured media. *Numerische Mathematik*, 146(4):783–818, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01157-5`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01157-5.pdf`.

Burman:2022:CBE

[BHL22] Erik Burman, Peter Hansbo, and Mats G. Larson. CutFEM based on extended finite element spaces. *Numerische Mathematik*, 152(2):331–369, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01313-z`.

Barrenechea:2020:MHM

[BJPV20] Gabriel R. Barrenechea, Fabrice Jaillet, Diego Paredes, and Frédéric Valentin. The multiscale hybrid mixed method in general polygonal meshes. *Numerische Mathematik*, 145(1):197–237,

May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01103-5.

Bartels:2022:EET

[BK22a] Sören Bartels and Alex Kaltenbach. Error estimates for total-variation regularized minimization problems with singular dual solutions. *Numerische Mathematik*, 152(4):881–906, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01324-w.

Beschle:2022:SEE

[BK22b] Cedric Aaron Beschle and Balázs Kovács. Stability and error estimates for non-linear Cahn–Hilliard-type equations on evolving surfaces. *Numerische Mathematik*, 151(1):1–48, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01280-5.

Bunder:2021:EFP

[BKR21] J. E. Bunder, I. G. Kevrekidis, and A. J. Roberts. Equation-free patch scheme for efficient computational homogenisation via self-adjoint coupling. *Numerische Mathematik*, 149(2):229–272, October 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01232-5.

Bergold:2022:EBT

[BL22] Paul Bergold and Caroline Lasser. An error bound for the time-sliced thawed Gaussian propagation method. *Numerische Mathematik*, 152(3):511–551, November 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01319-7.

Bao:2024:SPP

[BL24] Weizhu Bao and Yifei Li. A structure-preserving parametric finite element method for geometric flows with anisotropic surface energy. *Numerische Mathematik*, 156(2):609–639, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01398-8.

Banjai:2023:ECH

[BMS23a] Lehel Banjai, Jens M. Melenk, and Christoph Schwab. Exponential convergence of hp FEM for spectral fractional diffusion in polygons. *Numerische Mathematik*, 153(1):1–47, January 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01329-5`.

Bonafini:2023:AAD

[BMS23b] Mauro Bonafini, Ismael Medina, and Bernhard Schmitzer. Asymptotic analysis of domain decomposition for optimal transport. *Numerische Mathematik*, 153(2–3):451–492, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01347-x`.

Burman:2020:SFE

[BNO20] Erik Burman, Mihai Nechita, and Lauri Oksanen. A stabilized finite element method for inverse problems subject to the convection-diffusion equation. I: Diffusion-dominated regime. *Numerische Mathematik*, 144(3):451–477, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01087-x`; `https://link.springer.com/content/pdf/10.1007/s00211-019-01087-x.pdf`.

Burman:2022:SFE

[BNO22] Erik Burman, Mihai Nechita, and Lauri Oksanen. A stabilized finite element method for inverse problems subject to the convection–diffusion equation. II: convection-dominated regime. *Numerische Mathematik*, 150(3):769–801, March 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01268-1`.

Borthagaray:2020:SPF

[BNW20] Juan Pablo Borthagaray, Ricardo H. Nochetto, and Shawn W. Walker. A structure-preserving FEM for the uniaxially constrained **Q**-tensor model of nematic liquid crystals. *Numerische Mathematik*, 145(4):837–881, August 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01133-z`.

Balci:2022:CRF

[BOS22] Anna Kh. Balci, Christoph Ortner, and Johannes Storn. Crouzeix–Raviart finite element method for non-autonomous variational problems with Lavrentiev gap. *Numerische Mathematik*, 151(4):779–805, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01303-1`.

Bertoluzza:2024:IEV

[BPP24] Silvia Bertoluzza, Micol Pennacchio, and Daniele Prada. Interior estimates for the virtual element method. *Numerische Mathematik*, 156(3):1163–1196, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01408-9`.

Bokanowski:2021:SCS

[BPR21] Olivier Bokanowski, Athena Picarelli, and Christoph Reisinger. Stability and convergence of second order backward differentiation schemes for parabolic Hamilton–Jacobi–Bellman equations. *Numerische Mathematik*, 148(1):187–222, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01202-x`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01202-x.pdf`.

Bartels:2020:NSB

[BR20] Sören Bartels and Philipp Reiter. Numerical solution of a bending-torsion model for elastic rods. *Numerische Mathematik*, 146(4):661–697, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01156-6`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01156-6.pdf`.

Benzi:2023:CNE

[BRS23] Michele Benzi, Michele Rinelli, and Igor Simunec. Computation of the von Neumann entropy of large matrices via trace estimators and rational Krylov methods. *Numerische Mathematik*, 155(3–4): 377–414, December 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01368-6`.

Bonafini:2021:DDE

[BS21] Mauro Bonafini and Bernhard Schmitzer. Domain decomposition for entropy regularized optimal transport. *Numerische Mathematik*, 149(4):819–870, December 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01245-0`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01245-0.pdf`.

Banz:2024:EHF

[BS24] Lothar Banz and Ernst P. Stephan. *hp-FEM* for the α-Mosolov problem: a priori and a posteriori error estimates. *Numerische Mathematik*, 156(5):1679–1718, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01433-8`.

Biswas:2022:EED

[BTU22] A. Biswas, J. Tian, and S. Ulusoy. Error estimates for deep learning methods in fluid dynamics. *Numerische Mathematik*, 151 (3):753–777, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01294-z`.

Breiding:2022:SLR

[BV22] Paul Breiding and Nick Vannieuwenhoven. Sensitivity of low-rank matrix recovery. *Numerische Mathematik*, 152(4):725–759, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01327-7`.

Bartels:2021:ORC

[BW21] Sören Bartels and Zhangxian Wang. Orthogonality relations of Crouzeix–Raviart and Raviart–Thomas finite element spaces. *Numerische Mathematik*, 148(1):127–139, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01199-3`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01199-3.pdf`.

Brenner:2021:CEC

[BySTZ21] Susanne C. Brenner, Li yeng Sung, Zhiyu Tan, and Hongchao Zhang. A convexity enforcing C^0 interior penalty method for

the Monge–Ampère equation on convex polygonal domains. *Numerische Mathematik*, 148(3):497–524, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01210-x`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01210-x.pdf`.

Calzola:2023:SLS

[CCDS23] Elisa Calzola, Elisabetta Carlini, Xavier Dupuis, and Francisco J. Silva. A semi-Lagrangian scheme for Hamilton–Jacobi–Bellman equations with oblique derivatives boundary conditions. *Numerische Mathematik*, 153(1):49–84, January 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01336-6`.

Caetano:2024:HMB

[CCWG+24] A. M. Caetano, S. N. Chandler-Wilde, A. Gibbs, D. P. Hewett, and A. Moiola. A Hausdorff-measure boundary element method for acoustic scattering by fractal screens. *Numerische Mathematik*, 156(2):463–532, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01399-7`.

Cai:2020:REP

[CCZ20] Difeng Cai, Zhiqiang Cai, and Shun Zhang. Robust equilibrated a posteriori error estimator for higher order finite element approximations to diffusion problems. *Numerische Mathematik*, 144 (1):1–21, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01075-1`.

Church:2020:DMA

[CDE20] Lewis Church, Ana Djurdjevac, and Charles M. Elliott. A domain mapping approach for elliptic equations posed on random bulk and surface domains. *Numerische Mathematik*, 146(1):1–49, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01139-7`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01139-7.pdf`.

Cances:2020:NQB

[CEG+20] Éric Cancès, Virginie Ehrlacher, David Gontier, Antoine Levitt, and Damiano Lombardi. Numerical quadrature in the Brillouin zone for periodic Schrödinger operators. *Numerische Mathematik*, 144(3):479–526, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01096-w`.

Carstensen:2021:GLB

[CEP21] Carsten Carstensen, Alexandre Ern, and Sophie Puttkammer. Guaranteed lower bounds on eigenvalues of elliptic operators with a hybrid high-order method. *Numerische Mathematik*, 149(2):273–304, October 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01228-1; https://link.springer.com/content/pdf/10.1007/s00211-021-01228-1.pdf`.

Chaumont-Frelet:2024:EAH

[CFDI24] T. Chaumont-Frelet, V. Dolean, and M. Ingremeau. Efficient approximation of high-frequency Helmholtz solutions by Gaussian coherent states. *Numerische Mathematik*, 156(4):1385–1426, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01411-0`.

Chaumont-Frelet:2021:DGR

[CFEV21] T. Chaumont-Frelet, A. Ern, and M. Vohralík. On the derivation of guaranteed and p-robust a posteriori error estimates for the Helmholtz equation. *Numerische Mathematik*, 148(3):525–573, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01192-w`.

Carrillo:2020:CFV

[CFS20] José A. Carrillo, Francis Filbet, and Markus Schmidtchen. Convergence of a finite volume scheme for a system of interacting species with cross-diffusion. *Numerische Mathematik*, 145(3):473–511, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01121-3; https://link.springer.com/content/pdf/10.1007/s00211-020-01121-3.pdf`.

Christiansen:2024:DEC

[CGGH24] Snorre H. Christiansen, Jay Gopalakrishnan, Johnny Guzmán, and Kaibo Hu. A discrete elasticity complex on three-dimensional Alfeld splits. *Numerische Mathematik*, 156(1):159–204, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01381-9`.

Cances:2020:VFV

[CGT20] Clément Cancès, Thomas O. Gallouët, and Gabriele Todeschi. A variational finite volume scheme for Wasserstein gradient flows. *Numerische Mathematik*, 146(3):437–480, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01153-9`.

Carstensen:2024:AHH

[CGT24] Carsten Carstensen, Benedikt Gräßle, and Ngoc Tien Tran. Adaptive hybrid high-order method for guaranteed lower eigenvalue bounds. *Numerische Mathematik*, 156(3):813–851, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01407-w`.

Christof:2020:FEE

[CH20] Constantin Christof and Christof Haubner. Finite element error estimates in non-energy norms for the two-dimensional scalar Signorini problem. *Numerische Mathematik*, 145(3):513–551, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01117-z`. See correction [CH21].

Christof:2021:CFE

[CH21] Constantin Christof and Christof Haubner. Correction to: Finite element error estimates in non-energy norms for the two-dimensional scalar Signorini problem. *Numerische Mathematik*, 148(2):495, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01204-9; https://link.springer.com/content/pdf/10.1007/s00211-021-01204-9.pdf`. See [CH20].

Chainais-Hillairet:2022:LTB

[CHHM22] Claire Chainais-Hillairet, Maxime Herda, and Julien Moatti. Long-time behaviour of hybrid finite volume schemes for advection–diffusion equations: linear and nonlinear approaches. *Numerische Mathematik*, 151(4):963–1016, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01289-w`.

Chkifa:2024:LEL

[Chk24] Moulay Abdellah Chkifa. Lattice enumeration via linear programming. *Numerische Mathematik*, 156(1):71–106, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01376-6`.

Chen:2021:DAN

[CHL21a] Meng Chen, Yunqing Huang, and Jichun Li. Development and analysis of a new finite element method for the Cohen–Monk PML model. *Numerische Mathematik*, 147(1):127–155, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01166-4`.

Chernov:2021:MEK

[CHL+21b] Alexey Chernov, Håkon Hoel, Kody J. H. Law, Fabio Nobile, and Raul Tempone. Multilevel ensemble Kalman filtering for spatio-temporal processes. *Numerische Mathematik*, 147(1):71–125, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01159-3`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01159-3.pdf`.

Calvez:2023:CLV

[CHY23] Vincent Calvez, Hélène Hivert, and Havva Yoldas. Concentration in Lotka–Volterra parabolic equations: an asymptotic-preserving scheme. *Numerische Mathematik*, 154(1–2):103–153, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01362-y`.

Ciarlet:2022:AEF

[Cia22] Patrick Ciarlet, Jr. On the approximation of electromagnetic fields by edge finite elements — Part 4: analysis of the model with one sign-changing coefficient. *Numerische Mathematik*, 152 (2):223–257, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01315-x`.

Choi:2021:SHT

[CIV21] Bosu Choi, Mark Iwen, and Toni Volkmer. Sparse harmonic transforms II: best s-term approximation guarantees for bounded orthonormal product bases in sublinear-time. *Numerische Mathematik*, 148(2):293–362, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01200-z`.

Chen:2021:CNS

[CJT21] Qingshan Chen, Lili Ju, and Roger Temam. Conservative numerical schemes with optimal dispersive wave relations: Part I. Derivation and analysis. *Numerische Mathematik*, 149(1): 43–85, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01218-3`.

Cox:2020:RCA

[CK20] Sonja G. Cox and Kristin Kirchner. Regularity and convergence analysis in Sobolev and Hölder spaces for generalized Whittle–Matérn fields. *Numerische Mathematik*, 146(4):819–873, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01151-x`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01151-x.pdf`.

Carstensen:2022:PPE

[CKP22] Carsten Carstensen, Rekha Khot, and Amiya K. Pani. A priori and a posteriori error analysis of the lowest-order NCVEM for second-order linear indefinite elliptic problems. *Numerische Mathematik*, 151(3):551–600, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01296-x`.

Craig:2022:PGA

[CLL+22] Katy Craig, Jian-Guo Liu, Jianfeng Lu, Jeremy L. Marzuola, and Li Wang. A proximal-gradient algorithm for crystal surface evolution. *Numerische Mathematik*, 152(3):631–662, November 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01320-0`.

Chen:2021:AHO

[CLX21] Zhiming Chen, Ke Li, and Xueshuang Xiang. An adaptive high-order unfitted finite element method for elliptic interface problems. *Numerische Mathematik*, 149(3):507–548, November 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01243-2`.

Caucao:2022:MSF

[CLY22] Sergio Caucao, Tongtong Li, and Ivan Yotov. A multipoint stress-flux mixed finite element method for the Stokes–Biot model. *Numerische Mathematik*, 152(2):411–473, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01310-2`.

Cardoen:2024:MAE

[CMNS24] Clément Cardoen, Swann Marx, Anthony Nouy, and Nicolas Seguin. A moment approach for entropy solutions of parameter-dependent hyperbolic conservation laws. *Numerische Mathematik*, 156(4):1289–1324, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01428-5`.

Casas:2021:NAC

[CMR21] Eduardo Casas, Mariano Mateos, and Arnd Rösch. Numerical approximation of control problems of non-monotone and non-coercive semilinear elliptic equations. *Numerische Mathematik*, 149(2):305–340, October 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01222-7; https://link.springer.com/content/pdf/10.1007/s00211-021-01222-7.pdf`.

Chen:2020:OEE

[CMS20] Hongtao Chen, Jingjing Mao, and Jie Shen. Optimal error estimates for the scalar auxiliary variable finite-element schemes for gradient flows. *Numerische Mathematik*, 145(1):167–196, May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01112-4`.

Carstensen:2022:SMF

[CNP22] C. Carstensen, Neela Nataraj, and Amiya K. Pani. Stability of mixed FEMs for non-selfadjoint indefinite second-order linear elliptic PDEs. *Numerische Mathematik*, 150(4):975–992, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01282-3`.

Carstensen:2023:UPA

[CNRS23] Carsten Carstensen, Neela Nataraj, Gopikrishnan C. Remesan, and Devika Shylaja. Unified a priori analysis of four second-order FEM for fourth-order quadratic semilinear problems. *Numerische Mathematik*, 154(3–4):323–368, August 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01356-w`.

Claeys:2022:RTC

[CP22] Xavier Claeys and Emile Parolin. Robust treatment of cross-points in optimized Schwarz methods. *Numerische Mathematik*, 151(2):405–442, June 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01288-x`.

Chrysafinos:2023:AAO

[CP23] Konstantinos Chrysafinos and Dimitra Plaka. Analysis and approximations of an optimal control problem for the Allen–Cahn equation. *Numerische Mathematik*, 155(1–2):35–82, October 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01374-8`.

Carstensen:2024:AGL

[CP24] Carsten Carstensen and Sophie Puttkammer. Adaptive guaranteed lower eigenvalue bounds with optimal convergence rates.

Numerische Mathematik, 156(1):1–38, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01382-8`.

Curry:2020:CLG

[CS20] Charles Curry and Alexander Schmeding. Convergence of Lie group integrators. *Numerische Mathematik*, 144(2):357–373, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01083-1`.

Carstensen:2023:TDT

[CS23a] C. Carstensen and M. Schedensack. Two discretisations of the time-dependent Bingham problem. *Numerische Mathematik*, 153 (2–3):411–450, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01338-4`.

Cheng:2023:LDG

[CS23b] Yao Cheng and Martin Stynes. The local discontinuous Galerkin method for a singularly perturbed convection–diffusion problem with characteristic and exponential layers. *Numerische Mathematik*, 154(1–2):283–318, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01361-z`.

Carstensen:2022:CAH

[CT22] Carsten Carstensen and Ngoc Tien Tran. Convergent adaptive hybrid higher-order schemes for convex minimization. *Numerische Mathematik*, 151(2):329–367, June 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01284-1`.

Chen:2020:CEP

[CW20] Wenbin Chen and Yanqiu Wang. H^1, $H(\mathrm{curl})$ and $H(\mathrm{div})$ conforming elements on polygon-based prisms and cones. *Numerische Mathematik*, 145(4):973–1004, August 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01129-9`.

Chandler-Wilde:2021:BEM

[CWHMB21] Simon N. Chandler-Wilde, David P. Hewett, Andrea Moiola, and Jeanne Besson. Boundary element methods for acoustic scattering

by fractal screens. *Numerische Mathematik*, 147(4):785–837, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01182-y`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01182-y.pdf`.

Chandler-Wilde:2023:SDL

[CWHPV23] Simon N. Chandler-Wilde, Raffael Hagger, Karl-Mikael Perfekt, and Jani A. Virtanen. On the spectrum of the double-layer operator on locally-dilation-invariant Lipschitz domains. *Numerische Mathematik*, 153(4):635–699, April 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01353-z`.

Chandler-Wilde:2022:CEN

[CWS22] S. N. Chandler-Wilde and E. A. Spence. Coercivity, essential norms, and the Galerkin method for second-kind integral equations on polyhedral and Lipschitz domains. *Numerische Mathematik*, 150(2):299–371, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01256-x`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01256-x.pdf`. See correction [CWS23].

Chandler-Wilde:2023:CCE

[CWS23] S. N. Chandler-Wilde and E. A. Spence. Correction to: Coercivity, essential norms, and the Galerkin method for second-kind integral equations on polyhedral and Lipschitz domains. *Numerische Mathematik*, 154(1–2):319–321, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01357-9`. See [CWS22].

Chandler-Wilde:2024:CSK

[CWS24] S. N. Chandler-Wilde and E. A. Spence. Coercive second-kind boundary integral equations for the Laplace Dirichlet problem on Lipschitz domains. *Numerische Mathematik*, 156(4):1325–1384, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01424-9`.

Cicone:2021:NAI

[CZ21] Antonio Cicone and Haomin Zhou. Numerical analysis for iterative filtering with new efficient implementations based on FFT. *Numerische Mathematik*, 147(1):1–28, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01165-5`.

Cances:2022:CFV

[CZ22] Clément Cancès and Antoine Zurek. A convergent finite volume scheme for dissipation driven models with volume filling constraint. *Numerische Mathematik*, 151(1):279–328, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01270-7`.

Cui:2022:SGF

[CZB22] Cu Cui, Qinghui Zhang, and Ivo Babuska. Stable generalized finite element method (SGFEM) for three-dimensional crack problems. *Numerische Mathematik*, 152(2):475–509, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01312-0`.

Alba:2020:SSK

[dAFR20] Patricia Díaz de Alba, Luisa Fermo, and Giuseppe Rodriguez. Solution of second kind Fredholm integral equations by means of Gauss and anti-Gauss quadrature rules. *Numerische Mathematik*, 146(4):699–728, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01163-7`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01163-7.pdf`.

Dostal:2022:SSC

[DBR22] Zdenek Dostál, Tomás Brzobohatý, and Lubomír Ríha. On the spectrum of Schur complements of 2D elastic clusters joined by rigid edge modes and hybrid domain decomposition. *Numerische Mathematik*, 152(1):41–66, September 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01307-x`.

Dolz:2021:MRA

[DES21] Jürgen Dölz, Herbert Egger, and Matthias Schlottbom. A model reduction approach for inverse problems with operator valued data. *Numerische Mathematik*, 148(4):889–917, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01224-5`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01224-5.pdf`.

Diening:2020:RKI

[DFTW20] L. Diening, M. Fornasier, R. Tomasi, and M. Wank. A relaxed Kacanov iteration for the p-Poisson problem. *Numerische Mathematik*, 145(1):1–34, May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01107-1`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01107-1.pdf`.

Dujardin:2020:CHE

[DHL20] Guillaume Dujardin, Frédéric Hérau, and Pauline Lafitte. Coercivity, hypocoercivity, exponential time decay and simulations for discrete Fokker–Planck equations. *Numerische Mathematik*, 144 (3):615–697, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01094-y`.

Diening:2023:AST

[DHW23] Lars Diening, Martina Hofmanová, and Jörn Wichmann. An averaged space-time discretization of the stochastic p-Laplace system. *Numerische Mathematik*, 153(2–3):557–609, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01343-7`.

Dong:2020:NPL

[DJC20] Bo Dong, Nan Jiang, and Moody T. Chu. Nonlinear power-like iteration by polar decomposition and its application to tensor approximation. *Numerische Mathematik*, 144(4):729–749, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01100-8`.

Dai:2023:NST

[DL23] Zhen Dai and Lek-Heng Lim. Numerical stability and tensor nuclear norm. *Numerische Mathematik*, 155(3–4):345–376, December 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01377-5`.

Dapogny:2020:OSR

[DLO20] Charles Dapogny, Nicolas Lebbe, and Edouard Oudet. Optimization of the shape of regions supporting boundary conditions. *Numerische Mathematik*, 146(1):51–104, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01140-0`.

Despres:2021:CSO

[DNT21] B. Després, A. Nicolopoulos, and B. Thierry. Corners and stable optimized domain decomposition methods for the Helmholtz problem. *Numerische Mathematik*, 149(4):779–818, December 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01251-2`.

Delgado:2020:EOP

[DP20] Jorge Delgado and J. M. Peña. Extremal and optimal properties of B-bases collocation matrices. *Numerische Mathematik*, 146(1):105–118, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01135-x`.

Duru:2020:SDG

[DRG+20] Kenneth Duru, Leonhard Rannabauer, Alice-Agnes Gabriel, Gunilla Kreiss, and Michael Bader. A stable discontinuous Galerkin method for the perfectly matched layer for elastodynamics in first order form. *Numerische Mathematik*, 146(4):729–782, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01160-w`.

Dornisch:2021:IMM

[DS21] W. Dornisch and J. Stöckler. An isogeometric mortar method for the coupling of multiple NURBS domains with optimal convergence rates. *Numerische Mathematik*, 149(4):871–931, December

2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01246-z; https://link.springer.com/content/pdf/10.1007/s00211-021-01246-z.pdf.

Danczul:2022:RBM

[DS22] Tobias Danczul and Joachim Schöberl. A reduced basis method for fractional diffusion operators I. *Numerische Mathematik*, 151 (2):369–404, June 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01287-y.

Diening:2022:FOT

[DST22] L. Diening, J. Storn, and T. Tscherpel. Fortin operator for the Taylor–Hood element. *Numerische Mathematik*, 150 (2):671–689, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01260-1; https://link.springer.com/content/pdf/10.1007/s00211-021-01260-1.pdf.

Dewaele:2024:WCN

[DV24] Nick Dewaele and Nick Vannieuwenhoven. Which constraints of a numerical problem cause ill-conditioning? *Numerische Mathematik*, 156(4):1427–1453, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01427-6.

Ecevit:2022:SGB

[EBL22] Fatih Ecevit, Yassine Boubendir, and Souaad Lazergui. Spectral Galerkin boundary element methods for high-frequency sound-hard scattering problems. *Numerische Mathematik*, 150(3): 803–847, March 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01269-0.

Ellison:2021:PTA

[EF21] Abe C. Ellison and Bengt Fornberg. A parallel-in-time approach for wave-type PDEs. *Numerische Mathematik*, 148(1):79–98, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01197-5.

Egger:2023:SAA

[EG23] H. Egger and J. Giesselmann. Stability and asymptotic analysis for instationary gas transport via relative energy estimates. *Numerische Mathematik*, 153(4):701–728, April 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01349-9`.

Elliott:2022:NAI

[EGK22] Charles M. Elliott, Harald Garcke, and Balázs Kovács. Numerical analysis for the interaction of mean curvature flow and diffusion on closed surfaces. *Numerische Mathematik*, 151(4):873–925, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01301-3`.

Eto:2024:SPF

[EGN24] Tokuhiro Eto, Harald Garcke, and Robert Nürnberg. A structure-preserving finite element method for the multi-phase Mullins–Sekerka problem with triple junctions. *Numerische Mathematik*, 156(4):1479–1509, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01414-x`.

Eigel:2020:ASG

[EMPS20] Martin Eigel, Manuel Marschall, Max Pfeffer, and Reinhold Schneider. Adaptive stochastic Galerkin FEM for lognormal coefficients in hierarchical tensor representations. *Numerische Mathematik*, 145(3):655–692, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01123-1`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01123-1.pdf`.

Einkemmer:2022:PSS

[EOR22] L. Einkemmer, A. Ostermann, and M. Residori. A pseudo-spectral Strang splitting method for linear dispersive problems with transparent boundary conditions. *Numerische Mathematik*, 150(1):105–135, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01252-1`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01252-1.pdf`.

Egger:2020:MLM

[ER20] H. Egger and B. Radu. A mass-lumped mixed finite element method for acoustic wave propagation. *Numerische Mathematik*, 145(2):239–269, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01118-y`.

Erbar:2020:COT

[ERSS20] Matthias Erbar, Martin Rumpf, Bernhard Schmitzer, and Stefan Simon. Computation of optimal transport on discrete metric measure spaces. *Numerische Mathematik*, 144(1):157–200, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01077-z`.

Eisenmann:2024:ROS

[ES24] Monika Eisenmann and Tony Stillfjord. A randomized operator splitting scheme inspired by stochastic optimization methods. *Numerische Mathematik*, 156(2):435–461, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01396-w`.

Fuda:2022:NSL

[FCH22a] Chiara Fuda, Rosanna Campagna, and Kai Hormann. On the numerical stability of linear barycentric rational interpolation. *Numerische Mathematik*, 152(4):761–786, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01316-w`. See publisher correction [FCH22b].

Fuda:2022:PCN

[FCH22b] Chiara Fuda, Rosanna Campagna, and Kai Hormann. Publisher correction to: On the numerical stability of linear barycentric rational interpolation. *Numerische Mathematik*, 152(4):787–788, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01330-y`. See [FCH22a].

Freese:2024:SLG

[FHKP24] Philip Freese, Moritz Hauck, Tim Keil, and Daniel Peterseim. A super-localized generalized finite element method. *Numerische*

Mathematik, 156(1):205–235, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01386-4`.

Fuhrer:2022:DMS

[FHN22] Thomas Führer, Norbert Heuer, and Antti H. Niemi. A DPG method for shallow shells. *Numerische Mathematik*, 152(1):67–99, September 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01308-w`.

Fuhrer:2020:UFR

[FHS20] Thomas Führer, Norbert Heuer, and Francisco-Javier Sayas. An ultraweak formulation of the Reissner–Mindlin plate bending model and DPG approximation. *Numerische Mathematik*, 145 (2):313–344, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01116-0`.

Fuhrer:2023:LSF

[FK23] Thomas Führer and Michael Karkulik. Least-squares finite elements for distributed optimal control problems. *Numerische Mathematik*, 154(3–4):409–442, August 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01367-7`.

Feireisl:2020:FVS

[FLMM20] Eduard Feireisl, Mária Lukácová-Medvid'ová, and Hana Mizerová. A finite volume scheme for the Euler system inspired by the two velocities approach. *Numerische Mathematik*, 144(1): 89–132, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01078-y`.

Feireisl:2023:IEE

[FLMS23] Eduard Feireisl, Mária Lukácová-Medvid'ová, and Bangwei She. Improved error estimates for the finite volume and the MAC schemes for the compressible Navier–Stokes system. *Numerische Mathematik*, 153(2–3):493–529, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01346-y`.

Fang:2021:PSP

[FLNS21] Zhi-Wei Fang, Xue-Lei Lin, Michael K. Ng, and Hai-Wei Sun. Preconditioning for symmetric positive definite systems in balanced fractional diffusion equations. *Numerische Mathematik*, 147 (3):651–677, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01175-x`.

Faustmann:2022:CTE

[FMP22] Markus Faustmann, Jens Markus Melenk, and Maryam Parvizi. Caccioppoli-type estimates and $\mathcal{H}$-matrix approximations to inverses for FEM-BEM couplings. *Numerische Mathematik*, 150 (3):849–892, March 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-021-01261-0`.

Frittelli:2021:BSV

[FMS21] Massimo Frittelli, Anotida Madzvamuse, and Ivonne Sgura. Bulk-surface virtual element method for systems of PDEs in two-space dimensions. *Numerische Mathematik*, 147(2):305–348, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01167-3`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01167-3.pdf`.

Ferreira:2022:RTD

[FP22] Carla Ferreira and Beresford Parlett. A real triple dqds algorithm for the nonsymmetric tridiagonal eigenvalue problem. *Numerische Mathematik*, 150(2):373–422, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01254-z`.

Falcone:2020:CAF

[FPT20] Maurizio Falcone, Giulio Paolucci, and Silvia Tozza. Convergence of adaptive filtered schemes for first order evolutionary Hamilton–Jacobi equations. *Numerische Mathematik*, 145(2):271–311, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01119-x`.

Filbet:2021:CAA

[FRZ21] Francis Filbet, L. Miguel Rodrigues, and Hamed Zakerzadeh. Convergence analysis of asymptotic preserving schemes for

strongly magnetized plasmas. *Numerische Mathematik*, 149(3): 549–593, November 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01248-x`.

Feischl:2020:ECH

[FS20] M. Feischl and Ch. Schwab. Exponential convergence in H^1 of hp-FEM for Gevrey regularity with isotropic singularities. *Numerische Mathematik*, 144(2):323–346, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01085-z`; `https://link.springer.com/content/pdf/10.1007/s00211-019-01085-z.pdf`.

Feng:2024:IUE

[FS24] Yue Feng and Katharina Schratz. Improved uniform error bounds on a Lawson-type exponential integrator for the long-time dynamics of sine-Gordon equation. *Numerische Mathematik*, 156(4): 1455–1477, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01423-w`.

Fuhrer:2020:FOL

[Füh20] Thomas Führer. First-order least-squares method for the obstacle problem. *Numerische Mathematik*, 144(1):55–88, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01084-0`.

Funaro:2022:HWN

[Fun22] Daniele Funaro. How and why non smooth solutions of the 3D Navier–Stokes equations could possibly develop. *Numerische Mathematik*, 152(4):789–817, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01333-9`.

Grassle:2024:PWS

[GBS24] Benedikt Gräßle, Nis-Erik Bohne, and Stefan Sauter. The pressure-wired Stokes element: a mesh-robust version of the Scott–Vogelius element. *Numerische Mathematik*, 156(5):1781–1807, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01430-x`.

Gaudeul:2022:ECA

[GF22] Benoît Gaudeul and Jürgen Fuhrmann. Entropy and convergence analysis for two finite volume schemes for a Nernst–Planck–Poisson system with ion volume constraints. *Numerische Mathematik*, 151(1):99–149, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01279-y`.

Gong:2022:CPO

[GGS22] Shihua Gong, Martin J. Gander, and Euan A. Spence. Convergence of parallel overlapping domain decomposition methods for the Helmholtz equation. *Numerische Mathematik*, 152(2): 259–306, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01318-8`.

Garde:2021:MRC

[GH21] Henrik Garde and Nuutti Hyvönen. Mimicking relative continuum measurements by electrode data in two-dimensional electrical impedance tomography. *Numerische Mathematik*, 147(3):579–609, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01170-8; https://link.springer.com/content/pdf/10.1007/s00211-020-01170-8.pdf`.

Ghoshal:2020:CGS

[GJT20] Shyam Sundar Ghoshal, Animesh Jana, and John D. Towers. Convergence of a Godunov scheme to an Audusse–Perthame adapted entropy solution for conservation laws with BV spatial flux. *Numerische Mathematik*, 146(3):629–659, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01150-y`.

Gedicke:2020:DCD

[GK20] Joscha Gedicke and Arbaz Khan. Divergence-conforming discontinuous Galerkin finite elements for Stokes eigenvalue problems. *Numerische Mathematik*, 144(3):585–614, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01095-x; https://link.springer.com/content/pdf/10.1007/s00211-019-01095-x.pdf`.

Guth:2024:PPC

[GKK+24] Philipp A. Guth, Vesa Kaarnioja, Frances Y. Kuo, Claudia Schillings, and Ian H. Sloan. Parabolic PDE-constrained optimal control under uncertainty with entropic risk measure using quasi-Monte Carlo integration. *Numerische Mathematik*, 156 (2):565–608, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01397-9`.

Giesselmann:2020:FCF

[GL20] Jan Giesselmann and Philippe G. LeFloch. Formulation and convergence of the finite volume method for conservation laws on spacetimes with boundary. *Numerische Mathematik*, 144(4): 751–785, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01101-7`.

Gustafsson:2022:MFE

[GL22] Tom Gustafsson and Philip L. Lederer. Mixed finite elements for Bingham flow in a pipe. *Numerische Mathematik*, 152(4): 819–840, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01332-w`.

Georgoulis:2021:PEB

[GLW21] Emmanuil H. Georgoulis, Omar Lakkis, and Thomas P. Wihler. A posteriori error bounds for fully-discrete hp-discontinuous Galerkin timestepping methods for parabolic problems. *Numerische Mathematik*, 148(2):363–386, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01187-7`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01187-7.pdf`.

Garcke:2021:NAB

[GN21] Harald Garcke and Robert Nürnberg. Numerical approximation of boundary value problems for curvature flow and elastic flow in Riemannian manifolds. *Numerische Mathematik*, 149(2):375–415, October 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01231-6`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01231-6.pdf`.

Gimperlein:2020:RPE

[GÖSS20] Heiko Gimperlein, Ceyhun Özdemir, David Stark, and Ernst P. Stephan. A residual a posteriori error estimate for the time-domain boundary element method. *Numerische Mathematik*, 146 (2):239–280, October 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01142-y`.

Gao:2023:NAM

[GQS23] Huadong Gao, Weifeng Qiu, and Weiwei Sun. New analysis of mixed FEMs for dynamical incompressible magnetohydrodynamics. *Numerische Mathematik*, 153(2–3):327–358, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01341-9`.

Gantner:2024:IRS

[GS24] Gregor Gantner and Rob Stevenson. Improved rates for a space-time FOSLS of parabolic PDEs. *Numerische Mathematik*, 156 (1):133–157, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01387-3`.

Grubisic:2023:SCM

[GSH23] Luka Grubišić, Mikael Saarikangas, and Harri Hakula. Stochastic collocation method for computing eigenspaces of parameter-dependent operators. *Numerische Mathematik*, 153(1):85–110, January 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01339-3`.

Giga:2020:NNS

[GSTU20] Yoshikazu Giga, Koya Sakakibara, Kazutoshi Taguchi, and Masaaki Uesaka. A new numerical scheme for discrete constrained total variation flows and its convergence. *Numerische Mathematik*, 146(1):181–217, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01134-y`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01134-y.pdf`.

Gimperlein:2021:OOP

[GSUT21] Heiko Gimperlein, Jakub Stocek, and Carolina Urzúa-Torres. Optimal operator preconditioning for pseudodifferential boundary problems. *Numerische Mathematik*, 148(1):1–41, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01193-9`.

Glowinski:2020:ANA

[GSY20] Roland Glowinski, Yongcun Song, and Xiaoming Yuan. An ADMM numerical approach to linear parabolic state constrained optimal control problems. *Numerische Mathematik*, 144(4): 931–966, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01104-4`.

Gallistl:2024:SGE

[GT24] Dietmar Gallistl and Ngoc Tien Tran. Stability and guaranteed error control of approximations to the Monge–Ampère equation. *Numerische Mathematik*, 156(1):107–131, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01385-5`.

Ghoshal:2022:GTS

[GTV22] Shyam Sundar Ghoshal, John D. Towers, and Ganesh Vaidya. A Godunov type scheme and error estimates for scalar conservation laws with Panov-type discontinuous flux. *Numerische Mathematik*, 151(3):601–625, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01297-w`.

Guo:2020:SCR

[Guo20] Hailong Guo. Surface Crouzeix–Raviart element for the Laplace–Beltrami equation. *Numerische Mathematik*, 144(3):527–551, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01099-7`.

Guth:2023:MQM

[GV23] Philipp A. Guth and Andreas Van Barel. Multilevel quasi-Monte Carlo for optimization under uncertainty. *Numerische Mathematik*, 154(3–4):443–484, August 2023. CODEN NUMMA7. ISSN

0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01364-w.

Gao:2024:QIH

[GWSF24] Wenwu Gao, Jiecheng Wang, Zhengjie Sun, and Gregory E. Fasshauer. Quasi-interpolation for high-dimensional function approximation. *Numerische Mathematik*, 156(5):1855–1885, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01435-6.

Halla:2021:GAH

[Hal21] Martin Halla. Galerkin approximation of holomorphic eigenvalue problems: weak T-coercivity and T-compatibility. *Numerische Mathematik*, 148(2):387–407, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01205-8; https://link.springer.com/content/pdf/10.1007/s00211-021-01205-8.pdf.

Harrach:2021:USG

[Har21] Bastian Harrach. Uniqueness, stability and global convergence for a discrete inverse elliptic Robin transmission problem. *Numerische Mathematik*, 147(1):29–70, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-020-01162-8; https://link.springer.com/content/pdf/10.1007/s00211-020-01162-8.pdf.

Hu:2020:FDP

[HH20] Jingwei Hu and Xiaodong Huang. A fully discrete positivity-preserving and energy-dissipative finite difference scheme for Poisson–Nernst–Planck equations. *Numerische Mathematik*, 145 (1):77–115, May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01109-z.

Hakula:2024:UQR

[HHK+24] Harri Hakula, Helmut Harbrecht, Vesa Kaarnioja, Frances Y. Kuo, and Ian H. Sloan. Uncertainty quantification for random domains using periodic random variables. *Numerische Mathematik*, 156(1):273–317, ???? 2024. CODEN NUMMA7. ISSN

0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01392-6.

Hong:2021:NDG

[HHMX21] Qingguo Hong, Jun Hu, Limin Ma, and Jinchao Xu. New discontinuous Galerkin algorithms and analysis for linear elasticity with symmetric stress tensor. *Numerische Mathematik*, 149(3): 645–678, November 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01234-3.

Hallman:2023:PAD

[HI23] Eric Hallman and Ilse C. F. Ipsen. Precision-aware deterministic and probabilistic error bounds for floating point summation. *Numerische Mathematik*, 155(1–2):83–119, October 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01370-y.

Ha:2021:CEE

[HJK21] Seung-Yeal Ha, Shi Jin, and Doheon Kim. Convergence and error estimates for time-discrete consensus-based optimization algorithms. *Numerische Mathematik*, 147(2):255–282, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01174-y.

Harrach:2020:BBV

[HJP20] Bastian Harrach, Tim Jahn, and Roland Potthast. Beyond the Bakushinkii veto: regularising linear inverse problems without knowing the noise distribution. *Numerische Mathematik*, 145(3):581–603, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01122-2; https://link.springer.com/content/pdf/10.1007/s00211-020-01122-2.pdf.

Helin:2022:NAE

[HK22a] Tapio Helin and Remo Kretschmann. Non-asymptotic error estimates for the Laplace approximation in Bayesian inverse problems. *Numerische Mathematik*, 150(2):521–549, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245

(electronic). URL http://link.springer.com/article/10.1007/s00211-021-01266-9; https://link.springer.com/content/pdf/10.1007/s00211-021-01266-9.pdf.

Hochbruck:2022:EAF

[HK22b] Marlis Hochbruck and Jonas Köhler. Error analysis of a fully discrete discontinuous Galerkin alternating direction implicit discretization of a class of linear wave-type problems. *Numerische Mathematik*, 150(3):893–927, March 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-021-01262-z.

Hagstrom:2023:CRB

[HK23] Thomas Hagstrom and Seungil Kim. Complete radiation boundary conditions for the Helmholtz equation II: domains with corners. *Numerische Mathematik*, 153(4):775–825, April 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01352-0.

Hafemeyer:2020:FEE

[HKP20] Dominik Hafemeyer, Christian Kahle, and Johannes Pfefferer. Finite element error estimates in L^2 for regularized discrete approximations to the obstacle problem. *Numerische Mathematik*, 144 (1):133–156, January 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-019-01081-3.

Hairer:2020:LTA

[HL20a] Ernst Hairer and Christian Lubich. Long-term analysis of a variational integrator for charged-particle dynamics in a strong magnetic field. *Numerische Mathematik*, 144(3):699–728, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-019-01093-z.

Heltai:2020:PEE

[HL20b] Luca Heltai and Wenyu Lei. A priori error estimates of regularized elliptic problems. *Numerische Mathematik*, 146(3):571–596, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01152-w.

Hochbruck:2021:CIE

[HL21a] Marlis Hochbruck and Jan Leibold. Correction to: An implicit-explicit time discretization scheme for second-order semilinear wave equations with application to dynamic boundary conditions. *Numerische Mathematik*, 147(4):901, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01190-y`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01190-y.pdf`. See [HL21b].

Hochbruck:2021:IET

[HL21b] Marlis Hochbruck and Jan Leibold. An implicit-explicit time discretization scheme for second-order semilinear wave equations with application to dynamic boundary conditions. *Numerische Mathematik*, 147(4):869–899, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01184-w`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01184-w.pdf`. See correction [HL21a].

Hu:2022:EFE

[HL22] Jiashun Hu and Buyang Li. Evolving finite element methods with an artificial tangential velocity for mean curvature flow and Willmore flow. *Numerische Mathematik*, 152(1):127–181, September 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01309-9`.

Hu:2024:FCF

[HLMZ24] Jun Hu, Yizhou Liang, Rui Ma, and Min Zhang. A family of conforming finite element divdiv complexes on cuboid meshes. *Numerische Mathematik*, 156(4):1603–1638, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01418-7`.

Hochbruck:2020:CLM

[HLO20] Marlis Hochbruck, Jan Leibold, and Alexander Ostermann. On the convergence of Lawson methods for semilinear stiff problems. *Numerische Mathematik*, 145(3):553–580, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-`

020-01120-4; https://link.springer.com/content/pdf/10.1007/s00211-020-01120-4.pdf.

Hairer:2022:LSI

[HLS22] Ernst Hairer, Christian Lubich, and Yanyan Shi. Large-stepsize integrators for charged-particle dynamics over multiple time scales. *Numerische Mathematik*, 151(3):659–691, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01298-9.

Hairer:2020:FBA

[HLW20] Ernst Hairer, Christian Lubich, and Bin Wang. A filtered Boris algorithm for charged-particle dynamics in a strong magnetic field. *Numerische Mathematik*, 144(4):787–809, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01105-3; https://link.springer.com/content/pdf/10.1007/s00211-020-01105-3.pdf.

Hauck:2024:SLS

[HM24] Moritz Hauck and Axel Målqvist. Super-localization of spatial network models. *Numerische Mathematik*, 156(3):901–926, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01410-1.

Harbrecht:2024:MKM

[HMSS24] H. Harbrecht, M. Multerer, O. Schenk, and Ch. Schwab. Multiresolution kernel matrix algebra. *Numerische Mathematik*, 156 (3):1085–1114, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01409-8.

Hassan:2023:ASR

[HMW23] Muhammad Hassan, Yvon Maday, and Yipeng Wang. Analysis of the single reference coupled cluster method for electronic structure calculations: the full-coupled cluster equations. *Numerische Mathematik*, 155(1–2):121–173, October 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01371-x.

Haberl:2021:CQO

[HPSV21] Alexander Haberl, Dirk Praetorius, Stefan Schimanko, and Martin Vohralík. Convergence and quasi-optimal cost of adaptive algorithms for nonlinear operators including iterative linearization and algebraic solver. *Numerische Mathematik*, 147(3):679–725, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01176-w; https://link.springer.com/content/pdf/10.1007/s00211-021-01176-w.pdf`.

Hu:2020:SHD

[HSS+20] Weiwei Hu, Jiguang Shen, John R. Singler, Yangwen Zhang, and Xiaobo Zheng. A superconvergent hybridizable discontinuous Galerkin method for Dirichlet boundary control of elliptic PDEs. *Numerische Mathematik*, 144(2):375–411, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01090-2`.

Hamfeldt:2022:CFO

[HT22] Brittany Froese Hamfeldt and Axel G. R. Turnquist. A convergence framework for optimal transport on the sphere. *Numerische Mathematik*, 151(3):627–657, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01292-1`.

Huynh:2022:NKB

[Huy22] Ngoc Mai Monica Huynh. Newton–Krylov-BDDC deluxe solvers for non-symmetric fully implicit time discretizations of the bidomain model. *Numerische Mathematik*, 152(4):841–879, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01331-x`.

Harbrecht:2024:CBI

[HvR24] Helmut Harbrecht and Remo von Rickenbach. Compression of boundary integral operators discretized by anisotropic wavelet bases. *Numerische Mathematik*, 156(3):853–899, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01403-0`.

Hollbacher:2021:CSI

[HW21a] Susanne Höllbacher and Gabriel Wittum. Correction to: A sharp interface method using enriched finite elements for elliptic interface problems. *Numerische Mathematik*, 147(4):783, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01191-x`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01191-x.pdf`. See [HW21b].

Hollbacher:2021:SIM

[HW21b] Susanne Höllbacher and Gabriel Wittum. A sharp interface method using enriched finite elements for elliptic interface problems. *Numerische Mathematik*, 147(4):759–781, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01180-0`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01180-0.pdf`. See correction [HW21a].

Imbert-Gerard:2021:RGP

[IGS21] Lise-Marie Imbert-Gérard and Guillaume Sylvand. A roadmap for Generalized Plane Waves and their interpolation properties. *Numerische Mathematik*, 149(1):87–137, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01220-9`.

Ji:2023:ICR

[Ji23] Haifeng Ji. An immersed Crouzeix–Raviart finite element method in 2D and 3D based on discrete level set functions. *Numerische Mathematik*, 153(2–3):279–325, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01345-z`.

Jin:2022:CRD

[Jin22] Qinian Jin. Convergence rates of a dual gradient method for constrained linear ill-posed problems. *Numerische Mathematik*, 151 (4):841–871, August 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01300-4`.

Joly:2020:TBC

[JK20] Patrick Joly and Maryna Kachanovska. Transparent boundary conditions for wave propagation in fractal trees: convo-

lution quadrature approach. *Numerische Mathematik*, 146(2): 281–334, October 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01145-9`.

John:2022:ASS

[JK22] Volker John and Petr Knobloch. On algebraically stabilized schemes for convection-diffusion-reaction problems. *Numerische Mathematik*, 152(3):553–585, November 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01325-9`.

Jacobs:2020:FAO

[JL20] Matt Jacobs and Flavien Léger. A fast approach to optimal transport: the back-and-forth method. *Numerische Mathematik*, 146(3):513–544, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01154-8`.

Jin:2020:STD

[JLZ20] Bangti Jin, Buyang Li, and Zhi Zhou. Subdiffusion with time-dependent coefficients: improved regularity and second-order time stepping. *Numerische Mathematik*, 145(4):883–913, August 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01130-2`.

Jiang:2023:NLR

[JNPS23] Tai-Xiang Jiang, Michael K. Ng, Junjun Pan, and Guang-Jing Song. Nonnegative low rank tensor approximations with multidimensional image applications. *Numerische Mathematik*, 153(1): 141–170, January 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01328-6`.

Junike:2024:NTC

[Jun24] Gero Junike. On the number of terms in the COS method for European option pricing. *Numerische Mathematik*, 156(2):533–564, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01402-1`.

Ji:2022:NPF

[JWL22] Haifeng Ji, Feng Wang, and Zhilin Li. A new parameter free partially penalized immersed finite element and the optimal convergence analysis. *Numerische Mathematik*, 150(4):1035–1086, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01276-1`.

Jin:2020:IIS

[JZ20] Bangti Jin and Zhi Zhou. Incomplete iterative solution of subdiffusion. *Numerische Mathematik*, 145(3):693–725, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01128-w`.

Jin:2022:VFP

[JZZ22] Shi Jin, Yuhua Zhu, and Enrique Zuazua. The Vlasov–Fokker–Planck equation with high dimensional parametric forcing term. *Numerische Mathematik*, 150(2):479–519, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01257-w`.

Kong:2020:TBC

[KH20] Wang Kong and Zhongyi Huang. Transparent boundary conditions and numerical computation for singularly perturbed telegraph equation on unbounded domain. *Numerische Mathematik*, 145(2):345–382, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01115-1`.

Kashiwabara:2020:PEE

[KK20] Takahito Kashiwabara and Tomoya Kemmochi. Pointwise error estimates of linear finite element method for Neumann boundary value problems in a smooth domain. *Numerische Mathematik*, 144 (3):553–584, March 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01098-8`.

Kaarnioja:2022:FAP

[KKK+22a] Vesa Kaarnioja, Yoshihito Kazashi, Frances Y. Kuo, Fabio Nobile, and Ian H. Sloan. Fast approximation by periodic kernel-based lattice-point interpolation with application in uncertainty

quantification. *Numerische Mathematik*, 150(1):33–77, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01242-3`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01242-3.pdf`.

Korotov:2022:DFE

[KKK22b] Sergey Korotov, Michal Krízek, and Václav Kucera. On degenerating finite element tetrahedral partitions. *Numerische Mathematik*, 152(2):307–329, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01317-9`.

Kovacs:2017:SCF

[KL17] Balázs Kovács and Christian Lubich. Stable and convergent fully discrete interior–exterior coupling of Maxwell's equations. *Numerische Mathematik*, 137(1):91–117, September 2017. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). See correction [NKL21].

Kovacs:2021:CEF

[KLL21] Balázs Kovács, Buyang Li, and Christian Lubich. A convergent evolving finite element algorithm for Willmore flow of closed surfaces. *Numerische Mathematik*, 149(3):595–643, November 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01238-z`.

Kucera:2022:APC

[KLMNS22] Václav Kucera, Mária Lukácová-Medvid'ová, Sebastian Noelle, and Jochen Schütz. Asymptotic properties of a class of linearly implicit schemes for weakly compressible Euler equations. *Numerische Mathematik*, 150(1):79–103, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01240-5`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01240-5.pdf`.

Kressner:2023:IPL

[KMZ23] Daniel Kressner, Stefano Massei, and Junli Zhu. Improved ParaDiag via low-rank updates and interpolation. *Numerische Mathematik*, 155(1–2):175–209, October 2023. CODEN NUMMA7.

ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01372-w.

Kwon:2021:CWS

[KN21] Young-Sam Kwon and Antonin Novotný. Construction of weak solutions to compressible Navier–Stokes equations with general inflow/outflow boundary conditions via a numerical approximation. *Numerische Mathematik*, 149(4):717–778, December 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01237-0.

Kazashi:2021:SPP

[KNV21] Yoshihito Kazashi, Fabio Nobile, and Eva Vidlicková. Stability properties of a projector-splitting scheme for dynamical low rank approximation of random parabolic equations. *Numerische Mathematik*, 149(4):973–1024, December 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01241-4; https://link.springer.com/content/pdf/10.1007/s00211-021-01241-4.pdf.

Kopteva:2020:LPE

[Kop20] Natalia Kopteva. Lower a posteriori error estimates on anisotropic meshes. *Numerische Mathematik*, 146(1):159–179, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01137-9.

Kurz:2021:FPE

[KPP+21] Stefan Kurz, Dirk Pauly, Dirk Praetorius, Sergey Repin, and Daniel Sebastian. Functional a posteriori error estimates for boundary element methods. *Numerische Mathematik*, 147(4):937–966, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01188-6; https://link.springer.com/content/pdf/10.1007/s00211-021-01188-6.pdf.

Kritzer:2020:EWI

[KPW20] P. Kritzer, F. Pillichshammer, and G. W. Wasilkowski. On efficient weighted integration via a change of variables. *Numerische Mathematik*, 146(3):545–570, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic).

URL https://link.springer.com/article/10.1007/s00211-020-01147-7.

Kriel:2020:EIF

[Kri20] A. J. Kriel. Entropy inequalities for fully-discrete E-schemes. *Numerische Mathematik*, 144(2):347–356, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-019-01089-9.

Kriel:2021:EIF

[Kri21] A. J. Kriel. Entropy inequalities for fully-discrete E-schemes: a sequel. *Numerische Mathematik*, 149(1):139–149, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01227-2.

Kuroki:2020:CCP

[KS20] Hidesato Kuroki and Kohei Soga. On convergence of Chorin's projection method to a Leray–Hopf weak solution. *Numerische Mathematik*, 146(2):401–433, October 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01144-w.

Kirby:2024:HOB

[KS24] Robert C. Kirby and Daniel Shapero. High-order bounds-satisfying approximation of partial differential equations via finite element variational inequalities. *Numerische Mathematik*, 156(3):927–947, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01405-y.

Kreuzer:2021:OPE

[KV21] Christian Kreuzer and Andreas Veeser. Oscillation in a posteriori error estimation. *Numerische Mathematik*, 148(1):43–78, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01194-8; https://link.springer.com/content/pdf/10.1007/s00211-021-01194-8.pdf.

Kempf:2023:HDA

[KW23] Rüdiger Kempf and Holger Wendland. High-dimensional approximation with kernel-based multilevel methods on sparse grids.

Numerische Mathematik, 154(3–4):485–519, August 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01363-x`.

Liu:2024:SME

[LCO24] Xuanyu Liu, Huajie Chen, and Christoph Ortner. Stability of the minimum energy path. *Numerische Mathematik*, 156(1):39–70, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01391-7`.

LeHenaff:2023:GFW

[Le 23] Yoann Le Henaff. Grid-free weighted particle method applied to the Vlasov–Poisson equation. *Numerische Mathematik*, 155(3–4): 289–344, December 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01378-4`.

Leibold:2022:UEA

[Lei22] Jan Leibold. A unified error analysis for nonlinear wave-type equations with application to acoustic boundary conditions. *Numerische Mathematik*, 152(4):907–936, December 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01326-8`.

Li:2021:BNS

[Li21] Buyang Li. A bounded numerical solution with a small mesh size implies existence of a smooth solution to the Navier–Stokes equations. *Numerische Mathematik*, 147(2):283–304, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01172-0`.

Liu:2021:ADD

[Liu21] Hailiang Liu. Analysis of direct discontinuous Galerkin methods for multi-dimensional convection–diffusion equations. *Numerische Mathematik*, 147(4):839–867, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01183-x`.

Li:2021:SAD

[LL21a] Xiliang Li and Xin Li. AS++ T-splines: arbitrary degree, nestedness and approximation. *Numerische Mathematik*, 148(4): 795–816, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01214-7`.

Lin:2021:MCS

[LL21b] Jing Lin and Pierre F. J. Lermusiaux. Minimum-correction second-moment matching: theory, algorithms and applications. *Numerische Mathematik*, 147(3):611–650, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01178-8`.

Larson:2024:STCb

[LL24] Mats G. Larson and Carl Lundholm. Space-time CutFEM on overlapping meshes II: simple discontinuous mesh evolution. *Numerische Mathematik*, 156(3):1055–1083, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01413-y`.

Larson:2024:STCa

[LLL24] Mats G. Larson, Anders Logg, and Carl Lundholm. Space-time CutFEM on overlapping meshes I: simple continuous mesh motion. *Numerische Mathematik*, 156(3):1015–1054, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01417-8`.

Li:2024:TLN

[LLMP24] Yuanyuan Li, Shuai Lu, Peter Mathé, and Sergei V. Pereverzev. Two-layer networks with the ReLU^k activation function: Barron spaces and derivative approximation. *Numerische Mathematik*, 156(1):319–344, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01384-6`.

Laurent:2021:MR

[LLS21] Philippe Laurent, Guillaume Legendre, and Julien Salomon. On the method of reflections. *Numerische Mathematik*, 148(2): 449–493, June 2021. CODEN NUMMA7. ISSN 0029-599X

(print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01207-6`.

Lederer:2024:TDG

[LLS24] Philip L. Lederer, Christoph Lehrenfeld, and Paul Stocker. Trefftz discontinuous Galerkin discretization for the Stokes problem. *Numerische Mathematik*, 156(3):979–1013, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01404-z`.

Loring:2024:LWL

[LLW24] Terry A. Loring, Jianfeng Lu, and Alexander B. Watson. Locality of the windowed local density of states. *Numerische Mathematik*, 156(2):741–775, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01400-3`.

Lemoine:2021:RIE

[LM21] Jérôme Lemoine and Arnaud Münch. Resolution of the implicit Euler scheme for the Navier–Stokes equation through a least-squares method. *Numerische Mathematik*, 147(2):349–391, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01171-1`.

Lange:2020:NDF

[LO20] Marko Lange and Shin'ichi Oishi. A note on Dekker's FastTwoSum algorithm. *Numerische Mathematik*, 145(2):383–403, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01114-2`. See correction [LO21].

Lange:2021:CND

[LO21] Marko Lange and Shin'ichi Oishi. Correction to: A note on Dekker's FastTwoSum algorithm. *Numerische Mathematik*, 149(1):227–228, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01213-8`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01213-8.pdf`. See [LO20].

Loisel:2020:EAS

[Loi20] Sébastien Loisel. Efficient algorithms for solving the p-Laplacian in polynomial time. *Numerische Mathematik*, 146 (2):369–400, October 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01141-z`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01141-z.pdf`.

Lippert:2023:FHW

[LPU23] Laura Lippert, Daniel Potts, and Tino Ullrich. Fast hyperbolic wavelet regression meets ANOVA. *Numerische Mathematik*, 154 (1–2):155–207, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01358-8`.

Lelievre:2019:HMC

[LRS19] Tony Lelièvre, Mathias Rousset, and Gabriel Stoltz. Hybrid Monte Carlo methods for sampling probability measures on submanifolds. *Numerische Mathematik*, 143(2):379–421, October 2019. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01056-4`. See correction [LRS20].

Lelievre:2020:CHM

[LRS20] Tony Lelièvre, Mathias Rousset, and Gabriel Stoltz. Correction to: Hybrid Monte Carlo methods for sampling probability measures on submanifolds. *Numerische Mathematik*, 144(2):447–449, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01086-y`; `https://link.springer.com/content/pdf/10.1007/s00211-019-01086-y.pdf`. See [LRS19].

Lovbak:2021:MMC

[LSV21] Emil Løvbak, Giovanni Samaey, and Stefan Vandewalle. A multilevel Monte Carlo method for asymptotic-preserving particle schemes in the diffusive limit. *Numerische Mathematik*, 148 (1):141–186, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01201-y`.

Lafontaine:2022:SRE

[LSW22] D. Lafontaine, E. A. Spence, and J. Wunsch. A sharp relative-error bound for the Helmholtz h-FEM at high frequency. *Numerische Mathematik*, 150(1):137–178, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01253-0`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01253-0.pdf`.

Liu:2022:FCP

[LV22] Xuefeng Liu and Tomás Vejchodský. Fully computable a posteriori error bounds for eigenfunctions. *Numerische Mathematik*, 152(1):183–221, September 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01304-0`.

Li:2021:FDL

[LW21] Buyang Li and Yifei Wu. A fully discrete low-regularity integrator for the 1D periodic cubic nonlinear Schrödinger equation. *Numerische Mathematik*, 149(1):151–183, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01226-3`.

Li:2022:AFE

[LY22] Peijun Li and Xiaokai Yuan. An adaptive finite element DtN method for the elastic wave scattering problem. *Numerische Mathematik*, 150(4):993–1033, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01273-4`.

Li:2020:MDM

[LZ20] Hao Li and Xiangxiong Zhang. On the monotonicity and discrete maximum principle of the finite difference implementation of C^0–Q^2 finite element method. *Numerische Mathematik*, 145 (2):437–472, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01110-6`.

Matsui:2022:PMN

[Mat22] Kazunori Matsui. A projection method for Navier–Stokes equations with a boundary condition including the total pressure.

Numerische Mathematik, 152(3):663–699, November 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01323-x`.

Marchand:2020:TLP

[MCT20] Pierre Marchand, Xavier Claeys, and Pierre-Henri Tournier. Two-level preconditioning for h-version boundary element approximation of hypersingular operator with GenEO. *Numerische Mathematik*, 146(3):597–628, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01149-5`.

Miller:2021:MSA

[MH21] Philip Miller and Thorsten Hohage. Maximal spaces for approximation rates in ℓ^1-regularization. *Numerische Mathematik*, 149(2):341–374, October 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01225-4; https://link.springer.com/content/pdf/10.1007/s00211-021-01225-4.pdf`.

Molinari:2024:IRL

[MMRV24] Cesare Molinari, Mathurin Massias, Lorenzo Rosasco, and Silvia Villa. Iterative regularization for low complexity regularizers. *Numerische Mathematik*, 156(2):641–689, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01390-8`.

Millar:2022:PNN

[MMV22] F. Millar, I. Muga, and K. G. Van der Zee. Projection in negative norms and the regularization of rough linear functionals. *Numerische Mathematik*, 150(4):1087–1121, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01278-z`.

Mula:2024:MSM

[MN24] Olga Mula and Anthony Nouy. Moment-SoS methods for optimal transport problems. *Numerische Mathematik*, 156(4):1541–1578, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01422-x`.

Marmignon:2022:ERA

[MNR22] Claude Marmignon, Fabio Naddei, and Florent Renac. Energy relaxation approximation for compressible multicomponent flows in thermal nonequilibrium. *Numerische Mathematik*, 151 (1):151–184, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01285-0`.

Merle:2021:ATS

[MP21] Fabian Merle and Andreas Prohl. An adaptive time-stepping method based on a posteriori weak error analysis for large SDE systems. *Numerische Mathematik*, 149(2):417–462, October 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01233-4`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01233-4.pdf`.

Merle:2023:PEA

[MP23] Fabian Merle and Andreas Prohl. A posteriori error analysis and adaptivity for high-dimensional elliptic and parabolic boundary value problems. *Numerische Mathematik*, 153(4):827–884, April 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01350-2`.

Melenk:2021:SRK

[MR21] Jens Markus Melenk and Alexander Rieder. On superconvergence of Runge–Kutta convolution quadrature for the wave equation. *Numerische Mathematik*, 147(1):157–188, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01161-9`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01161-9.pdf`.

Micu:2020:ACW

[MRT20] Sorin Micu, Ionel Roventa, and Laurentiu Emanuel Temereanca. Approximation of the controls for the wave equation with a potential. *Numerische Mathematik*, 144(4):835–887, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01106-2`.

Malyshev:2020:CDC

[MS20] Alexander Malyshev and Miloud Sadkane. Computing the distance to continuous-time instability of quadratic matrix polynomials. *Numerische Mathematik*, 145(1):149–165, May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01108-0`.

Mor:2023:STR

[MSA23] Uria Mor, Boris Shustin, and Haim Avron. Solving trust region subproblems using Riemannian optimization. *Numerische Mathematik*, 154(1–2):1–33, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01360-0`.

Mazza:2021:MTS

[MSSCT21] M. Mazza, M. Semplice, S. Serra-Capizzano, and E. Travaglia. A matrix-theoretic spectral analysis of incompressible Navier–Stokes staggered DG approximations and a related spectrally based preconditioning approach. *Numerische Mathematik*, 149(4): 933–971, December 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01247-y`.

Matsue:2020:NVB

[MT20] Kaname Matsue and Akitoshi Takayasu. Numerical validation of blow-up solutions with quasi-homogeneous compactifications. *Numerische Mathematik*, 145(3):605–654, July 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01125-z`.

Modin:2020:WMN

[MV20] Klas Modin and Olivier Verdier. What makes nonholonomic integrators work? *Numerische Mathematik*, 145(2):405–435, June 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01126-y`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01126-y.pdf`.

Nabet:2021:EEF

[Nab21] Flore Nabet. An error estimate for a finite-volume scheme for the Cahn–Hilliard equation with dynamic boundary condi-

tions. *Numerische Mathematik*, 149(1):185–226, September 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01230-7`.

Nataf:2020:CMA

[Nat20a] Frédéric Nataf. Correction to: Mathematical analysis of robustness of two-level domain decomposition methods with respect to inexact coarse solves. *Numerische Mathematik*, 146(2):435–436, October 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01146-8`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01146-8.pdf`. See [Nat20b].

Nataf:2020:MAR

[Nat20b] Frédéric Nataf. Mathematical analysis of robustness of two-level domain decomposition methods with respect to inexact coarse solves. *Numerische Mathematik*, 144(4):811–833, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01102-6`. See correction [Nat20a].

Nick:2021:CSC

[NKL21] Jörg Nick, Balázs Kovács, and Christian Lubich. Correction to: Stable and convergent fully discrete interior–exterior coupling of Maxwell's equations. *Numerische Mathematik*, 147(4):997–1000, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01196-6`; `https://www.math.utah.edu/pub/tex/bib/nummath2010.bib`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01196-6.pdf`. See [KL17].

Nick:2022:TDE

[NKL22] Jörg Nick, Balázs Kovács, and Christian Lubich. Time-dependent electromagnetic scattering from thin layers. *Numerische Mathematik*, 150(4):1123–1164, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01277-0`.

Nguyen:2021:MMD

[NN21] Dong T. P. Nguyen and Dirk Nuyens. MDFEM: Multivariate decomposition finite element method for elliptic PDEs with uniform random diffusion coefficients using higher-order QMC and FEM. *Numerische Mathematik*, 148(3):633–669, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01212-9`.

Nasdala:2021:EMA

[NP21a] Robert Nasdala and Daniel Potts. Efficient multivariate approximation on the cube. *Numerische Mathematik*, 147 (2):393–429, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01177-9`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01177-9.pdf`.

Noferini:2021:NVS

[NP21b] Vanni Noferini and Federico Poloni. Nearest Ω-stable matrix via Riemannian optimization. *Numerische Mathematik*, 148(4):817–851, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01217-4`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01217-4.pdf`.

Nurkanovic:2024:FES

[NSAD24] Armin Nurkanović, Mario Sperl, Sebastian Albrecht, and Moritz Diehl. Finite Elements with Switch Detection for direct optimal control of nonsmooth systems. *Numerische Mathematik*, 156(3): 1115–1162, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01412-z`.

Nie:2020:NAS

[NSD20] Daxin Nie, Jing Sun, and Weihua Deng. Numerical algorithm for the space-time fractional Fokker–Planck system with two internal states. *Numerische Mathematik*, 146(3):481–511, November 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01148-6`.

OReilly:2022:PNS

[ON22] Ossian O'Reilly and Jan Nordström. Provably non-stiff implementation of weak coupling conditions for hyperbolic problems. *Numerische Mathematik*, 150(2):551–589, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01263-y`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01263-y.pdf`.

Otarola:2022:AAS

[OS22] Enrique Otárola and Abner J. Salgado. On the analysis and approximation of some models of fluids over weighted spaces on convex polyhedra. *Numerische Mathematik*, 151(1):185–218, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01272-5`.

Oswald:2017:RRS

[OZ17] Peter Oswald and Weiqi Zhou. Random reordering in SOR-type methods. *Numerische Mathematik*, 135(4):1207–1220, April 2017. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/accesspage/article/10.1007/s00211-016-0829-7`; `http://link.springer.com/article/10.1007/s00211-016-0829-7`. See correction [OZ23].

Oswald:2023:CRR

[OZ23] Peter Oswald and Weiqi Zhou. Correction: Random reordering in SOR-type methods. *Numerische Mathematik*, 154(3–4):521–525, August 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01365-9`.

Pagliantini:2021:DRB

[Pag21] Cecilia Pagliantini. Dynamical reduced basis methods for Hamiltonian systems. *Numerische Mathematik*, 148(2):409–448, June 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01211-w`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01211-w.pdf`.

Peralta:2022:MHP

[PK22] Gilbert Peralta and Karl Kunisch. Mixed and hybrid Petrov–Galerkin finite element discretization for optimal control of the wave equation. *Numerische Mathematik*, 150(2):591–627, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01258-9`.

Potzsche:2023:NDI

[Pöt23] Christian Pötzsche. Numerical dynamics of integrodifference equations. *Numerische Mathematik*, 154(1–2):249–281, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01354-y`.

Pieronek:2023:IRN

[PR23] Lukas Pieronek and Andreas Rieder. On the iterative regularization of non-linear illposed problems in L^∞. *Numerische Mathematik*, 154(1–2):209–247, June 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01359-7`.

Pozza:2021:FRK

[PS21] Stefano Pozza and Valeria Simoncini. Functions of rational Krylov space matrices and their decay properties. *Numerische Mathematik*, 148(1):99–126, May 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01198-4`.

Parzer:2022:CRA

[PS22] Fabian Parzer and Otmar Scherzer. On convergence rates of adaptive ensemble Kalman inversion for linear ill-posed problems. *Numerische Mathematik*, 152(2):371–409, October 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01314-y`.

Pestana:2024:FSI

[PS24] Jennifer Pestana and David J. Silvester. Fast solution of incompressible flow problems with two-level pressure approximation. *Numerische Mathematik*, 156(4):1579–1602, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic).

URL https://link.springer.com/article/10.1007/s00211-024-01420-z.

Qiu:2024:HDC

[QZ24] Weifeng Qiu and Lina Zhao. $H(\mathrm{div})$-conforming HDG methods for the stress-velocity formulation of the Stokes equations and the Navier–Stokes equations. *Numerische Mathematik*, 156(4): 1639–1678, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01419-6.

Rodriguez:2021:FPH

[RDYL21] Jose Israel Rodriguez, Jin-Hong Du, Yiling You, and Lek-Heng Lim. Fiber product homotopy method for multiparameter eigenvalue problems. *Numerische Mathematik*, 148(4):853–888, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01215-6.

Real:2024:HRR

[Rea24] Rommel R. Real. Hanke–Raus rule for Landweber iteration in Banach spaces. *Numerische Mathematik*, 156(1):345–373, ???? 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01389-1.

Reid:2023:SPB

[RICO23] Tim W. Reid, Ilse C. F. Ipsen, Jon Cockayne, and Chris J. Oates. Statistical properties of BayesCG under the Krylov prior. *Numerische Mathematik*, 155(3–4):239–288, December 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-023-01375-7.

Rieder:2023:DEQ

[Rie23] Alexander Rieder. Double exponential quadrature for fractional diffusion. *Numerische Mathematik*, 153(2–3):359–410, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01342-8.

Ranocha:2020:GRM

[RLK20] Hendrik Ranocha, Lajos Lóczi, and David I. Ketcheson. General relaxation methods for initial-value problems with application to

multistep schemes. *Numerische Mathematik*, 146(4):875–906, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01158-4`.

Romisch:2024:APM

[RS24] W. Römisch and T. M. Surowiec. Asymptotic properties of Monte Carlo methods in elliptic PDE-constrained optimization under uncertainty. *Numerische Mathematik*, 156(5):1887–1914, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01436-5`.

Sagiv:2022:SCP

[Sag22] Amir Sagiv. Spectral convergence of probability densities for forward problems in uncertainty quantification. *Numerische Mathematik*, 150(4):1165–1186, April 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01281-4`.

Seibel:2022:BEM

[Sei22] Daniel Seibel. Boundary element methods for the wave equation based on hierarchical matrices and adaptive cross approximation. *Numerische Mathematik*, 150(2):629–670, February 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01259-8`; `https://link.springer.com/content/pdf/10.1007/s00211-021-01259-8.pdf`.

Shi:2024:DAM

[Shi24] Yanyan Shi. Drift approximation by the modified Boris algorithm of charged-particle dynamics in toroidal geometry. *Numerische Mathematik*, 156(3):1197–1217, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01416-9`.

Simoes:2022:EDL

[SMdD22] Alexandre Anahory Simoes, Juan Carlos Marrero, and David Martín de Diego. Exact discrete Lagrangian mechanics for nonholonomic mechanics. *Numerische Mathematik*, 151(1):49–98, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01283-2`.

Sande:2020:EEE

[SMS20] Espen Sande, Carla Manni, and Hendrik Speleers. Explicit error estimates for spline approximation of arbitrary smoothness in isogeometric analysis. *Numerische Mathematik*, 144(4):889–929, April 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01097-9`.

Sande:2022:RTP

[SMS22] Espen Sande, Carla Manni, and Hendrik Speleers. Ritz-type projectors with boundary interpolation properties and explicit spline error estimates. *Numerische Mathematik*, 151(2):475–494, June 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01286-z`.

Sekine:2020:NFU

[SNO20] Kouta Sekine, Mitsuhiro T. Nakao, and Shin'ichi Oishi. A new formulation using the Schur complement for the numerical existence proof of solutions to elliptic problems: without direct estimation for an inverse of the linearized operator. *Numerische Mathematik*, 146(4):907–926, December 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01155-7`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01155-7.pdf`.

Soga:2024:MAF

[Sog24] Kohei Soga. Mathematical analysis of a finite difference method for inhomogeneous incompressible Navier–Stokes equations. *Numerische Mathematik*, 156(5):1809–1853, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01421-y`.

Schwarzacher:2022:NAF

[SS22] Sebastian Schwarzacher and Bangwei She. On numerical approximations to fluid-structure interactions involving compressible fluids. *Numerische Mathematik*, 151(1):219–278, May 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01275-2`.

Saha:2023:RCS

[SS23a] Jitraj Saha and Mehakpreet Singh. Rate of convergence and stability analysis of a modified fixed pivot technique for a fragmentation equation. *Numerische Mathematik*, 153(2–3):531–555, March 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01344-0`.

Stevenson:2023:IOP

[SS23b] Rob Stevenson and Johannes Storn. Interpolation operators for parabolic problems. *Numerische Mathematik*, 155(1–2):211–238, October 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01373-9`.

Sanchez:2021:PPE

[SSVS21] Nestor Sánchez, Tonatiuh Sánchez-Vizuet, and Manuel E. Solano. A priori and a posteriori error analysis of an unfitted HDG method for semi-linear elliptic problems. *Numerische Mathematik*, 148 (4):919–958, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01221-8`.

Schillings:2020:CLA

[SSW20] Claudia Schillings, Björn Sprungk, and Philipp Wacker. On the convergence of the Laplace approximation and noise-level-robustness of Laplace-based Monte Carlo methods for Bayesian inverse problems. *Numerische Mathematik*, 145 (4):915–971, August 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01131-1; https://link.springer.com/content/pdf/10.1007/s00211-020-01131-1.pdf`.

Sun:2022:NAR

[Sun22] Weiwei Sun. New analysis and recovery technique of mixed FEMs for compressible miscible displacement in porous media. *Numerische Mathematik*, 150(1):179–215, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01249-w`.

Shen:2021:UPP

[SX21] Jie Shen and Jie Xu. Unconditionally positivity preserving and energy dissipative schemes for Poisson–Nernst–Planck equations. *Numerische Mathematik*, 148(3):671–697, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01203-w`.

Szostok:2024:GTB

[Szo24] Tomasz Szostok. A generalization of a theorem of Brass and Schmeisser. *Numerische Mathematik*, 156(5):1915–1925, October 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01434-7`.

Takayasu:2022:CRN

[TLO22a] Akitoshi Takayasu, Jean-Philippe Lessard, and Hisashi Okamoto. Correction to: Rigorous numerics for nonlinear heat equations in the complex plane of time. *Numerische Mathematik*, 151 (3):751–752, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01299-8`. See [TLO22b].

Takayasu:2022:RNN

[TLO22b] Akitoshi Takayasu, Jean-Philippe Lessard, and Hisashi Okamoto. Rigorous numerics for nonlinear heat equations in the complex plane of time. *Numerische Mathematik*, 151(3):693–750, July 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01291-2`. See correction [TLO22a].

Trefethen:2021:ENC

[TNW21] Lloyd N. Trefethen, Yuji Nakatsukasa, and J. A. C. Weideman. Exponential node clustering at singularities for rational approximation, quadrature, and PDEs. *Numerische Mathematik*, 147(1):227–254, January 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-020-01168-2`; `https://link.springer.com/content/pdf/10.1007/s00211-020-01168-2.pdf`.

Tropp:2022:RBK

[Tro22] Joel A. Tropp. Randomized block Krylov methods for approximating extreme eigenvalues. *Numerische Mathematik*, 150(1): 217–255, January 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01250-3`.

Uhlig:2024:ZNN

[Uhl24] Frank Uhlig. Zhang neural networks: an introduction to predictive computations for discretized time-varying matrix problems. *Numerische Mathematik*, 156(2):691–739, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01393-5`.

VanBuggenhout:2023:GSO

[Van23] Niel Van Buggenhout. On generating Sobolev orthogonal polynomials. *Numerische Mathematik*, 155(3–4):415–443, December 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01379-3`.

vandenBerg:2024:VIS

[vdBBS24] Jan Bouwe van den Berg, Maxime Breden, and Ray Sheombarsing. Validated integration of semilinear parabolic PDEs. *Numerische Mathematik*, 156(4):1219–1287, August 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-024-01415-w`.

Veldman:2022:FRT

[VZ22] D. W. M. Veldman and E. Zuazua. A framework for randomized time-splitting in linear-quadratic optimal control. *Numerische Mathematik*, 151(2):495–549, June 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01290-3`.

Wang:2021:HMF

[Wan21] Haiyong Wang. How much faster does the best polynomial approximation converge than Legendre projection? *Numerische Mathematik*, 147(2):481–503, February 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01173-z`.

Winkler:2020:EEV

[Win20] Max Winkler. Error estimates for variational normal derivatives and Dirichlet control problems with energy regularization. *Numerische Mathematik*, 144(2):413–445, February 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-019-01091-1`.

Wu:2021:CTR

[WM21] Bowei Wu and Per-Gunnar Martinsson. Corrected trapezoidal rules for boundary integral equations in three dimensions. *Numerische Mathematik*, 149(4):1025–1071, December 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01244-1`.

Wu:2021:PPC

[WS21] Kailiang Wu and Chi-Wang Shu. Provably physical-constraint-preserving discontinuous Galerkin methods for multidimensional relativistic MHD equations. *Numerische Mathematik*, 148(3): 699–741, July 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01209-4`.

Wang:2022:MSC

[WZL22] Li Wang, Lei-Hong Zhang, and Ren-Cang Li. Maximizing sum of coupled traces with applications. *Numerische Mathematik*, 152(3):587–629, November 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01322-y`.

Xiang:2020:ODR

[XL20] Shuhuang Xiang and Guidong Liu. Optimal decay rates on the asymptotics of orthogonal polynomial expansions for functions of limited regularities. *Numerische Mathematik*, 145(1):117–148, May 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-020-01113-3`.

Xu:2023:BLD

[XN23] Yiming Xu and Akil Narayan. Budget-limited distribution learning in multifidelity problems. *Numerische Mathematik*, 153(1): 171–212, January 2023. CODEN NUMMA7. ISSN 0029-599X

(print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-022-01337-5.

Xavier:2021:EEF

[XRV21] Juliana C. Xavier, Mauro A. Rincon, and Daniel G. Alfaro Vigo. Error estimates for a fully discrete spectral scheme for nonlinear Boussinesq systems. *Numerische Mathematik*, 149(3):679–716, November 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01239-y.

Xu:2021:AFS

[XY21] Liwei Xu and Tao Yin. Analysis of the Fourier series Dirichlet-to-Neumann boundary condition of the Helmholtz equation and its application to finite element methods. *Numerische Mathematik*, 147(4):967–996, April 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL http://link.springer.com/article/10.1007/s00211-021-01195-7.

Yi:2024:PPE

[YL24] Son-Young Yi and Sanghyun Lee. Physics-preserving enriched Galerkin method for a fully-coupled thermo-poroelasticity model. *Numerische Mathematik*, 156(3):949–978, June 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01406-x.

Yserentant:2020:ESL

[Yse20] Harry Yserentant. On the expansion of solutions of Laplace-like equations into traces of separable higher dimensional functions. *Numerische Mathematik*, 146(1):219–238, September 2020. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-020-01138-8; https://link.springer.com/content/pdf/10.1007/s00211-020-01138-8.pdf.

Yserentant:2024:IMS

[Yse24] Harry Yserentant. An iterative method for the solution of Laplace-like equations in high and very high space dimensions. *Numerische Mathematik*, 156(2):777–811, April 2024. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL https://link.springer.com/article/10.1007/s00211-024-01401-2.

Zeng:2023:PLM

[Zen23] Chao Zeng. Proximal linearization methods for Schatten p-quasi-norm minimization. *Numerische Mathematik*, 153(1):213–248, January 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01335-7`.

Zhang:2021:NMS

[Zha21] Ruming Zhang. Numerical methods for scattering problems in periodic waveguides. *Numerische Mathematik*, 148 (4):959–996, August 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01229-0; https://link.springer.com/content/pdf/10.1007/s00211-021-01229-0.pdf`.

Zhou:2023:NMC

[ZJK23] Guanyu Zhou, Feifei Jing, and Takahito Kashiwabara. The numerical methods for the coupled fluid flow under the leak interface condition of the friction-type. *Numerische Mathematik*, 153 (4):729–773, April 2023. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-023-01348-w`.

Zeng:2021:AMC

[ZJN21] Chao Zeng, Tai-Xiang Jiang, and Michael K. Ng. An approximation method of CP rank for third-order tensor completion. *Numerische Mathematik*, 147(3):727–757, March 2021. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `http://link.springer.com/article/10.1007/s00211-021-01185-9`.

Zhang:2022:TFG

[ZZ22] Qian Zhang and Zhimin Zhang. Three families of grad div-conforming finite elements. *Numerische Mathematik*, 152(3):701–724, November 2022. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL `https://link.springer.com/article/10.1007/s00211-022-01321-z`.