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Title word cross-reference

<p>2 [VSS+13, Wal18]. 256⁴ [IKY+10]. 3 [AKW19, ARR99, BGM15, CSGM17, FIMU19, GGS01, HSLK11, KC18, PR95, SSCF19, THL88]. ² [AMC+18]. ³ [KPST18]. α [TKSK88]. $d = 2$ [BRT+92]. H [YIYD19]. $\mathbf{CH} + \mathbf{H}_2 \rightleftharpoons \mathbf{CH}_3^* \rightleftharpoons \mathbf{CH}_2 + \mathbf{H}$ [ASW91]. \mathbf{CuO}_2 [SSSW91]. ILU [SZ11]. k [TNLP13]. K_2 [CBW95]. LU [BLRR01, DD89, DD91,</p>	<p>IGDQO19, MC21, YZC+15]. $M \times N$ [BYCB05, DP05, JLO05]. N [HJ96, SWW94, DAB+12, FT19, RTRG+07, INS+20]. \star [NC18].</p> <p>-Body [HJ96, SWW94, INS+20, RTRG+07, DAB+12, FT19]. -D [SSCF19, ARR99, GGS01, PR95, THL88]. -matrix [YIYD19].</p> <p>0th [RAGW93].</p>
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100 [IHMM87]. **100k** [INY⁺14]. **10P** [DD89]. **164** [LT88]. **19** [JMM⁺21, OWC⁺21]. **1917-1991** [Mar91]. **1A** [HXW⁺13]. **1s** [McN89].

2 [CL95, CC95, CLM⁺16, DD89, DD91, GCL93, HGMW12, LT90, LYL⁺16, Mor89a]. **200/VF** [DD89]. **2000** [CLBS17]. **2003** [OL05]. **2004** [DT06]. **2019** [BQOS21]. **2019-PACO** [BQOS21]. **205** [ABAS87, McN89].

3 [BG00, CM97, JLO05]. **3-D** [BG00, CM97]. **3.0** [BRM03]. **3090** [DD89]. **3090-200** [DD89]. **3090-200/VF** [DD89]. **31G*** [PUR94]. **3800** [WOG95].

416 [THL88]. **450** [MAB⁺13].

5 [HRM89]. **5/SE** [KJH96].

6 [Pla09, PUR94]. **6-31G*** [PUR94]. **600J** [DEKV92]. **623** [LYL⁺16]. **64-core** [VEMR17].

80 [DD91]. **860** [HGD91, KR95]. **87545** [Bus87].

90 [DL97].

A&M [Nas92]. **abstraction** [MFOAGE18]. **accelerate** [GLZS14]. **Accelerated** [ELEB21, AWWG19, BLU⁺22, CSGM17, GDKWS15, IJB22, KNPS21, NOM⁺19, RDG12, RWM17, SFLC18, SE12, TRS13]. **Accelerating** [CLG13, JDD18, KPST18, LDLD19, MPD⁺12, VOL⁺14, WZH⁺20, CAE⁺13, JCK21, MP18, YFS⁺14]. **Acceleration** [AGC⁺19, ATL⁺15, CKE08, ŚCKW19, CLBS17, KDO16, LQJG16, MGS⁺15, SDF⁺17, SSCF19, VMPW20]. **accelerator** [RMV⁺19]. **accelerators** [HDL⁺15, MCU⁺13, MFOAGE18, NOM⁺19]. **accelerators/InfiniBand** [NOM⁺19].

Access [Bri10, KR11, NTKP06, WHL03, DKMT18, DCN17, HGMW12, Wal18]. **Accessing** [HLP⁺03]. **Accuracy** [HCCG20, SK20]. **Accurate** [LR09, LRO10, TMWS91, VFD04, WSD⁺14]. **Acknowledgments** [Ano02c, Ano02d]. **Acoustic** [GKN⁺96, MBF⁺11, ALE⁺20]. **Across** [KS05, SB19]. **ACS** [Mar88a]. **Action** [DBA⁺09, Num04]. **Active** [Her91]. **Activity** [CY08]. **ACTS** [DT06]. **Ad** [BG02, CHZ02, IBC⁺10, TNBG07]. **Ad-Hoc** [IBC⁺10]. **Ada** [Kok88]. **adaptation** [DCLS19, RHK21]. **Adapted** [PMS⁺04]. **Adapteva** [VEMR17]. **Adapting** [DE03]. **Adaptive** [AH93, CKPD99, CW05, EDSV06, FSC⁺11, HT04b, HRW19, JSSZ09, Kal09b, RV15, SR05, TRS13, VR00, Wri12, dRADS⁺18a, IJB22, KBY⁺19, LST15, LPB⁺16, LSLR⁺20, ZMG⁺21, FSC⁺11]. **Adaptive-CoMPI** [FSC⁺11]. **adaptively** [Sta19]. **Additive** [PR95, TBB⁺22]. **Address** [MHW15, SBG10]. **Addressing** [SWA⁺14]. **adjoint** [YWL⁺14]. **adjoint-based** [YWL⁺14]. **Administration** [SDA⁺01]. **Adsorption** [CH94]. **Advanced** [Ano87a, MA15, TC10, WH20, Don89]. **Advances** [KKDV03, KKD05, LK10, NPT⁺06, BC14]. **Advisor** [GVF⁺18]. **Aerodynamics** [YM91]. **Aerospace** [MAB07]. **affine** [RCAE⁺20]. **against** [SFLC18]. **Agenda** [Ano87b]. **agent** [WDH⁺15]. **Agents** [QWIC02]. **Aggregation** [ZRC⁺06, AMC⁺18, WVL⁺16]. **agricultural** [SH93]. **AI** [CDG⁺21]. **AI-driven** [CDG⁺21]. **Aided** [MM90]. **aircraft** [GDS17]. **AIX** [Ano01a]. **Alamos** [BBB⁺91b, Bus87]. **Albany** [DWT⁺19]. **Albedo** [Tho90]. **Algebra** [CDQS04, CDP⁺94, Don02a, Don02b, Ede93, GJMS88, JO92, KJH96, MA15, PB19, Poz97, AAB⁺21a, ATD17, FTB13, AAT⁺20, LRLG19, MBvdG13]. **algebraic** [BGO20]. **Algorithm**

[AH93, AEPR92, ARR99, BCCL09, Bai88, BMT89, CBW95, CBV97, DIB00, GJMS88, GCD97, HA91, HT04b, IJ93, JL89, KVY⁺⁹⁰, KC92a, KC92b, LP10, LRBS89, LJC⁺¹⁰, Mar87a, Mor89a, SCB⁺⁹⁵, Sta19, SD87, TRS⁺¹⁰, UF89, WCE95, ABH⁺¹⁸, AAA⁺²², AHB⁺¹⁶, BGM15, DSH⁺¹⁶, GHL15, HLZ⁺²⁰, INS⁺²⁰, KWEF18, LSLR⁺²⁰, MJGL13, NMAE13, NS21, PH19, RPdB⁺¹⁹, UZM⁺¹⁴, YZC⁺¹⁵, YB12, ZWS21].

Algorithm-based [Sta19, YZC⁺¹⁵]. **algorithmic** [HSM19]. **Algorithms** [AM00, BG02, Cha88, CDT05, CAK⁺⁰⁷, Fro91, GD09, GKMT00, HdV18, KLJ87, MS09, MPS15, NK89, NZ93, PMS⁺⁰⁴, RRV06, SC04a, Sha88, Wad99, CGW19, Cec20, CdVL⁺¹⁸, CSC19, ESW⁺¹², FTB13, LRLG19, NC18, QSX⁺²⁰, dAVCM⁺¹⁹, McR87]. **aligner** [RWM17]. **aligner** [IMB⁺¹⁹]. **Alinea** [MA15]. **All-Gather** [TRS⁺¹⁰]. **all-reduce** [CGW19]. **All-to-All** [BJ92]. **Alliant** [DD91]. **Allocation** [AAF⁺⁰¹, FBBC03, WPBB01, YB07, Jea13, MRD⁺¹⁵, SPNB14]. **Alpha** [KHP⁺⁰⁴]. **Altera** [RGB⁺¹⁸]. **Alternative** [SWHP05]. **Amazon** [Pap11]. **AMBLE** [HBSP08]. **AMD** [KNPS21]. **Amdahl** [ABD⁺¹⁸, HE01]. **amines** [PUR94]. **ammonium** [PUR94]. **Amplitude** [BGK⁺⁹⁰]. **AMR** [RV15, SZC12]. **AMReX** [ZMG⁺²¹]. **analogs** [PUR94]. **Analysis** [ACD07, BBC⁺⁰⁰, Del93, DH96, DF08, EGMP93, Eyr06, GHM⁺¹⁰, GNB11, HVWS09, HVSW09, HLW00, IMW⁺¹³, IHMM87, Ish91, LM03, LWL05, MB87, Mic09, RS03, SSQ08, SCB⁺⁹⁵, SE92, SC09, SGFC09, SBG10, SBBS06, THDC09, WBFB04, YRA⁺⁰², ZRÇ⁺⁰⁶, dRADS^{+18b}, BBDH14, BCLP17, CAA⁺²⁰, CHWS20, DWT⁺¹⁹, EAG⁺¹⁹, FIMU19, FAB⁺²¹, GPO⁺²⁰, IMH⁺¹¹, IMH⁺¹², JKD⁺¹¹, JDAD19, LH18, LSES20, LRLG19, MPD⁺¹², MP18, MCR⁺¹⁷, MJD16, MRD⁺¹⁵, PF16, STP⁺¹³, SDJ17, TKA⁺¹⁷, TDM⁺¹⁷, LS90].

Analytic [CHWS20, MA89, THDS19]. **Analytical** [FFR⁺¹⁰]. **analytics** [AGHR19]. **Analyze** [KKCB98]. **Analyzers** [Ano01a]. **Analyzing** [BRU05, NC18, UZM⁺¹⁴, WPBB01]. **Anatomy** [FKT01, KWEF18, YFH⁺⁹⁶]. **Andabyss** [Spr06]. **Angara** [SDI⁺¹⁹]. **Animal** [UB95]. **animated** [LSS93]. **Animation** [SS89]. **anisotropic** [DCLS19]. **Annex** [Ano02f, Ano02h, Ano02g, Ano02i, Ano02j, Ano02e]. **Announcements** [Ano92a, Ano92b, Ano92c, Ano92d]. **Aperture** [MPG93, ZCZ⁺¹³, SVBP13]. **API** [BH00]. **Appendix** [Ano01a, Ano02f]. **Appendixes** [Ano01a]. **AppLeS** [SBWS99]. **applicability** [WKLW19]. **Application** [AS00, Bar09, BKRSR09, BCC⁺⁰¹, BWB⁺¹⁰, BPK⁺⁰⁷, BB02, CWG09, DW97, DFMD94, FTB13, FSC⁺¹¹, GHM⁺¹⁰, GHZ10, Kal09a, KKCB98, KS09a, MSHPV18, Mic09, MS95, NKR90, OCC⁺⁰⁸, PPK09, PHC⁺¹⁰, SC09, TM99, TKA⁺¹⁷, AKW19, CMS⁺¹¹, DEL⁺¹², ESD⁺²², GVF⁺¹⁸, MCR⁺¹⁷, Ozs16, SHK⁺¹⁸, WD21]. **Application-based** [MSHPV18]. **application-level** [DEL⁺¹²]. **Application-tailored** [FTB13]. **Applications** [AGR⁺⁰³, Ano91b, Ano92g, Ano92e, Ano92f, Ano93a, Ano94a, Ano95b, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a, BGG05, BP01, BDP01, BV11, BM12, BM13, BBH⁺⁰⁶, BRU05, BJ92, BJK07, Bus87, CBL10, Cot04, Cza03, Dar99, Dee10, DH96, DE03, FGC⁺⁰⁵, Fra05, GKP97, GMLP08, GG14, HT04a, HLW00, HRM89, JMC05, KBA00, Key09, KUE⁺⁰⁰, LDGR03, Lee03, LM03, kLCCW07, MKG90, MYCR06, Mar87a, MAB07, ME14, MYC92, Mor89b, NFK98, NPT⁺⁰⁶, RBMF87, SC04b, SSNM92, SVN09, SBG10, SKC10, TXD⁺⁰⁷, TLG98, TAR⁺⁰⁸, Wal03, WWA⁺¹¹, WBFB04, ZOF90, dSSB⁺⁰⁸, AAB^{+21b}, ASHH16, Ano94c, dRADS^{+18b}, ABD⁺¹⁸, AGHR19,

BH17, BRGR11, BPR18, BSW⁺¹⁴, BEK⁺¹⁸, BGB⁺¹⁸, BG11, CDRV15, CRS⁺¹⁹, CBD⁺¹⁷, DAB⁺¹², DMQS12, ECG⁺¹³, EJD⁺¹⁹, GCSK13, HGWN14, IMB⁺¹⁹, JRT16, KPR17, LRG⁺¹⁶, Lap22, LSES20]. **applications** [LWT⁺¹¹, MGB12, MFB⁺¹⁹, MCR⁺¹⁷, MDH⁺¹⁸, MCU⁺¹³, MBF⁺²¹, PH91, PNFC16, RV15, SDJ17, SKZ⁺¹⁸, SIC⁺¹⁹, SLG95, SMZ⁺¹⁸, TNLP13, THC⁺¹¹, TNCC21, UZM⁺¹⁴, VMPW20, WDW⁺¹², WD19, ZMG⁺²¹, Ano98b, Ano99, Ano91a, Ano98a, Ano00, Ano01b]. **Applications-** [Ano91b, Ano92e, Ano92f, Ano93a]. **Applications-Information** [Ano92g]. **Applied** [vLRA⁺⁰³, BE17, IKMS⁺¹⁹]. **Applying** [Dem90, LDGR03, LSES20, MBHF15]. **Approach** [BYCB05, DZ07, FBW⁺⁸⁷, KS09b, LDB⁺⁰⁶, NTKP06, Sha88, uITH07, Spr06, DCM⁺¹⁷, FTB13, GS18, HLC⁺¹⁹, HGWN14, IGDQO19, KBY⁺¹⁹, MGB12, MP18, MJD16, PNFC16, ZB20]. **Approaches** [SWHP05, MJGL13]. **Approximate** [Cho01, HFV⁺¹², MGFP20]. **Approximation** [DGJ09, LSLR⁺²⁰]. **Aqueous** [PRT90]. **Architectural** [Gro03, TXD⁺⁰⁷]. **Architecture** [BAA⁺⁰⁶, Hua03, HWP03, Ish91, KBA00, KFM⁺¹⁰, SC04b, HCCG20, MMDA19, RHK21]. **Architectures** [BFLL99, GD09, HD05, HdV18, HLW00, HSLK11, MS02, RW03, RS03, SSQ08, AKC⁺¹⁹, BSK14, AAT⁺²⁰, GGMJF⁺²⁰, HFV⁺¹², IMH⁺¹¹, IMH⁺¹², INS⁺²⁰, JO92, KILL13, LNSMMA15, STP⁺¹³, Udd17, VOL⁺¹⁴, YFS⁺¹⁴]. **Area** [DFP⁺⁹⁶, MYCR06, MAJJS03, NBB⁺⁹⁶, Ade21, Rad18]. **Argonne** [Don89]. **ARION** [HLP⁺⁰³]. **Arising** [Ma00]. **Arithmetic** [BSBF89, Gro03, AAB^{+21a}, LH19]. **ARMCI** [NTKP06]. **Army** [Aus92]. **Array** [BBDR95, CYT⁺⁰², JO92]. **Arrays** [HC08, NPT⁺⁰⁶, CBD⁺¹⁷, DFT⁺¹⁵, Wal18]. **Arrival** [Wit92]. **art** [KNPS21]. **Artificial** [Ano87d, YIME19]. **ASCI** [PK04]. **Aspects** [RW03, ZOF90]. **Aspen** [SVBP13]. **Assessing** [ACM88, MWC⁺⁰⁵, TDG⁺¹⁹]. **Assessment** [ZOF90]. **Assist** [BB02]. **association** [GDKWS15]. **astronomy** [CLG13, VFJ⁺¹⁵]. **astrophysical** [FT19]. **Asynchronous** [ALE⁺²⁰, TNBG07, BBDH14, MC21, NCA21, PH91, RWM17, TNCC21]. **Asynchrony** [WWA⁺¹¹]. **Atmosphere** [DEE⁺¹², HAF⁺⁹⁶, MS05, MW12, TD08, AGC⁺¹⁹, EAG⁺¹⁹]. **Atmosphere-Ocean** [HAF⁺⁹⁶]. **Atmospheric** [ARR99, DFS⁺⁰⁵, GGS01, WD05, AWWG19, MKM⁺¹⁹, NBE⁺²²]. **atom** [TSH⁺¹⁹]. **Atomic** [HB90, IHMM87, LRT07, SYF96, HYY⁺²²]. **Atomistic** [NKiN⁺⁰⁸, GSK⁺¹⁵]. **Attributes** [Del93]. **Audio** [TC10]. **August** [DT13]. **Auto** [THC⁺¹¹, CH13, KFJ20, TRS13]. **Auto-tuning** [THC⁺¹¹, CH13, KFJ20, TRS13]. **Automata** [AKP08, MHS11, RES87, GDS17]. **Automatic** [BHK⁺⁰⁶, CBL10, CDCV06, Cza03, KMPJ08, MJ04, RCAE⁺²⁰, Yel04, CH13]. **Automaton** [BCZM07]. **Automobile** [HTSK90]. **Autonomous** [SKB01]. **AutoParallel** [RCAE⁺²⁰]. **Autotuning** [OV13, BHK⁺¹³, CBM13]. **Availability** [Pra01]. **Aware** [KCC⁺⁰⁶, TCW06, YBA⁺⁰³, BGO20, CZR⁺¹¹, GJMV18, HTD⁺¹⁴, HLW⁺¹⁶, KPR17, MRD⁺¹⁵, BQOS21, SS10]. **Awareness** [HBSP08]. **Axisymmetric** [SG91]. **B** [Ano02h, Ano01a, Ano02g]. **B.E.** [BPBL11]. **Babel** [EKD⁺¹²]. **Back** [BPBL11, BIC⁺¹⁰, BBD⁺¹⁷]. **Balance** [BG09]. **Balanced** [BFNV07]. **Balancing** [GS05, GLGLB⁺¹¹, SK20, ZBMK11]. **Band**

[Tho90]. **Banded** [Ano02k]. **bandwidth** [CIWI17]. **Barnes** [INS⁺20]. **Based** [AM00, CY08, CLP⁺99, DCL⁺08, FSC⁺11, GGS01, GRC08, Gro03, Gus04, Hua03, Key09, MWM⁺08, Nak99, Num04, PGTS10, PPK09, PBAL09, QH08, SG07, TCW06, TC10, VDB04, WPBB01, dS21, ATL⁺15, BGM15, BE17, BEW16, BAP⁺12, CDL20, CBM13, CHT⁺19, CZR⁺11, CCBL18, DSH⁺16, DAB⁺12, EDB19, ELEB21, FTB13, GSA⁺19, GDS17, HTD⁺14, HDL⁺15, HLP⁺03, JKD⁺11, JDD18, JKBW18, JCK21, LM03, MGB12, MSHPV18, MJGL13, ML20, NC18, PSV⁺16, STP⁺13, Sta19, SDI⁺19, SPNB14, TR17, TPG⁺18, WKLW19, WKLW21, WZHG17, YZC⁺15, YWL⁺14, ZZG⁺14]. **Basic** [Gir02, JO92, KJH96, Don02a, Don02b]. **basis** [EKF⁺19, LDLD19]. **Batched** [HDL⁺15]. **Bay** [WLVL⁺96]. **Bayesian** [KPST18]. **Beambeam3D** [SSQ08]. **Beamforming** [CYT⁺02]. **Bearing** [FFNP97]. **Behavior** [AK93, DCN17]. **behaviour** [CHT⁺19]. **Bell** [dS21]. **BenchFriend** [CS14]. **Benchmark** [DL09, HC10, DHL16, NMI⁺19, PSV⁺16, PF16]. **Benchmarking** [BRT⁺92, HBC⁺08]. **Benchmarks** [BCK⁺89, Gus04, McN89, MSK92, SGFC09, WGI90, WOG95, WG07, BWB⁺10, CS14, BBB⁺91a]. **benefit** [WLFH16]. **Benefits** [ACM88]. **Beowulf** [SS99]. **Bergen** [Gaf88]. **Best** [BPBL11, Lee03]. **better** [DCD⁺13, GGO16, SZ11, TGP19]. **between** [SKS⁺13]. **Beyond** [Hab90, Mar89b, SBF90, SPHW18, INY⁺14]. **Big** [AMB⁺18, YIN⁺11, CCBL18]. **Biggest** [Ste09a]. **Bill** [Bus87]. **billions** [HLH⁺19]. **Binary** [DIB00, LK01]. **Biofluid** [RKKC90]. **Bioinformatic** [GHM⁺10]. **Bioinformatics** [TXD⁺07, Cec20, MCR⁺17]. **Biological** [FFR⁺10, WW92]. **Biology** [SSNM92, VRR18]. **Biomedical** [KHK⁺09]. **Biomembranes** [SABK94]. **black** [SK20]. **black-box** [SK20]. **blade** [KBY⁺19]. **blade-resolved** [KBY⁺19]. **Blas** [Ano02k, Ano02b, Ano02a, BG11, DD89, DD91, Ano02h]. **Blast** [Don02a, Don02b]. **Block** [Arn07, BS88, ZMG⁺21, DEKV92, MC21, RV15]. **Block-Sorting** [Arn07]. **Block-structured** [ZMG⁺21, RV15]. **Blocked** [BELF07, LSLR⁺20]. **Blocks** [HC08]. **Bloom** [LGDH16]. **Blue** [GNB11, KMH⁺14, MAB⁺13, SSU⁺12, YIN⁺11]. **BlueGene** [dSSB⁺08]. **BlueGene/L** [dSSB⁺08]. **Board** [SPTT08]. **BOAST** [VPG⁺18]. **Body** [HJ96, Nak99, RTRG⁺07, SWW94, TMWS91, DAB⁺12, FT19, INS⁺20]. **Boltzmann** [SBBS06, CGST19, HBKR21, Mon12, OKTR11, RWM17, WKLW21, YZZW21]. **bond** [THDS19]. **bond-order** [THDS19]. **Bone** [HOPB92]. **Book** [Bus87, Con88, Don87, Mar87a, Mar87b, Mar88a, McR87, Nag89]. **Boundary** [uITH07, SG91, Ade21]. **Boundary-Value** [uITH07]. **box** [SK20]. **BPEL** [MWM⁺08]. **brick** [LPB⁺16]. **Bridging** [SS99]. **Brink** [Spr06]. **broad** [Rad18]. **broad-area** [Rad18]. **Broadcast** [BJ92, YSP⁺05]. **Brownian** [NSI20]. **brownout** [PMP⁺20]. **BSC** [LAV09]. **BSP** [dAVCM⁺19]. **BSP/CGM** [dAVCM⁺19]. **budget** [CCR20]. **buffer** [LBB17]. **Build** [CD06]. **Builder** [DL97]. **Building** [CDH⁺97b, FD04, LJO05, SKZ⁺18, SW04, Wit92, vLRA⁺03]. **Bulk** [DGP⁺97, MAJJS03, Jon12, WDW⁺12]. **bundle** [WVL⁺16]. **Butterfly** [Kum89]. **Buzbee** [Bus87]. **Byte** [WG07]. **C** [Ano02i, Ano02j, dRADS⁺18b, BLC17, LJC⁺10, LNK22, Poz97, TDM⁺17]. **C90** [ABF⁺99]. **Cache** [BMW87, BH06, GHM⁺10, SC04a, Wad99, ABD⁺18, ABG⁺19, CHT⁺19]. **Cache-Coherent** [Wad99].

Cache-Efficient [SC04a]. **cache-oblivious** [CHT⁺19]. **cache-partitioned** [ABD⁺18, ABG⁺19]. **caches** [CSC19]. **Caching** [kLCCW07]. **Cactus** [AAF⁺01]. **calcium** [CHW⁺15]. **Calculation** [ACG⁺90, BGK⁺90, TMWS91, HIT⁺14]. **Calculational** [ZOF90]. **Calculations** [CDD⁺90, Gen88, Liu90, TMW⁺99, YCHH90, ZK93, CLM⁺16, HTD⁺14, QSX⁺20, SDI⁺19, TSK88]. **Calibrating** [ABH⁺18]. **Call** [DBA⁺09]. **Caltech** [Din91]. **Caltech/JPL** [Din91]. **CAM** [TD08, DEE⁺12, LMT⁺12]. **Campus** [GNTLH97]. **Campus-Wide** [GNTLH97]. **Can** [Pan97, VFJ⁺15]. **Canada** [Nun87]. **Cancers** [GKB93]. **Candidate** [MCS⁺06]. **Cane** [YWL⁺14]. **capabilities** [IMS16]. **Capability** [GS09, BBH⁺13, CYZ⁺20, DVW⁺12]. **capable** [RWM17]. **Capacity** [BL99]. **Carcinogens** [HB90]. **cardiac** [BSW⁺14]. **Cards** [Gro03]. **Carlo** [BEH⁺90, CH94, DFT⁺15, FSS13, LM03, LPB⁺16, MWAR⁺87, MB87, MFP⁺17, SABD13, SSSW91, SSR⁺14, VSS⁺13, ZK93]. **Carolina** [LC90]. **Case** [BF01, BDFVP15, CBW95, CDH⁺97b, GLGLB⁺11, GL97, HL10, HE01, HLP⁺03, MT89, PPK⁺04, SG09a, WGI90, WLB92, WW92, BSW⁺14, CGGC⁺16, CMS⁺11, DTL19, GGMJF⁺20, IMB⁺19, MBvdG13, MCR⁺17, OF17, TKA⁺17, THC⁺11, WZH⁺20, YWL⁺14]. **cases** [CDL⁺19]. **cat** [YIME19]. **cat-scale** [YIME19]. **CBVE** [WLVL⁺96]. **CCDSC** [DT13]. **CCGSC** [DT11]. **CCSM4** [CVJ12]. **CEBAF** [DZDR95]. **Cell** [EGG05, WET⁺19, BPBL11]. **Cell/B.E.** [BPBL11]. **cells** [RPdB⁺19]. **Cellular** [AKP08, BCZM07, MHS11, GDS17]. **Center** [AAB⁺21c, All88, lSD89, Mer87, RS88, MP95, Aus92, ABB⁺94, BBW90, DGH⁺93, KT94, LC90, Mai87, Mir90, Nas92, Sci92, TR92]. **Centers** [All88, Aus92, BBB⁺91b, Bra91, BBW90, GS09, KT94, Nas92, TR92, Web91]. **Centre** [Gaf88, MHW15]. **Centric** [SR05]. **Century** [BHdR09]. **cerebellum** [YIME19]. **CERFACS** [lSD89]. **CESM1** [CVJ12, CMHB15]. **CFD** [GKMT00, KDL01, LDGR03, MAF⁺22, RHK21, WZH⁺20, WKLW19]. **CFD-DEM** [MAF⁺22]. **CFDShip** [BCYS11]. **CFDShip-Iowa** [BCYS11]. **CGM** [CDT05, dAVCM⁺19]. **CGMGRAPH** [CDT05]. **CGMGRAPH/CGMLIB** [CDT05]. **CGMLIB** [CDT05]. **CGNR** [Man97]. **chain** [DSH⁺16]. **Challenge** [BEH⁺90, CBB⁺96, DSD⁺91, GD09, IKY⁺10, Kit90, RAGW93, SGFC09, NMI⁺19, RAB⁺15]. **Challenges** [Cap09, GL09, Her09, KMW⁺13, VFJ⁺15, GR17, WD19]. **change** [ZCZ⁺13]. **Changing** [MMS88]. **Chapel** [CCZ07, CH13, DZ07]. **Characteristics** [McR87, LWT⁺11]. **Characterization** [Kal09a, LPJ98, TMMR10, WDW⁺12, Har11]. **Characterization/Segmentation** [Kal09a]. **Chaste** [BSW⁺14]. **checker** [TDG⁺19]. **Checkpoint** [CY08, SSB⁺05, BRR17, IFA15]. **Checkpoint/Restart** [SSB⁺05]. **checkpoint/verification** [BRR17]. **Checkpointing** [GNB11, SSB⁺05, HLC⁺19, KHS⁺19]. **Chemical** [ARR99, Bro88, DFC90, Koi90, Mar88a, MMS88, TWK87, YZZW21]. **chemical-potential** [YZZW21]. **Chemically** [LP10, MYC92]. **ChemIO** [NFK98]. **Chemistry** [ATD⁺88, Bro88, EDS95, Mar88a, NFK98, TMW⁺99]. **Chesapeake** [WLVL⁺96]. **chimera** [HLZ⁺20]. **China** [CYZ⁺20, SKC10]. **chip** [KDH18, VEMR17]. **chips** [LTPK17]. **Cholesky** [CDL20, Jea13]. **Chroma** [JC12]. **Chromodynamics** [Liu90]. **CICE** [CMHB15]. **Circular** [AEPR92]. **Circulation** [KM95, PLS05]. **CLAS** [DZDR95]. **Class** [McN89]. **Classification** [Tho90, WEPB12]. **Client** [kLCCW07].

Client-Side [kLCCW07]. **Climate** [CJK⁺05, DJC05, GS05, JLO05, WOS08, WHL03, BBA⁺21, NBE⁺22, WDH⁺15, YWL⁺14]. **Climatic** [WBMY90]. **Cloud** [LJC⁺10, BTRZ⁺19, LNK22, MCR⁺17, NBE⁺22, TR17, TPG⁺18]. **cloud-based** [TPG⁺18]. **Clouds** [Dee10, DT11, DT17, Tho90, DT19, MGB12, MRD⁺15]. **Club** [BCK⁺89]. **Cluster** [BFNV07, CK01, DMT01, Fra05, GSHL03, JSSZ09, KT99, LWL05, WG07, GDKWS15, MHS11, NOM⁺19, WZHG17, JDD18]. **Clustering** [NRR97, DSH⁺16, ZWS21]. **Clusters** [AWS01, BG09, CDT05, CAK⁺07, CWG09, CDCV06, DT99, DT11, DT17, Gir02, KS05, LDB⁺06, MWC⁺05, PPK⁺04, PC08a, SG09a, Ste01, YB07, CvG11, DTDP14, DT19, EEL15, HLS⁺17, JRT16, JC12, MBC⁺18, MGFP20, Pap11, PFGDM20]. **CM** [CC95, KJH96]. **CM-2** [CC95]. **CM-5** [KJH96]. **CM-5/SE** [KJH96]. **CM2** [CH94]. **CMP** [ABG⁺19]. **Co** [ABD⁺18, ABG⁺19, FAB⁺21, GD09, Ger21, Mat03, BPR18, Jon12, UCZ⁺15, AAB⁺21c]. **Co-Design** [GD09, FAB⁺21, Ger21, UCZ⁺15, AAB⁺21c]. **Co-reservation** [Mat03]. **Co-scheduling** [ABD⁺18, ABG⁺19, Mat03, BPR18, Jon12]. **Coarse** [BGB⁺96, DZRS99]. **Coarse-Grained** [BGB⁺96, DZRS99]. **Coastal** [Cow08]. **Code** [AD89, AJL⁺97, BBA87, BH00, CK01, CEL⁺97, Del93, DZDR95, HL10, HE01, LWL05, MMD98, MS02, MT89, MBF⁺11, MSK92, PPR03, Pla09, WZH⁺20, YW93, BSH⁺16, DWT⁺19, DAC⁺14, FU12, HIT⁺14, HBKR21, INY⁺14, JKD⁺11, MBvdG13, MGS⁺15, PHF21, RHK21, SSR⁺14, TRS13, TGP19, VRB⁺19]. **Codes** [AS00, BGB⁺18, CL95, DL97, IHMM87, MCW⁺00, Reu92, SWW94, ESD⁺22]. **coexistence** [CBA⁺18]. **Coherent** [Wad99, PS12]. **Collaboration** [SG09b]. **Collaborative** [DFH⁺96, HBSP08, NBB⁺96]. **Collaboratory** [YFH⁺96]. **Collapse** [Gun00, HTSK90]. **Collection** [DT06]. **Collections** [HLP⁺03]. **Collective** [BMR06, FCLG07, KFM⁺10, LCZ⁺15, TRG05, VFD04, KMH⁺14, SCB14]. **collectives** [DJJ⁺19, WLFH16]. **Collide** [NBB⁺96]. **collision** [VOL⁺14]. **Color** [IMH⁺11, IMH⁺12, Tho90]. **Color/Albedo** [Tho90]. **Columbia** [MAB07, HBC⁺08]. **combatant** [BCYS11]. **combination** [ASHH16]. **combinatorial** [AAB⁺21b, BG11]. **Combined** [YK04, BLOR18]. **Combining** [Gir02, Mon12, SCB14]. **Coming** [de 89]. **commercial** [MRD⁺15]. **Commercialization** [SG09b]. **Common** [ZM07]. **Communication** [BCG⁺10, BYCB05, BKS⁺07, BBDR95, FIMU19, HC10, INY⁺14, JLO05, LR09, LRO10, LRT07, NTKP06, PLS05, QH08, RW03, SWHP05, TRG05, TGT05, BGO20, BBH⁺13, CSC19, DGB⁺14, IYK16, NOM⁺19, OGM⁺16, RWM17]. **Communication-overlap** [INY⁺14]. **Communication/Computation** [BBDR95]. **Communications** [Ano87e, BMR06, Bus87, VFD04, SCB14]. **Communicators** [GFD05]. **Community** [DBA⁺09, HBSM03, CJK⁺05, DVW⁺12, DEE⁺12, DJC05, ESW⁺12, HVKW05, JLO05, MS05, MW12, TD08, WD05]. **Comparative** [MOK00]. **Comparing** [BF01, KdOCR⁺20]. **Comparison** [BSK14, CAK⁺07, Gen88, HC10, Jon92, KM95, Mat95, SR98, SFLC18, WKLW21]. **Comparisons** [Ma00]. **Compensation** [MSMW07]. **CoMPI** [FSC⁺11]. **Compilation** [BJK07, CW05, PG18]. **Compiler** [CW05]. **Compilers** [Ano01a, YHG⁺07]. **Complete** [LK01]. **completely** [PH19]. **Completion** [CY08]. **Complex** [ASHH16, Dar99, GKB93, GHZ10,

PK04, CSGM17, EHTW21, WKLW19].
complex-entry [CSGM17]. **Complexity** [BMR06, BGB⁺96, DF08, Spr06, BRGR11].
Component [BAA⁺06, DF08, KBA00, KFM⁺10, MGB12, PGTS10, PPR03, SVN09].
Component-Based [PGTS10, MGB12].
Components [CTD⁺05, WSD⁺14].
Composing [HGWN14]. **composite** [NMAE13]. **composites** [LPB⁺16].
Composition [Cot04, DLB07].
Compositional [AWS01, BBD00, KR94, KR95].
Compounds [FWZ91]. **compressible** [HHSM19]. **Compression** [Arn07, DLY⁺98, DF08, FSC⁺11, CGGC⁺16, CCO⁺19, CDL⁺19, IFA15, KV19, Ozs16, TDG⁺19].
Compressors [GMWG10, YK07].
Compromised [LJC⁺10].
Compromised-Time-Cost [LJC⁺10].
COMPSs [CCBL18]. **Computation** [BBDR95, CBW95, Chu99, lSD89, GWKN08, Her88, HS93, JP93, Nag89, SSNM92, Ste09a, Ste09b, Tis97, WSCZ05, SVBP13, WEPB12, ABB⁺94, KT94, TR92]. **Computational** [Blo87, CD97, Cha88, CDH⁺97b, DVW⁺12, DFMD94, DGJ09, DT99, DGH⁺93, Duk91, EGMP93, FBW⁺87, Gen88, HBSM03, HOPB92, HL10, JL89, NFK98, Num04, PK04, PBE⁺19, RBMF87, SK90, SG07, SBWS99, SW04, TMW⁺99, VR00, Wit92, WPBB01, YM91, YK07, Ytt97, AFL⁺18, BSW⁺14, CGGC⁺16, CBA⁺18, DTL19, JKBW18, TBA⁺17, VRRL18].
Computations [BBR10, Ber92, Duk91, MA15, MCG04, SD87, ALE⁺20, BCYS11, BCLP17, DKMT18, HDL⁺15]. **compute** [KL13]. **Computer** [BEF⁺95, Bus87, CKE08, Cla91, Don89, GL09, HKK88, HD05, JL89, KT99, MM90, PS87, TWK87, VC89, WBM90, AHB⁺16, BAM⁺16, BE17, HIT⁺14, HLS⁺17, INY⁺14, KMM16, Kum89, MBHF15, PNFC16, TAM⁺16].
Computer-Aided [MM90]. **Computers** [Ano87f, BOD⁺91, BBA87, BH99, CDH⁺93, CDP⁺94, EDS95, FG97, FFNP97, GP93, Gun00, IS96, Jon92, Meu88, CGST19, FAB⁺21]. **Computing** [ATN⁺00, Ano87a, Ano87d, Ano94c, Ano95b, Ano98b, Ano98a, Ano99, Ano00, Ano01b, Aus92, BV11, BM12, BM13, BGI⁺99, BQOS21, BAA⁺06, BRT⁺92, Bus87, CWHP99, DF18, Dar00, Dem90, Don89, DT99, DMT01, DT11, DT17, DCL⁺08, Ede93, EDSV06, EW06, EW22, ESD⁺22, Ewi88, Eyr06, FGC⁺05, FGJ⁺04, Gaf88, GHM⁺10, Ger21, GMWG10, GNTLH97, GL97, HME90, Her09, JLL04, JSSZ09, Joh01, KDH11, Kep04a, KT99, Kuc04, KHK⁺09, KS05, LS90, LJC⁺10, LD07, MPS15, Mah90, MYCR06, Mar87a, Mat95, ME14, PPK09, PA11, Rao02, RAGW93, Sab91, Sal87, SKB01, Ste01, Ste04, SFP02, SKC10, THDC09, Wal03, YBA⁺03, ABH⁺18, AFGQO19, AMB⁺18, ARPY19, Bai20, BE17, BTRZ⁺19, BBA⁺21, BLOR18, BAP⁺12, CGW19, Cec20, DTDP14, DHL16, DT19, DAC⁺14, ECG⁺13, EDB19, EKD⁺12, Fem90]. **computing** [FKA⁺17, GR17, GSND20, Har11, IYK16, IFA15, JdSA⁺17, KT94, LDLD19, LBB17, MEK⁺19, MFB⁺19, MCU⁺13, MBF⁺21, PPC⁺16, RRJ⁺20, SWA⁺14, STS17, TNLP13, VSHN14, WZHG17, WD19, ZKRA14, Lee03, Ano94a, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a]. **Computing-Numerical** [THDC09]. **concurrency** [DGB⁺14].
Concurrent [AH93, BMWD87, Fro91, BRGR11].
Conference [Gaf88, OL05, KKDV03].
Configuration [AEPR92, LTPK17, LBB17].
Configuring [PPK⁺04]. **Confined** [ACG⁺90]. **Confinement** [BGB⁺18].
Conjugate [AH93, CSV91, MG87, DHL16, IVG⁺20, KMM16, PSV⁺16, PF16].
conjugate-gradient [DHL16]. **Connecting** [BKS⁺07]. **Connection** [Ano87d, Don87, BJ92, CC95, GKH⁺91, HZ91]. **Conquer**

[Cza03]. **consensus** [KDNE18].
conservation [LH19]. **Consistent** [KS09a].
Consortium [GS09]. **Constant** [MP94].
Constrained
 [FSS13, LJC⁺10, NKR90, IK18]. **constraint**
 [DAB⁺12]. **constraint-based** [DAB⁺12].
Constraints [CY08, GSHL03, BLOR18,
 CCRV20, LCZ⁺15]. **construction** [PS12].
consumption
 [BDC21, BLOR18, CGGC⁺16].
Contaminant [ABF⁺99]. **content**
 [LFB⁺15, MRD⁺15]. **content-aware**
 [MRD⁺15]. **Context**
 [KDH11, QH08, YBA⁺03, CZR⁺11].
Context-Aware [YBA⁺03].
context-based [CZR⁺11]. **continuous**
 [AWWG19]. **continuum** [BTRZ⁺19].
contrast [RPdB⁺19]. **Contributors**
 [Ano91b, Ano91a, Ano92g, Ano96c, Ano96a,
 Ano97b, Ano97c, Ano98a]. **Control**
 [AK91, AK93, Dar00, DFH⁺96, VR00,
 HRW19, RRJ⁺20, WDW⁺12]. **Controlled**
 [DSD⁺91]. **Controllers** [MFOAGE18].
controlling [OF17]. **converge** [CCBL18].
Convergence [BBR10, DFS⁺05]. **convex**
 [SH93]. **Convolutional** [BDC21].
Cooperative
 [DBA⁺09, DCL⁺08, kLCCW07, IK18].
Coordinate [YRA⁺02]. **Coordinated**
 [FP02]. **coprocessor** [VEMR17].
coprocessors [HLS⁺17]. **Copy** [SWHP05].
CORBA [PPR03]. **Core**
 [Bri10, DFS⁺05, MS05, AKC⁺19, BBG⁺14,
 BH12, CAE⁺13, DEE⁺12, DDKK19,
 INS⁺20, KDH11, KILL13, LMT⁺12,
 LDW⁺12, LNSMMA15, MSPSI15, PSV⁺16,
 SSR⁺14, TKA⁺17, Udd17, VEMR17,
 VRB⁺19, VOL⁺14, YFS⁺14, GLZS14].
cores [DJJ⁺19, FU12, INY⁺14, LYL⁺16].
Cornell [Mer87]. **correction**
 [AG18, YFS⁺14]. **Correlating** [CS14].
correlation [CLG13, GHL15].
Correspondence
 [BH99, IS96, PTGB02, WLB92].

Corrigendum [Ano19, Ano20a, Ano20b].
Cortical [WW92]. **Coscheduling**
 [BL99, CAK⁺07]. **Cost**
 [LJC⁺10, PPK09, TR17].
Cost-Constrained [LJC⁺10]. **Coulomb**
 [DGD⁺04]. **Coupled** [HAF⁺96, IKY⁺10,
 JDD18, KT99, LJO05, PK04, BG22, KC18,
 NOM⁺19, SKP⁺22, YJZN22]. **Coupler**
 [CJK⁺05, CVJ12]. **Coupling** [HD05, JLO05,
 LJO05, MTW⁺22, PPR03, EW22]. **CoV**
 [CDG⁺21]. **COVID**
 [dS21, JMM⁺21, OWC⁺21]. **COVID-19**
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 [CJK⁺05]. **CPU** [BL99, BJWS20, GHL15,
 HTD⁺14, PFGDM20, SHK⁺18, VRB⁺19].
CPU-GPU [HTD⁺14]. **CPU-MIC**
 [SHK⁺18]. **CPUs**
 [HBKR21, KDH11, SFLC18, TKA⁺17].
Crash [HTSK90, CEL⁺97]. **Cray**
 [ABF⁺08, AEPR92, DD89, DD91, Del93,
 GCL93, LT88, Ma00, MYC92, MSK92,
 THL88, YW93, ABF⁺99, DH96, Lai93,
 McN89, SBBS06]. **Cray-1s** [McN89].
CRAY-2 [DD89, DD91, GCL93].
CRAY-T3E [Ma00]. **CRE2017** [Mas19].
CRE2019 [KM20]. **creation** [KILL13].
Creutz [BRT⁺92]. **Crisis** [BE07]. **Criteria**
 [BKRSR09]. **critical** [SDJ17]. **critical-path**
 [SDJ17]. **Cross**
 [PLS05, CLG13, LSLR⁺20, SK20, WVVL⁺16].
cross-bundle [WVVL⁺16].
cross-correlation [CLG13]. **cross-machine**
 [SK20]. **Cross-Platform** [PLS05]. **crowd**
 [VOL⁺14]. **CRPC** [CDP⁺94]. **crucial**
 [SZ11]. **cryo** [SSCF19]. **cryo-EM** [SSCF19].
Crystal [Cla91]. **crystalline** [HXW⁺13].
crystallisation [WSD⁺14].
Crystallography [CDH⁺93]. **CUBE**
 [JBOT19]. **CUDA** [DSH⁺16, GDKWS15,
 KKB⁺21, KNPS21, MV20, SDJ17, ZZG⁺14].
CUDA-accelerated [GDKWS15].
CUDA-enabled [DSH⁺16]. **CUMULVS**
 [GKP97, KWB06]. **Current**
 [Cap09, GFD05, GCSK13, LVA⁺13].

cutting [HLZ⁺20]. **CYBER** [ABAS87, McN89]. **cycle** [AHB⁺16]. **CYDRA** [HRM89]. **CYDRA-5** [HRM89].

D [KR94, KR95, SSSF19, VSS⁺13, AKW19, ARR99, ARPY19, BGM15, BG00, CSGM17, CM97, FIMU19, GGS01, HSLK11, KC18, PR95, THL88, Wal18]. **D-GM** [ARPY19]. **DAC** [Cza03]. **DAG** [TR17]. **DAG-based** [TR17]. **Daily** [Mar89b]. **DAME** [PG18]. **DAMPVM** [Cza03]. **DAMPVM/DAC** [Cza03]. **DARE** [CGT⁺18]. **Data** [ACF⁺11, AF09, Ano87e, BCG⁺10, BHK⁺88, BCM⁺03, BH06, CFK⁺94, CBW95, DP05, DH96, DZ07, DT17, DFT⁺15, Fei99, Fol90a, GMLP08, GG11, HJ96, JW06, Joh01, KUE⁺00, LR07, MAJJS03, RRV06, SS89, SS10, TLdS22, VS03, WHL03, ZRC⁺06, AKW19, APD⁺15, ATL⁺15, AMB⁺18, BTRZ⁺19, CDL⁺19, CCBL18, DCN17, DT19, EMP⁺18, FKA⁺17, FAB⁺21, HLW⁺16, KV19, Lap22, LGDH16, MRD⁺15, OWC⁺21, Ozs16, PH91, PBB⁺20, PG18, RWM17, STP⁺13, SZ11, TDG⁺19, TDM⁺17, WDH⁺15]. **Data-driven** [TLdS22, BTRZ⁺19, OWC⁺21]. **Data-Intensive** [GMLP08, KUE⁺00, ACF⁺11, FKA⁺17]. **Data-Parallel** [HJ96]. **Database** [MS09]. **Databases** [RGB⁺18]. **Dataflow** [ACM88, Sha88, JDD18, WZHG17]. **dataflow-based** [JDD18, WZHG17]. **Datagrid** [PHB04]. **Datasets** [SE92, ZM07, GVR⁺21]. **Datatype** [SWHP05]. **Davidson** [UF89]. **deadline** [CCRV20]. **Deadlock** [LBB17]. **Deadlock-free** [LBB17]. **Dealing** [GSHL03]. **Debuggers** [Ano01a]. **Decision** [GWKN08, JCK21]. **Decision-Making** [GWKN08]. **Decomposition** [BLRR01, Cha88, GCD97, Meu88, NK89, DFT⁺15, IKMS⁺19, KLR⁺21, Lai93, YZC⁺15]. **Decoupled** [PH91]. **Dedicated** [CAK⁺07, GSHL03, DJJ⁺19]. **deep** [CHT⁺19, JMM⁺21, VRB⁺19]. **defined** [ADMP18, JDAD19]. **Defining** [KKS04]. **deformable** [SE12]. **degrees** [TAM⁺16]. **degrees-of-freedom** [TAM⁺16]. **Delay** [Rao02]. **Demand** [EW06, dPIdA03]. **Demystifying** [TNCC21]. **Dense** [Ano02k, BGG05, BDL⁺07, Ede93, LRLG19, MBvdG13, SCR11]. **density** [HBKR21, LNSMMA15, QXS⁺20]. **density-functional** [QSX⁺20]. **Department** [Kit90]. **dependencies** [ELEB21]. **Dependent** [MBF⁺11]. **Deployable** [GCL93]. **Deploying** [CdVL⁺18]. **Deployment** [CDCV06, GCL93, GMLP08]. **deposited** [GSK⁺15]. **Deposition** [MD99]. **depth** [JDAD19]. **derivatives** [Haj93]. **Derived** [SWHP05, MDH⁺18]. **deriving** [IGDQO19, MBvdG13]. **describing** [ABH⁺18]. **Design** [AEG⁺03, BGI⁺99, BBH⁺13, BBMB19, BRM03, BH06, CE00, CLP⁺99, CTD⁺05, Dar00, DZRS99, DFH⁺96, DJC05, EGMP93, FGC⁺05, GJMS88, GCCC⁺03, GHM⁺10, GD09, KS09b, PPK09, SD87, AAA⁺22, BG11, DTL19, FAB⁺21, Ger21, JMM⁺21, UZM⁺14, UCZ⁺15, AAB⁺21c, Mar87a]. **Designing** [RWM17, SWHP05, SKS⁺13, ZWS21]. **Desmos** [SDI⁺19]. **Detailed** [EDS95, SBBS06, CHWS20]. **Detection** [CBL10, YZC⁺15, AG18, BSS15, HGMW12, KDNE18, VOL⁺14, WLG⁺18, ZCZ⁺13]. **Detector** [DZDR95, Ano19, BBG⁺18]. **Determination** [BHK⁺88, CSY10]. **Determined** [CGB⁺94]. **Deterministic** [DR06, DMSMG18, MV20, SLL⁺19]. **DEUS** [RAB⁺15]. **developed** [CVJ12]. **Developing** [THDC09, PPC⁺16]. **Development** [Ano01a, BLU⁺22, BCC⁺01, BBD00, Dar99, HL00, HRM89, Kal09a, LC90, LD07, MM90, MS19, PPS09, Eri88]. **Development/Tuning** [Kal09a]. **Developments** [YSS⁺06]. **device**

[Lai93, OF17, SKP⁺22]. **Devices** [PHC⁺10, RKKC90, Rad18]. **DG** [MV20]. **DG-MOSFETs** [MV20]. **diagnosis** [DCM⁺17]. **diagonal** [YLL⁺14]. **Diagrams** [FWZ91]. **Dialogue** [LS06]. **Diego** [Mai87]. **Dielectric** [ZOF90]. **Diet** [CD06]. **Difference** [CC95, THL88, EKF⁺19, WKLW21]. **different** [LWT⁺11]. **Differential** [Key09, Meu88, KS89, RMS⁺18]. **differentiation** [HHSM19]. **diffraction** [EEL15]. **Diffusion** [BFNV07, EDS95, SG91, TWK87, BG22, LMT⁺12]. **Diffusion-Limited** [TWK87]. **diffusion/filtering** [LMT⁺12]. **Digital** [MPG93, YFH⁺96, GHL15]. **dilation** [LST15]. **Dimensional** [BCZM07, CSY10, EGG05, LT90, MT89, BE17, KS89, KRR19, LSS93, YFS⁺14]. **Dimensionality** [BFLL99]. **Dimensions** [TWK87]. **Dip** [LT90]. **Dipole** [DGJ09]. **Dirac** [PHF21]. **Direct** [Bri10, CM97, HVWS09, HVSW09, LWL05]. **Direction** [Mah90]. **Directionally** [SZC12]. **Directions** [Fol90a, PBB⁺20]. **Discharge** [YW93]. **discontinuous** [AWWG19]. **Discovery** [AEG⁺03, AAF⁺01, ASAK19, GVR⁺21, PBB⁺20, AEG⁺03]. **Discrete** [DGJ09, Ham91, DMSMG18, Mon12]. **discretizations** [KFM⁺21, LH19]. **discriminating** [SKS⁺13]. **disembarking** [GDS17]. **Disk** [KNP⁺87]. **Dislocation** [HSLK11]. **Disordered** [KVY⁺90]. **dispel4py** [FKA⁺17]. **Dispelling** [Ano87c]. **Dissemination** [GL97]. **Dissolution** [Cla91]. **Distance** [HME90, KR11]. **Distances** [KTWL18]. **Distributed** [AKP08, AF09, BGG05, BFLL99, BGF02, CWHP99, CYT⁺02, CLF87, CB95, Dee10, DFMD94, DCCS10, EDSV06, GKN⁺96, GGS01, Gir02, HC10, HD05, HdV18, JMP02, KT99, LWOB97, MYCR06, MWAR⁺87, Mat95, MCW⁺00, Nag89, NKP⁺00, QWIC02, Rao02, RBMF87, SWG⁺03, SPNB14, YIYD19, YRA⁺02, ZRÇ⁺06, dPIa03, ABH⁺18, CBD⁺17, EDB19, GEKO19, JRT16, JO92, RCAE⁺20, THDS19, VMPW20]. **Distributed-Memory** [MCW⁺00, YIYD19]. **Distributing** [CBSB01]. **Distribution** [TCW06, TC10, QSX⁺20]. **Distributions** [DZ07]. **diverse** [PBB⁺20]. **Divide** [Cza03]. **Divide-and-Conquer** [Cza03]. **dividends** [DTL19]. **Divisible** [DLG06, MYCR06]. **Division** [Bus87, Don89]. **DNA** [DTDP14, GPO⁺20, HB90, MP18, PRT90]. **Docking** [GHM⁺10]. **DOE** [HBSM03]. **Domain** [Cha88, CDH⁺97b, GCD97, Lai93, Meu88, WCDS99, CSGM17, IKMS⁺19, KLR⁺21, PHF21, YJZN22]. **Domain-Specific** [CDH⁺97b, PHF21]. **Donation** [TCW06]. **Donation-Based** [TCW06]. **Double** [PRT90]. **Drift** [BFNV07]. **Drift-Diffusion** [BFNV07]. **Drive** [HE01, PPS09]. **Driven** [CHZ02, DCL⁺08, YB07, BTRZ⁺19, CDG⁺21, DAB⁺12, OWC⁺21, TLdS22]. **drug** [GVR⁺21, JMM⁺21, MSPSI15]. **Dual** [BBC⁺00, FT19, Ish91]. **Dual-Level** [BBC⁺00]. **Dumont** [BCP⁺20]. **Duration** [CY08]. **DV** [TKSK88]. **DV-X** [TKSK88]. **Dynamic** [AAF⁺01, ABAS87, BCM⁺03, BG00, CY08, DLY⁺98, DFMD94, GFD05, HWP03, IMB⁺19, SCB⁺95, SVN09, TM99, LGDH16, MJD16, PMP⁺20, SCB14]. **Dynamical** [DFS⁺05, FBW⁺87, HT04b, MS05, SWW94, DEE⁺12, DDKK19, LMT⁺12]. **Dynamics** [ACD07, BMT89, CGB⁺94, Cha88, CWG09, DQFW90, DGD⁺04, Gen88, Gun00, HL10, HSLK11, JL89, KVY⁺90, MP94, Nak99, NHG⁺96, PRT90, RBMF87, SK90, ABH⁺18, AKC⁺19, AKW19, CDG⁺21, CHW⁺15, HXW⁺13, KFJ20, KKL⁺19, KNPS21, PIR⁺20, SDI⁺19]. **E-Science** [HWP03, HT04a]. **E3SM**

[LNK22]. **E3SM-MMF** [LNK22]. **eager** [ELEB21]. **eager-release** [ELEB21]. **Early** [GKN⁺96, GNTLH97, HGD91, Kal09a, SLG95]. **Earth** [DVW⁺12, ESW⁺12, MEK⁺19, CTD⁺05, CVJ12, DEL⁺12, IKY⁺10]. **earthquake** [AHB⁺16, CMS⁺11, MTW⁺22, BAM⁺16]. **earthquake-cycle** [AHB⁺16]. **ease** [MFOAGE18]. **EC2** [Pap11]. **ECG** [Arn07]. **ECJ** [CdVL⁺18]. **Ecological** [WBG06]. **Econometric** [ABAS87, GP93, PS87]. **Economic** [BE07, LC90, NKR90, SG07]. **Economic-Based** [SG07]. **Economics** [AK91]. **Ecosystem** [WBG06, AFGQO19]. **Eddy** [CK01]. **edge** [BTRZ⁺19, CSGM17, Rad18]. **edge-emitting** [Rad18]. **edge-FEA** [CSGM17]. **edge-to-cloud** [BTRZ⁺19]. **editor** [DT18, DT19, WD21, DT17, WD18, WD19, dA03]. **Editorial** [CDH⁺97a, Don92, DT09, Mar92, Mar94, Wit92]. **Editors** [BM13, Cec20]. **Education** [Mah90, Sab91, KT94]. **Effect** [SKSG19]. **Effective** [BCK⁺89, Pan97]. **effectiveness** [TR17]. **Effects** [WBM90, Haj93]. **Efficacy** [GWKN08]. **Efficiency** [ABAS87, DFS⁺05, GHM⁺10, ATD17, ECG⁺13, JdSA⁺17, KLR⁺21, MJD16, SFLC18, UZM⁺14]. **Efficient** [ACG⁺90, AEPR92, BRR17, CDG⁺14, DMT97, GMLP08, HS93, KFJ20, KC92a, KC92b, KKL⁺19, KFM⁺21, KUE⁺00, LRO9, LRO10, LP10, MG87, MFP⁺17, OWO98, SC04a, TD08, YZZW21, BBMB19, HBKR21, KV19, KKB⁺21, LNSMMA15, MMDA19, Ozs16, RMV⁺19, SDI⁺19, TKA⁺17, Wal18]. **EFFIS** [SKP⁺22]. **eigensolver** [HTD⁺14]. **Eigenvalue** [HS93, Tis97, UF89]. **Eigenvalues** [KC92a, KC92b]. **ELAPS** [PB19]. **Elastic** [ACD07]. **electrodynamics** [YJZN22]. **electrodynamics-micromagnetics** [YJZN22]. **Electromagnetic** [DGP⁺97, CMN12]. **electromagnetics** [CSGM17, OGM⁺16]. **Electromagnetism** [BGG05]. **Electron** [FFR⁺10, KVV⁺90]. **Electronic** [FWZ91, TMW⁺99, HTD⁺14, HIT⁺14, PHF21]. **electrophysiology** [BSW⁺14]. **Electroweak** [BGK⁺90]. **Element** [AJL⁺97, BBA87, DFS⁺05, EGG05, FSN08, GCD97, KM95, MMD98, MS02, THC⁺96, de 89, Ade21, AFL⁺18, BSW⁺14, DWT⁺19, DEE⁺12, EAG⁺19, KFM⁺21, MGS⁺15, Mon12, PH19, SMK⁺20, ŚCKW19, WZH⁺20]. **elements** [ZB20]. **Eliminating** [HME90]. **embedded** [KPR17, KK01]. **Embedded/** [KK01]. **EMD** [LSES20]. **EMD/HHT** [LSES20]. **emergency** [GDS17]. **emerging** [AAT⁺20, HFV⁺12, IMH⁺11, IMH⁺12, WD19]. **emitting** [Rad18]. **Empirical** [VDB04, CBM13]. **Employing** [GVF⁺18]. **emulation** [BAP⁺12, LST15]. **Enabled** [CD06, CD97, CBB⁺04, DD06, MWM⁺08, DSH⁺16, LDLD19, NBE⁺22]. **Enabling** [AGR⁺03, BTRZ⁺19, DGB⁺14, FKT01, JMM⁺21, MBF⁺21, PBB⁺20, Ste09b, SKP⁺22, AAB⁺21b]. **Encoder** [BKRSR09]. **Encoding** [DLY⁺98]. **encryption** [KV19, Lap22]. **End** [BV11, GHM⁺10, LD07, NKiN⁺08, PA11, Rao02, SC09]. **End-To-End** [GHM⁺10, Rao02, SC09]. **Endangered** [BB02]. **Endmember** [HC08]. **endpoints** [DGB⁺14]. **energetic** [GSK⁺15]. **energies** [PUR94]. **Energy** [BEH⁺90, ECG⁺13, HTSK90, IHMM87, KLR⁺21, LTPK17, LWT⁺11, Mir90, SGFC09, YCHH90, ZOF90, ATD17, BDC21, BRGR11, BLOR18, BBMB19, CHT⁺19, EJD⁺19, JdSA⁺17, LRLG19, SKSG19, Kit90]. **energy-efficient** [BBMB19]. **Energy-optimal** [LTPK17]. **energy-saving** [SKSG19]. **Engine** [DCL⁺08, HBSP08, WZHG17, SS10]. **Engine-Driven** [DCL⁺08]. **Engineering** [Bro88, Dar00, DW97, Joh01, MMS88, Nas92, PK04, ADMP18, EHTW21, VMPW20, WH20, Mar88a]. **Enhance**

[WVL⁺16]. **Enhanced** [BPK⁺07]. **Enhancement** [AAC⁺97, WT99]. **Enhancements** [BDG⁺95]. **Enhancing** [FSC⁺11, HLW⁺16]. **Ensemble** [BBR10, VSS⁺13]. **Entity** [BGF02]. **Entropy** [CBW95]. **entry** [CSGM17]. **Environment** [AAF⁺01, CCH⁺88, DD91, DL97, DLB07, GL97, MM90, dPIaA03, ABH⁺18, ASAK19, ARPY19, KKL⁺19, LSS93, WLVL⁺96]. **Environmental** [DLY⁺98, TMMR10]. **Environments** [Ano01a, CWHP99, CDH⁺97b, DD06, Dee10, DFH⁺96, DCL⁺08, Eyr06, FSS13, Gan88, HBSP08, Mat95, MA89, RIF01, THC⁺96, WvNM⁺06, ADMP18, CCBS11, HI12, HI13, IVG⁺20, IH15, NC18]. **Epidemic** [KDNE18]. **epidemiological** [BEW16]. **Epiphany** [VEMR17]. **epistasis** [WLG⁺18]. **epistatic** [PFGDM20]. **EQSIM** [MTW⁺22]. **Equation** [BFL99, BEF⁺95, Fro91, IKY⁺10, Key09, ALE⁺20, EKF⁺19, KRR19]. **Equation-Based** [Key09]. **Equations** [Meu88, SBF90, SMW87, KS89, RMS⁺18, ZZG⁺14]. **Equilibration** [NKR90]. **Equilibrium** [JP93, NK89]. **Era** [BM13, ME14, WD21, BM12, Con88]. **Erratum** [KR95]. **error** [BSS15]. **Errors** [FCLG07, LFB⁺15, SLL⁺19, YZC⁺15]. **Estimates** [LS06, McN89]. **estimating** [BDC21]. **Estimation** [LR09, LRO10, BE17, LNSMMA15, SH93]. **ETA** [DD89]. **ETA-10P** [DD89]. **Ethylene** [DVC88]. **Euler** [ZB20]. **Eulerian** [INY⁺14]. **European** [ISD89, MHW15, PHB04]. **EUROPVM** [OL05]. **EUROPVM/MPI** [OL05]. **EuroPVMMPI** [KKDV03]. **EV7** [KHP⁺04]. **evacuation** [GDS17]. **Evaluate** [WGI90]. **Evaluating** [BBDR95, GFD05, LRG⁺16, NCA21, VC89, YFS⁺14, KdOCR⁺20]. **Evaluation** [ATN⁺00, ABF⁺08, Ano87b, BCK⁺89, BIC⁺10, BFNV07, BG02, BDG⁺00, CDQS04, CLP⁺99, KHP⁺04, NOM⁺19, RBL08, SWHP05, WOG95, YIN⁺11, AKP⁺18, BBG⁺14, HIT⁺14, JCK21, KKB⁺21, NMI⁺19]. **Evaluations** [PPK09]. **Event** [NRR97, BEW16, DAB⁺12]. **event-based** [BEW16]. **event-driven** [DAB⁺12]. **Events** [BG00, JDAD19]. **Eviction** [BH06]. **Evolution** [DAC⁺14, LBP18, WJS⁺90]. **evolutionary** [CdVL⁺18, JCK21, HdV18]. **Exa** [MAF⁺22]. **ExaAM** [TBB⁺22]. **Exact** [ZK93]. **EXAGRAPH** [AAB⁺21b]. **ExaLearn** [AAB⁺21c]. **Example** [NBB⁺96]. **ExaSAT** [UCZ⁺15]. **Exascale** [AAB⁺21c, AF09, Cap09, CGG⁺09, DBA⁺09, DBM⁺11, ESD⁺22, GD09, GL09, HCC⁺22, Her09, Kal09b, KS09a, KS09b, LAV09, Luc09, Lus09a, MMN09, PPS09, SG09b, SC09, Ste09b, AAB⁺21b, BCR⁺14, KFM⁺21, MEK⁺19, MBF⁺21, MAF⁺22, SWA⁺14, UCZ⁺15, VFJ⁺15, YB12, EW22, Ger21, SKP⁺22]. **Excited** [WLC91]. **Excited-State** [WLC91]. **Excitement** [RAGW93]. **executed** [LSES20]. **Executing** [WG07]. **Execution** [MS09, AHB⁺16, DAB⁺12, ELEB21, JDD18, KILL13, RCAE⁺20, TKA⁺17]. **executions** [RV15]. **exhaustive** [PS12]. **Expand** [GCCC⁺03]. **expansion** [AMC⁺18]. **Expansions** [KMPJ08]. **Expect** [Pan92]. **Expectation** [Amd88]. **Experience** [HGD91, YHG⁺07]. **Experiences** [DD06, GKN⁺96, Reu92, ZKRA14]. **Experiment** [HME90]. **Experimental** [BCC⁺06, EGMP93, JW06, KKCB98, KLJ87, PB19]. **Experimentation** [Ano87a]. **Experiments** [AAF⁺01, AK91, Gir02, PR95]. **Explicit** [WBG06, EAG⁺19, AGC⁺19]. **Exploiting** [Bri10, SCR11, WWA⁺11, LFB⁺15]. **Exploration** [KPM⁺96, BBMB19]. **Explore** [JLL04]. **Exploring** [CCO⁺19, CBD⁺17, HAF⁺96, IMS16]. **explosions** [HCC⁺22]. **Expression** [RS03]. **Expressions** [BBDR95]. **expressive**

[CRS⁺19]. **Extended** [Ano02b]. **Extending** [GRC08, Pap11, LRG⁺16]. **Extensible** [CJK⁺05, KHS⁺19]. **Extension** [SVN09, AHB⁺16]. **Extraction** [CBL10, HC08]. **Extreme** [Her09, Key09, KC92a, KC92b, MPS15, ZKRA14, AAA⁺22, AMB⁺18, BEK⁺18, DCM⁺17, FAB⁺21, HRW19, INS⁺20, KDNE18, PBE⁺19, WD21]. **Extreme-scale** [ZKRA14, AMB⁺18, BEK⁺18, DCM⁺17, FAB⁺21, INS⁺20]. **extremely** [Ade21].

face [CdVL⁺18]. **Facility** [Ano87a, Don89]. **FACOM** [IHMM87]. **Factor** [DH96].

Factorization [DD89, DD91, IGDQO19, Jea13, YIYD19].

factorizations [DEKV92]. **Failure** [GCSK13, KS05, Ano19, BBH⁺13, BBG⁺18, KDNE18]. **failures** [SWA⁺14, TNLP13]. **far** [KKB⁺21]. **farm** [KBY⁺19]. **Farming** [CKPD99, MBHF15]. **Fast** [BGM15, BEW16, BMT89, CvG11, DIB00, NDMR20, PS12, PFGDM20, SWW94, IYK16, KKB⁺21, KDH18, SCR11, TKSK88, TDM⁺17, YB12, CKE08, KNP⁺87, LDW⁺12, MJ04]. **Fault** [BHK⁺06, Cap09, FD04, FGC⁺05, GKP97, GL04, JSSZ09, KWB06, WvNM⁺06, ASHH16, AG18, BBA⁺21, LRG⁺16, MSHPV18, MTW⁺22, SKZ⁺18, Sta19, SMZ⁺18, YZC⁺15].

fault-to-structure [MTW⁺22].

fault-tolerance [SMZ⁺18]. **Fault-Tolerant** [BHK⁺06, FD04, WvNM⁺06, ASHH16].

faults [RMS⁺18]. **Faulty** [LK01]. **FEA** [CSGM17]. **Feasibility** [KR94, KR95, CCO⁺19]. **Feature** [PTGB02, STP⁺13]. **Feature-based** [STP⁺13]. **features** [CH13, IMS16, PNFC16, PUR94, ZKRA14].

February [Sci92]. **federation** [Har11].

Feedback [CGB⁺94]. **Feedback-Scaling** [CGB⁺94]. **Feel** [ZWS21]. **Feel-the-Way** [ZWS21]. **FEM** [RMV⁺19]. **Fermi** [NTD10].

Fermions [ZK93]. **Fernbach** [Mar91].

FETI [GCD97, RMV⁺19]. **FFT** [Bai88, GGS01, KMPJ08, Wad99].

FFT-Based [GGS01]. **Fidelity** [SKP⁺22, TBB⁺22]. **Field** [HC08, HSLK11, KKB⁺21, PUR94, VSHN14].

File [BIC⁺10, GCCC⁺03, LRT07, kLCCW07, HLW⁺16]. **Film** [MD99]. **films** [GSK⁺15]. **filter** [LGDH16]. **filtering** [LMT⁺12]. **Finalists** [dS21]. **Financial** [BE07, HZ91]. **Finding** [dRADS⁺18b, FCLG07]. **Fine** [ACM88, BBG⁺10, LH18, WvNM⁺06, HTD⁺14].

Fine-Grain [ACM88]. **Fine-Grained** [BBG⁺10, WvNM⁺06, LH18, HTD⁺14].

Finite [AJL⁺97, BBA87, CC95, CBV97, EGG05, GCD97, KM95, MMD98, MS02, MS05, PH19, PLS05, THC⁺96, THL88, de 89, AFL⁺18, BSW⁺14, DWT⁺19, EKF⁺19, KFM⁺21, LH19, SMK⁺20, ŚCKW19, WKLW21].

Finite-Element [MS02, BSW⁺14].

Finite-Volume [MS05, LH19]. **First** [DQFW90, GKN⁺96, TMWS91, HIT⁺14, MMDA19]. **first-principles** [HIT⁺14].

Fitness [JCK21]. **fixed** [BSK14]. **Flames** [EDS95, SG91]. **FLASH** [DAC⁺14, JKD⁺11]. **Flexible** [GMLP08, CVJ12, DGB⁺14]. **Flink** [KWEF18]. **FLO67** [WLB92]. **Floating** [BSBF89, CDL⁺19, LH18]. **floating-point** [CDL⁺19, LH18]. **flood** [HPW⁺16]. **Flow** [ABF⁺99, DD06, HKK88, PGTS10, RKKC90, SS89, SK90, CDL20, FIMU19, HHSM19, KDH18, LSS93, WDW⁺12, ZB20].

Flowfield [MKG90]. **Flows** [CB95, GMWG10, MYC92]. **Fluid** [Cha88, DFMD94, Gen88, HL10, JL89, KT99, LWL05, PGTS10, RBMF87, SWW94, SS89, SK90, YW93, KC18, LSS93].

Fluid-Structure [KT99, KC18]. **fluids** [HBKR21]. **Fluorinated** [DFC90]. **fly** [GSA⁺19]. **Fock** [MMDA19, CLM⁺16, KKCB98, TMW⁺99].

focused [JRT16]. **Footprint** [JMC05].

force [PUR94]. **Forecasting** [MHW15]. **Forecasts** [MHW15]. **forests** [PNFC16]. **format** [GG14, GGO16]. **Forming** [CM97]. **Fortran** [KR95, DL97, KR94]. **Fortran90** [LJO05]. **Forum** [Don02a, Don02b]. **Forward** [AK93, Luc09, THL88, HRW19]. **Foundation** [Web91, Blo87]. **Four** [Tho90]. **Four-Band** [Tho90]. **Fourier** [KNP+87, LDW+12, MJ04, SSCF19]. **FPGA** [HC08, MHS11, PC08a, RHK21, RGB+18]. **FPS** [LT88]. **Fracture** [BG00, LPB+16]. **Framework** [CAK+07, DGJ09, IYV04, PGTS10, SSB+05, SB04, SKP+22, TMMR10, vLRA+03, FKA+17, GEKO19, JBOT19, MBC+18, MTW+22, MS19, PPC+16, PB19, SE12, SMZ+18, TDG+19, YWL+14, CTD+05]. **Frankenstein** [Wit92]. **Free** [MT89, LBB17, PHF21, SMK+20]. **Free-Lagrange** [MT89]. **freedom** [TAM+16]. **Frequency** [TC10, CSGM17, SKSG19]. **front** [FIMU19]. **Frontwidth** [BMWD87]. **FSAI** [IJB22]. **FTS** [BE18]. **Fueling** [Her91]. **Fugaku** [HYY+22]. **Fujitsu** [Ish91]. **Full** [AEPR92, JRT16, LK01, NBE+22, RAB+15, THC+11]. **full-physics** [NBE+22]. **Full-wave** [JRT16]. **Fully** [HR97, YW93, CH13, EAG+19]. **Fun** [RAGW93]. **Function** [ODD07, PPK09, ZOF90, EKF+19]. **function-generated** [EKF+19]. **Functional** [LR07, QSX+20]. **Functions** [LS06]. **Fundamental** [MR90]. **Fusion** [ACG+90, BGB+18, DSD+91, FWSW02, FP02, YK04, SKP+22, WET+19]. **Future** [BSBF89, HBSM03, Wil87, BAP+12, DPA+18]. **FV** [LMT+12]. **fv3** [SDF+17]. **FVCOM** [Cow08]. **FX** [DD91]. **FX/80** [DD91].

G [MCS+06]. **G2** [Cot04]. **Galaxies** [Her91, NBB+96]. **Galerkin** [AWWG19]. **Games** [EGMP93]. **GANESH** [BPK+07]. **Gap** [SS99]. **Gas** [CH94, LRBS89, MKG90]. **Gases** [WBM90]. **GASPI** [SKZ+18, SIC+19]. **Gate** [HC08]. **Gather** [TRS+10]. **Gauge** [Mor89a]. **GEMM** [NTD10]. **Gene** [MAB+13, RS03, YIN+11, GNB11, KMH+14, SSU+12]. **Gene/P** [MAB+13, GNB11, SSU+12]. **Gene/Q** [KMH+14]. **General** [PLS05, VC89, BE17, CRS+19, MMHL11]. **general-purpose** [BE17]. **generalized** [HTD+14, NS21, GLGLB+11]. **generated** [EKF+19]. **Generation** [DE03, HT04a, KMPJ08, BAP+12, HBKR21, LDLD19, MFB+19, MMDA19, TRS13, VRB+19, ZKRA14]. **generative** [JMM+21]. **Generator** [PMS+04, DL09]. **Generic** [CAK+07, HLC+19]. **Genetic** [RS03, NMAE13]. **genome** [GDKWS15]. **genome-wide** [GDKWS15]. **genomic** [MBC+18]. **Geodesy** [BGG05]. **geographically** [CvG11]. **geophysical** [CMN12]. **geophysics** [MTW+22, SCD+19]. **GFLOP** [SBF90]. **Glass** [YSN90]. **Global** [ATN+00, Ald89, CZR+11, DBA+09, GS05, MHW15, SBG10, Tho90, WBM90, DFT+15, TLdS22, TAM+16, WDH+15, NPT+06]. **Global-Address-Space** [SBG10]. **Global-aware** [CZR+11]. **Globalized** [GKMT00]. **Globally** [SH93]. **Globus** [FK97]. **GloVE** [dPIa03]. **Glow** [YW93]. **Gluons** [BOD+91, BEH+90]. **GM** [ARPY19]. **Going** [Her09]. **good** [NDMR20]. **Goodput** [BL99]. **Gordon** [BBD+17, dS21]. **gossip** [CGW19]. **gossip-inspired** [CGW19]. **GPFS** [BIC+10]. **GPGPU** [SDF+17]. **GPGPUs** [APD+15, KDH11]. **GPU** [AWWG19, ATL+15, ARPY19, BGM15, BJWS20, CSGM17, CS14, EEL15, GHL15, GDKWS15, GGO16, HTD+14, IJB22, JC12, JKBW18, JCK21, KTWL18, KKL+19, KNPS21, LPB+16, MC21, MPD+12, MJGL13, MGFP20, NBE+22, OKTR11, OF17, PS12, PNFC16, PFGDM20, RV15,

RpdB⁺¹⁹, SZC12, SPTT08, SE12, SKS⁺¹³, SDI⁺¹⁹, SK20, SSCF19, VMPW20, WDW⁺¹², YLL⁺¹⁴, ZZG⁺¹⁴.

GPU-accelerated [AWWG19, CSGM17, IJB22, KNPS21].

GPU-based [ATL⁺¹⁵, JKBW18, JCK21, MJGL13, SDI⁺¹⁹]. **GPU-enabled** [NBE⁺²²]. **GPUDirect** [OGM⁺¹⁶]. **GPUs** [ATD17, AKP⁺¹⁸, BLU⁺²², DEQO21, EHTW21, FT19, HDL⁺¹⁵, HBKR21, HPW⁺¹⁶, NCA21, NS21, PF16, SFLC18, TKA⁺¹⁷]. **Gradient** [AH93, CSV91, MG87, DHL16, IVG⁺²⁰, KMM16, PSV⁺¹⁶, PF16]. **Gradient-like** [CSV91]. **GrADS** [BCC⁺⁰¹]. **Grain** [ACM88]. **Grained** [BBG⁺¹⁰, BGB⁺⁹⁶, DZRS99, WvNM⁺⁰⁶, HTD⁺¹⁴, LH18]. **Grand** [BEH⁺⁹⁰, CBB⁺⁹⁶, DSD⁺⁹¹, Kit90]. **granularity** [LQJG16, SKSG19]. **GRAPE** [CKE08]. **Graph** [AAB^{+21b}, CDT05, CSC19, GLZS14]. **graphic** [LQJG16, PH19, YZZW21]. **Graphical** [DMQS12, KDO16]. **Graphics** [CLF87, GLGLB⁺¹¹, LP10, MA15, NTD10, RBMF87, Sal87, BE17, CLG13, GHHS15, Mon12, RDG12, RWM17, ZCZ⁺¹³]. **Graphs** [LK01]. **Gravitational** [SWW94]. **Gravity** [Ham91]. **Great** [BAM⁺¹⁶]. **Green** [ODD07]. **Greenbook** [HBSM03]. **Greenhouse** [WBM90]. **Grid** [CKPD99, Lee03, SBWS99, ASHH16, BCYS11, HLZ⁺²⁰, MCR⁺¹⁷, PPC⁺¹⁶, PS12, AEG⁺⁰³, AAF⁺⁰¹, AGR⁺⁰³, BCCL09, BCM⁺⁰³, BCC⁺⁰¹, BPK⁺⁰⁷, BSCC03, BCC⁺⁰⁶, CD06, CBSB01, CBB⁺⁰⁴, CBL06, CCBS11, CY08, DCL⁺⁰⁸, FKT01, GHM⁺¹⁰, GRC08, GHZ10, HBSP08, HT04a, HLP⁺⁰³, Hua03, HWP03, KHK⁺⁰⁹, LM03, MWM⁺⁰⁸, Mat03, MCS⁺⁰⁶, PPK09, PBD⁺⁰¹, PHB04, QH08, RIF01, RTRG⁺⁰⁷, SWG⁺⁰³, Wal03, WFBF04, WPBB01, WHL03, WvNM⁺⁰⁶, YBA⁺⁰³]. **Grid-Based** [GRC08, QH08, LM03]. **Grid-Enabled** [CBB⁺⁰⁴, MWM⁺⁰⁸]. **Grid-Ireland** [MCS⁺⁰⁶]. **Grid'5000** [BCC⁺⁰⁶]. **Gridded** [ZM07]. **GridLab** [AGR⁺⁰³]. **GridPACKTM** [PPC⁺¹⁶]. **GridRPC** [CJ06]. **Grids** [DT99, DT11, Joh01, Ma00, VR00, MMHL11, MGB12, Sta19, BKS⁺⁰⁷, BBH⁺⁰⁶, Dee10, Fra05, GMLP08, IKY⁺¹⁰, MS09, SG07, SW04, TCW06, vLRA⁺⁰³]. **GridSolve** [YSS⁺⁰⁶]. **Groundwater** [ABF⁺⁹⁹, MMD98]. **Group** [Bus87, BCR⁺¹⁴]. **Growth** [BCZM07, Blo87, Cla91]. **Guest** [DT18, DT19, WD21, BM13, Cec20, DT17, WD18, WD19, dA03]. **guidance** [SDJ17]. **Guided** [FBBC03, BEK⁺¹⁸]. **GWAS** [WLG⁺¹⁸]. **Gyrofluid** [KPM⁺⁹⁶]. **gyrokinetic** [IMW⁺¹³, INY⁺¹⁴, WET⁺¹⁹].

Hadoop [CdVL⁺¹⁸]. **Hadron** [GKH⁺⁹¹, Liu90]. **HAMR** [WZHG17]. **Harbor** [BBC⁺⁰⁰]. **hard** [RMS⁺¹⁸]. **Hardware** [BH06, KS09b, Spr06, BLU⁺²², HDL⁺¹⁵, MCU⁺¹³, MFOAGE18]. **hardware-accelerated** [BLU⁺²²]. **Hari** [NS21]. **Harmonics** [KMPJ08]. **Harnessing** [HLH⁺¹⁹]. **Hartree** [CLM⁺¹⁶, KKCB98, MMDA19, TMW⁺⁹⁹]. **Head** [GKB93]. **Heavy** [QH08, Reu92]. **Heavy-Ion** [Reu92]. **Helicity** [DVC88]. **Helium** [Fro91]. **Helix** [PRT90]. **Helmholtz** [BEF⁺⁹⁵]. **hemodynamics** [AFL⁺¹⁸]. **Hermetic** [YK07]. **Hermitian** [RDG12]. **Heterogeneity** [TCW06, WD21]. **Heterogeneity-Aware** [TCW06]. **Heterogeneous** [BM13, BLRR01, BMR06, BG09, CHZ02, CLBS17, Dee10, EGG05, KT99, KS05, LR07, LR09, LRO10, ME14, NBB⁺⁹⁶, RAGW93, RRV06, VLO⁺⁰⁸, dRADS^{+18a}, BJWS20, CMS⁺¹¹, CGST19, EDB19, GBB18, HGWN14, IMW⁺¹³, INS⁺²⁰, LST15, LDW⁺¹², MFP⁺¹⁷, NC18, SB19, UZM⁺¹⁴, BM12]. **HeteroMPI** [VLO⁺⁰⁸]. **Heuristic** [SG07]. **Heuristics** [CJ06]. **HHT** [LSES20]. **Hi** [TDM⁺¹⁷]. **Hi-C** [TDM⁺¹⁷]. **hierarchic** [EDB19].

Hierarchical

[DD06, GJMS88, HJ96, HWP03, IGDQO19, PBAL09, SG09a, WT99, DSH⁺16, GBB18, LSLR⁺20, MJD16, Wal18, ZBMK11].

Hierarchy [HL10, YK04]. **High**

[Ano87d, Ano87f, Ano94a, Ano94c, Ano95b, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a, Ano98b, Ano98a, Ano99, Ano00, Ano01b, ARR99, Aus92, Bai88, BV11, BGI⁺99, BCC⁺01, BAA⁺06, BEH⁺90, BEF⁺95, BRT⁺92, CWHP99, CC95, CDP⁺94, CSY10, CB95, CJK⁺05, DTD14, DFS⁺05, DGJ09, DBA⁺09, DHL16, ISD89, EKD⁺12, FGC⁺05, FGJ⁺04, GBB18, GHM⁺10, GHL15, GVR⁺21, GMWG10, GSK⁺15, HSLK11, IS96, IKY⁺10, KDH11, KBA00, Kep04a, KWB06, KFM⁺21, Kuc04, KMM16, LST15, LPB⁺16, LD07, MAB07, MSPSI15, NKiN⁺08, NFK98, NTKP06, PPK⁺04, PPK09, PA11, Poz97, Pra01, QWIC02, Sab91, STS17, SKB01, Ste01, Ste04, SKP⁺22, SKC10, TR17, THL88, TMW⁺99, THDC09, VRB⁺19, Wad99, WLC91, WLG⁺18, WOS08, YSP⁺05, AFGQO19, AGHR19, BAM⁺16, BLU⁺22, BLC17, BBA⁺21, BAP⁺12, CGW19, Cec20, CZR⁺11]. **high** [DVW⁺12, DAC⁺14, ECG⁺13, Fem90, FMR⁺20, GR17, GSND20, Har11, HBKR21, IYK16, IFA15, JRT16, LDLD19, LH19, MCU⁺13, OGM⁺16, PPC⁺16, PSV⁺16, PF16, ŚCKW19, TLdS22, TNLP13, Udd17, WDH⁺15, WD19, Mar87a]. **High-Cost** [PPK09]. **high-density** [HBKR21]. **High-End** [BV11, NKiN⁺08, PA11]. **high-intensity** [JRT16]. **High-Level** [BCC⁺01, GBB18, Udd17]. **High-Order** [CC95, KFM⁺21, LH19, OGM⁺16, ŚCKW19]. **High-Performance** [Bai88, BAA⁺06, BRT⁺92, CSY10, DGJ09, DBA⁺09, ISD89, HSLK11, IKY⁺10, KWB06, PPK⁺04, Sab91, TMW⁺99, THDC09, DTD14, DHL16, EKD⁺12, GHL15, GMWG10, GSK⁺15, KDH11, KMM16, LST15, LPB⁺16, SKC10, TR17, VRB⁺19, WLG⁺18, AFGQO19,

BBA⁺21, BAP⁺12, CGW19, Cec20, CZR⁺11, DAC⁺14, ECG⁺13, Fem90, FMR⁺20, GR17, GSND20, Har11, IYK16, IFA15, PPC⁺16, PSV⁺16, PF16, TNLP13].

High-Pressure [WLC91].

High-Resolution [DFS⁺05]. **High-Speed** [Ano87d, BAM⁺16, Mar87a].

High-Throughput

[GHM⁺10, GVR⁺21, AGHR19].

High-Wave [BEF⁺95]. **Higher** [Mah90].

Highly [Ade21, BG22, BCC⁺06, HBKR21, Sim90, KKB⁺21, PS12, WKLW21]. **HIP**

[KNPS21]. **History** [MT89, ZC92, Bra91].

Hitachi [WOG95]. **HLA** [RTRG⁺07].

HMapper [GPO⁺20]. **Hoc**

[IBC⁺10, TNBG07, BG02, CHZ02]. **hole**

[HLZ⁺20]. **HOMME** [CAE⁺13, DDKK19].

homogeneous [IMW⁺13]. **Homotopy**

[DZRS99]. **HONPAS** [QSX⁺20]. **Hop**

[TNBG07]. **Hoshen** [CBV97]. **Hosted**

[HBSM03]. **Hough** [GLGLB⁺11]. **hp**

[KBY⁺19]. **hp-adaptive** [KBY⁺19]. **HPC**

[Ano19, dS21, ABG⁺19, BBMB19, BBG⁺18,

CRS⁺19, CYZ⁺20, CCBL18, GCSK13,

GGMJF⁺20, Kep04b, KV19, KHK⁺09,

Lap22, MDH⁺18, NMI⁺19, PMP⁺20, SSQ08,

SGFC09, TNCC21, ZWS21]. **HPC-Based**

[dS21]. **HPCC** [CBB⁺96]. **HPCG**

[LYL⁺16]. **HPF** [BF01, DL97].

HPF-Builder [DL97]. **HPG**

[GPO⁺20, IMB⁺19]. **HPG-HMapper**

[GPO⁺20]. **HPVM** [CLP⁺99].

HPVM-Based [CLP⁺99]. **human**

[ABH⁺18, BE17, GGMJF⁺20]. **Hut**

[INS⁺20]. **Hybrid**

[BBG⁺10, BBH⁺06, CWG09, MS02, MV20,

MGFP20, RW03, BSK14, BBG⁺14, CAE⁺13,

GHL15, GGO16, HTD⁺14, HLW⁺16,

IVG⁺20, LYL⁺16, NOM⁺19, NMAE13,

QSX⁺20, RMV⁺19, STP⁺13, SZC12, SDJ17,

SMZ⁺18, SHK⁺18, THDS19, WSD⁺14].

hybrid-core [BBG⁺14]. **Hybridisation**

[EMP⁺18]. **hydrodynamic**

[HLH⁺19, SZC12]. **Hydrodynamics**

[LRBS89, PGTS10, GEKO19]. **hydrostatic** [AWWG19]. **hydroxymethylation** [GPO⁺20]. **Hyperbolic** [FG97, CHT⁺19, LH19, RV15]. **Hypercube** [Din91, KLJ87]. **Hypercubes** [LK01]. **HYPERDOCK** [ILCLG20]. **hyperheuristics** [ILCLG20]. **Hyperspectral** [DF08, HC08, PC08a, SPTT08, VLO⁺08].

I-WAY [DFP⁺96, GKN⁺96, NBB⁺96]. **I/O** [BCP⁺20, DLY⁺98, DEL⁺12, IBC⁺10, KKCB98, KES⁺17, LPJ98, MMD98, MS95, NFK98, OWO98, PH91, SW01, SR98, TLG98, TD08, TNCC21, WWA⁺11]. **IA** [PSV⁺16]. **IA-based** [PSV⁺16]. **IBM** [DEKV92, DD89, DD91, Gaf88, GNB11, KMH⁺14, MAB⁺13]. **Ice** [ZOF90]. **IceT** [GS99]. **idealized** [LPB⁺16]. **IDR** [AKP⁺18]. **IEH** [LK01]. **IESP** [GD09, Moh09]. **II** [Don02b, JP93, TDM⁺17]. **IJHPCA** [KM20, Mas19]. **illuminate** [CDG⁺21]. **ILU** [Ma00]. **Image** [AAC⁺97, BCJ01, CSY10, DIB00, DF08, PTGB02, Sal87, SPTT08, BGM15, TKA⁺17, THH⁺13, ZCZ⁺13]. **Imagery** [HC08, PC08a]. **Images** [VLO⁺08, RPdB⁺19, SKS⁺13]. **Imaging** [CBB⁺96, Wri12, JKBW18, SFLC18]. **Immersive** [THC⁺96]. **immiscible** [HBKR21]. **Impact** [Ald89, BRU05, Chu99, GJMS88, LC90, NMAE13, BHK⁺88]. **Implementation** [AEPR92, BBS99, BCZM07, BBA87, BIC⁺10, BG00, BRM03, CL95, CLF87, Cho01, CTD⁺05, EKF⁺19, FD04, HJ96, IBC⁺10, INS⁺20, KLJ87, LMT⁺12, LT90, MC90, MS02, MG87, MS05, NMI⁺19, ODD07, SYF96, Tis97, ZZG⁺14, dRADS⁺18a, BG11, GDS17, KTWL18, LNSMMA15, MV20, MHW15, NMAE13, OKTR11, OGM⁺16, VMPW20, YZZW21]. **Implementations** [Ano01a, RR96, BDFVP15, ESD⁺22, KWEF18, LWT⁺11]. **implemented** [BBDH14, PH19].

Implementing [CDT05, KV19, LRT07, YFH⁺96]. **Implications** [RES87]. **Implicit** [GKMT00, MS02, NS21, EAG⁺19, HLZ⁺20, KC18, AGC⁺19]. **Importance** [BCG⁺10, SC09]. **Important** [TC10, FAB⁺21]. **improve** [JdSA⁺17, LFB⁺15]. **Improved** [Ano87b, CMHB15, FSN08, NTD10, DMSMG18, INY⁺14]. **Improvement** [SVN09, KMM16]. **Improving** [ARPY19, BL99, BJK07, CGGC⁺16, DAB⁺12, ILCLG20, JMC05, KL13, MJD16, MW12, YK04]. **in-depth** [JDAD19]. **in-memory** [WZHG17]. **in-situ** [MFB⁺19]. **Incomplete** [IJ93, Kal09b, MC21]. **Increased** [DTL⁺21, WBM90]. **Increasing** [PHC⁺10, WW92]. **Independent** [BRU05, CCRV20]. **Index** [Ano96b, Ano97d, Ano98b, Ano99, Ano00, Ano01b, Ano02n, Ano02l, Ano02m, HC08, BE07]. **induction** [JCK21]. **Industrial** [DGP⁺97, GMWG10, LDGR03, JBOT19, VMPW20]. **inefficiency** [HGMW12]. **Inequality** [NK89]. **Inertial** [BGB⁺18]. **Infer** [RS03]. **inference** [KPST18]. **InfiniBand** [NOM⁺19, OF17, SWHP05]. **Influence** [CK01, Ede93]. **Information** [Ano91b, Ano91a, Ano92g, Ano96c, Ano96a, Ano97b, Ano97c, Ano98a, BH06, CHZ02, FWSW02, FP02, IMS16]. **Information-Driven** [CHZ02]. **Information-Theoretic** [FWSW02]. **Infrastructure** [FK97, HLP⁺03, Wal03]. **Infrastructures** [HdV18]. **Initial** [WLVL⁺96]. **Initiated** [SSB⁺05]. **Initio** [ASW91, HYY⁺22, LDLD19]. **injection** [CIWI17, WSD⁺14]. **Innovative** [MPS15]. **input** [Lap22, LCZ⁺15, WV16]. **input/output** [LCZ⁺15, WV16]. **inspired** [CGW19]. **Instance** [LJC⁺10]. **Instance-Intensive** [LJC⁺10]. **instances** [TR17]. **Institute** [Duk91, EM89, IHMM87]. **Instruction** [HRM89]. **Instrument**

[CBB⁺04]. **Instrumentation** [TM99]. **Integer** [Gro03]. **Integrate** [BFLL99]. **Integrated** [CFK⁺94, GLZS14, MHW15, WBG06, FT19]. **Integration** [ACD07, QWIC02, BTRZ⁺19]. **Integrative** [KHK⁺09]. **Intel** [GLZS14, HGD91, HLS⁺17, KLJ87, KR94, KR95, LSES20, SB19]. **Intelligence** [Ano87d]. **Intel(R)** [MMDA19]. **intensity** [JRT16, LH19]. **Intensive** [GMLP08, KUE⁺00, LJC⁺10, Mah90, ACF⁺11, FKA⁺17]. **Inter** [FWZ91]. **Inter-Semiconductor** [FWZ91]. **Interacting** [KWB06]. **Interaction** [AEPR92, Liu90, HYY⁺22, KC18]. **Interactions** [TMWS91, PFGDM20]. **Interactive** [CWHP99, CLF87, KPM⁺96, LSS93, RBMF87, RTRG⁺07, SS89, THC⁺96, VR00, WBF04]. **Interchange** [YK04]. **interconnect** [SDI⁺19]. **interest** [CdVL⁺18]. **Interface** [Ano93d, Ano94b, BDG⁺00, KFM⁺10, LWOB97, MPI98, SLG95, ESW⁺12, IMS16, ZKRA14, BC14, BBH⁺06, BRU05, Cot04, GL04, IBC⁺10, KKDV03, KKD05, LK10, SWHP05, TGT05]. **interfaces** [BG22]. **Interference** [KCC⁺06, TNCC21]. **Interference-Aware** [KCC⁺06]. **Interleaving** [KNP⁺87]. **International** [Ano91b, Ano92g, Ano92e, Ano92f, Ano93a, Ano94a, Ano95b, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a, Ano98a, Gaf88, Lee03, Ano98b, Ano99, DBA⁺09, DBM⁺11, Ano91a, Ano00, Ano01b]. **Internet** [EDSV06, Rao02]. **Interoperability** [Kal09b, LDB⁺06, SIC⁺19, EKD⁺12]. **Interpolation** [JLO05, SBBS06]. **Interpretation** [Fei99]. **Intrepid** [BWB⁺10]. **Introduction** [Ano02o, BM13, BL18, BQOS21, DT99, DT13, Hau94, KM20, Mas19, Nag93, OV13, SB18, SDS12, Ste01, Tur95, dS21]. **Inverse** [Cho01]. **inverses** [MGFP20]. **inversion** [BGM15]. **Investigating** [CW05, PHF21]. **Investigation** [CK01]. **Investigations** [Mav02]. **investing** [DTL19]. **Invitation** [Mar87c]. **Invocation** [DP05]. **Involving** [MBF⁺11]. **IO** [BIC⁺10, LRT07]. **Ion** [Reu92]. **ions** [KFJ20]. **Iowa** [BCYS11]. **IPC** [Udd17]. **iPSC** [HGD91, KR94, KR95]. **iPsc/** [KR94]. **iPSC/860** [HGD91, KR95]. **Ireland** [MCS⁺06]. **Irregular** [Cza03, Man97, TRS⁺10, KPR17, MMHL11]. **ischaemic** [SKS⁺13]. **Ising** [BMT89, BRT⁺92]. **island** [NC18]. **island-based** [NC18]. **isolating** [ALL13]. **Issue** [BV11, BM13, BQOS21, BE18, DT97, DT99, DT06, DT13, DT17, Fol90b, Hau94, KM20, MPI98, Mas19, ME14, Nag93, OV13, PA11, Yel04, dS21, BH17, Cec20, DT19, HdV18, MFB⁺19, WH20, WD19, WD21, SDS12]. **issued** [CSGM17]. **Issues** [AD93, BMWD87, CLSS09, CEL⁺97, Dem90, EGMP93, Men00, GCSK13]. **Italy** [OL05]. **Iterated** [RR96]. **iterations** [MC21]. **Iterative** [BDL⁺07, CSV91, CMN12, CM97, FFR⁺10, MC90, MCW⁺00, PHC⁺10, SC04b, SCFK04, AKP⁺18, CSGM17, CvG11]. **Iteratively** [ML20]. **Jacobi** [BBDH14]. **Jaguar** [BWB⁺10]. **Jam** [MCG04]. **Japan** [EM89, IHMM87]. **Java** [BJK07]. **Jini** [Hua03]. **Jini-Based** [Hua03]. **JISGA** [Hua03]. **job** [GJMV18]. **Josephson** [IKY⁺10]. **Journal** [Ano91b, Ano91a, Ano92g, Ano92e, Ano92f, Ano93a, Ano94a, Ano95b, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a, Ano98b, Ano98a, Ano99, Ano00, Ano01b]. **JPEG** [BKRSR09, CLBS17]. **JPL** [Din91]. **Jumpshot** [ZLGS99]. **Junctions** [IKY⁺10]. **Jupiter** [Tho90]. **Just** [BPBL11]. **Just-in-Time** [BPBL11]. **K-computer** [INY⁺14]. **Kepler** [HPW⁺16]. **Kernel** [TM99, ALL13, BLU⁺22, Jon12, LNSMMA15]. **Kernels** [BELF07, IYV04,

EHTW21, HCCG20, MAB⁺13, WKLW19]. **key** [KV19, KES⁺17]. **keys** [BSK14]. **Kinetics** [ARR99]. **KNC** [HCCG20]. **Knowledge** [AEG⁺03, Cap09, vLRA⁺03, ECG⁺13, KT94]. **Known** [Ano92h]. **Kokkos** [DWT⁺19]. **Kopelman** [CBV97]. **Krylov** [GKMT00, ATL⁺15, AKP⁺18, CMN12, MSKM21]. **Kutta** [KR11, RR96].

L [dSSB⁺08]. **LA-MPI** [YSP⁺05]. **Laboratory** [ABF⁺08, Bus87, GVR⁺21, BBB⁺91b, Don89, DGH⁺93, HGD91]. **LABS** [RRJ⁺20]. **Lagrange** [MT89, ZB20]. **Lagrangian** [KRR19]. **LAM** [SSB⁺05]. **LAM/MPI** [SSB⁺05]. **Laminar** [EDS95, SG91]. **Land** [HVKW05]. **landscape** [CYZ⁺20, GSND20]. **Language** [CCZ07, LD07, Pan92, Sha88, CH13, EKD⁺12, NMI⁺19, PHF21]. **Languages** [Kal09b, KKS04, YHG⁺07, JO92]. **Large** [AS00, AK91, AGL⁺87, BAM⁺16, BGG05, BDP01, BCCL09, Ber92, BWB⁺10, BBA87, BCC⁺06, CWHP99, CK01, Ede93, Ewi88, Fra05, FBW⁺87, GDKWS15, GMWG10, Gun00, HYY⁺22, HSLK11, Joh01, KNP⁺87, KUE⁺00, LT88, LM03, LDW⁺12, LC06, MC90, MR04, MRD⁺15, Mor89b, NKR90, PPK⁺04, PS87, RGB⁺18, SE92, SD87, TRS⁺10, UF89, VS03, WT99, YRA⁺02, ZRÇ⁺06, ABH⁺18, Ade21, BLOR18, BCYS11, CvG11, DCD⁺13, EEL15, FU12, HIT⁺14, JBOT19, MBHF15, MJD16, RDG12, STP⁺13, SIC⁺19, VOL⁺14, ZBMK11]. **Large-Scale** [AS00, AK91, BDP01, Ber92, BBA87, CWHP99, Ewi88, Fra05, Gun00, HSLK11, Joh01, KUE⁺00, LC06, Mor89b, NKR90, SD87, YRA⁺02, ZRÇ⁺06, BAM⁺16, GDKWS15, GMWG10, HYY⁺22, LM03, LDW⁺12, MRD⁺15, BLOR18, EEL15, JBOT19, MBHF15, MJD16, STP⁺13, SIC⁺19, VOL⁺14]. **Largest** [Ano92h]. **Largest-Known** [Ano92h]. **Latent** [WWA⁺11]. **Lattice** [BGK⁺90, Din91, JC12, LRBS89, Mor89a, MSK92, CGST19, HBKR21, Liu90, Mon12, OKTR11, RWM17, WKLW21, YIYD19, YZZW21, SBBS06]. **Law** [HE01]. **laws** [Hea15, LH19]. **Lax** [YFS⁺14]. **layout** [HLW⁺16, SZ11]. **layouts** [RWM17]. **Lazy** [BPBL11]. **LBLAS** [KJH96, JO92]. **Leading** [OCC⁺08, SSQ08]. **Learned** [PK04, IKMS⁺19]. **Learning** [AH93, AAB⁺21c, AK93, CBM13, DMJS19, DEQO21, EEL15, EJD⁺19, JMM⁺21, KFJ20, KWEF18, MP18, NSI20, OWC⁺21]. **Leasing** [EW06]. **Legacy** [Ano02h]. **Legion** [GNTLH97]. **Length** [DLY⁺98, BSK14]. **lesions** [SKS⁺13]. **Lessons** [PK04]. **Level** [BCC⁺01, BBC⁺00, YK04, DEL⁺12, GBB18, IK18, LRG⁺16, Udd17, DD89, DD91]. **Leveraging** [CH13, LYL⁺16, SFLC18]. **Liber8Tion** [Pla09]. **Libraries** [DMT01, GFD05, LDB⁺06, PBD⁺01, PMS⁺04, PH19]. **Library** [BK07, CE00, MA15, BLC17, DWT⁺19, DEL⁺12, JC12, LNK22, Poz97]. **Ligature** [KBA00]. **light** [HYY⁺22]. **light-matter** [HYY⁺22]. **Lightspeed** [PPK⁺04]. **lightweight** [GS18, SSU⁺12]. **like** [CSV91]. **limitations** [CGW19, SPHW18]. **Limited** [KR11, TWK87]. **Limits** [Amd88, THH⁺13]. **Linda** [Mat95, SSNM92]. **Line** [LWOB97, Ade21]. **Linear** [AGL⁺87, BS88, BDL⁺07, CDQS04, CL95, CDP⁺94, Don02a, Don02b, Ede93, GJMS88, JO92, KVY⁺90, KJH96, MC90, Ma00, MA15, Man97, NZ93, PB19, Poz97, WT99, de 89, AAB⁺21a, ATD17, CvG11, FTB13, AAT⁺20, Kum89, LRLG19, MBvdG13, ML20, RDG12, SPHW18]. **Link** [TLG98, PS87]. **LINPACK** [DL09]. **Linux** [ALL13, Ano01a, CK01, GSHL03, Jon12, LWL05, SG09a, YIN⁺11]. **Liquid** [DQFW90]. **Livermore** [WGI90]. **Living** [GHZ10]. **Load** [BG09, BFNV07, GS05, GLGLB⁺11, MYCR06, ZBMK11]. **Load-Balanced** [BFNV07]. **Loads** [DLG06]. **Local** [BRT⁺92, MYC92,

MTW⁺²², PNFC16, RRJ⁺²⁰, JO92, KJH96]. **Local-Creutz** [BRT⁺⁹²]. **Locality** [AKW19, BPBL11, PHC⁺¹⁰]. **Localization** [CYT⁺⁰², MJGL13]. **Localized** [WCE95]. **Logical** [Chu99, SR98]. **Long** [Gro03, HRM89]. **longest** [Ozs16]. **look** [BBD⁺¹⁷]. **Looking** [AK93]. **Loop** [IS96, YK04, RCAE⁺²⁰, WKLW19]. **Loops** [WGI90, RRJ⁺²⁰]. **Loss** [ZOF90]. **Lossless** [Arn07]. **lossy** [CCO⁺¹⁹, CDL⁺¹⁹, TDG⁺¹⁹]. **Low** [DF08, KR11]. **Low-Complexity** [DF08]. **Low-Storage** [KR11]. **Lu** [Tis97].

M2L [KKB⁺²¹]. **Machine** [AAB^{+21c}, BR03, CC95, CSV91, CBV97, EEL15, IKMS⁺¹⁹, KFJ20, MC90, SS89, Wit92, ZK93, BAP⁺¹², CBM13, DMJS19, DEQO21, EJD⁺¹⁹, KWEF18, MP18, NSI20, SK20, SSU⁺¹², BJ92, GKH⁺⁹¹, HZ91, KKDV03, KKD05, LK10, LPG88, Don87]. **machine-learning-based** [CBM13]. **Machines** [AH93, BBDR95, CDT05, CB95, HC10, HGWN14, Jea13, KS89]. **macromolecular** [DF18, MCR⁺¹⁷]. **made** [ASHH16]. **Madre** [SS10]. **MAGMA** [AAT⁺²⁰, NTD10]. **magnetic** [JKBW18]. **Magnetically** [ACG⁺⁹⁰]. **Magnetohydrodynamic** [ACG⁺⁹⁰, FU12]. **mainstream** [BHK⁺¹³]. **Major** [GL09]. **makes** [SDI⁺¹⁹]. **Making** [BPBL11, Dee10, GWKN08, BHK⁺¹³, KT94]. **malleable** [BPR18]. **Man** [Wit92]. **Manage** [HBSP08, ESW⁺¹²]. **Management** [AF09, AD93, BPK⁺⁰⁷, DD06, Dar00, HTSK90, MWM⁺⁰⁸, MFK09, PK04, SE92, YB07, PBB⁺²⁰]. **manager** [IK18]. **Managing** [Spr06, TGP19]. **manufacturing** [TBB⁺²²]. **Many** [GLZS14, TMWS91, AKC⁺¹⁹, BH12, INS⁺²⁰, LDLD19, LNSMMA15, MSPSI15, PSV⁺¹⁶, Udd17, VRB⁺¹⁹, VOL⁺¹⁴, YFS⁺¹⁴]. **Many-Body** [TMWS91]. **many-core** [AKC⁺¹⁹, BH12, INS⁺²⁰, LNSMMA15, MSPSI15, PSV⁺¹⁶, Udd17, VRB⁺¹⁹, VOL⁺¹⁴, YFS⁺¹⁴]. **many-nucleon** [LDLD19]. **manycore** [AGC⁺¹⁹, DJJ⁺¹⁹, HFV⁺¹², LTPK17, MBC⁺¹⁸, SCD⁺¹⁹]. **manycores** [BH17]. **Mapping** [CDRV15, QH08, ASAK19, DCN17, GJMV18, Jea13, KPR17]. **Mappings** [PTGB02]. **Marenostrum** [RBL08]. **marine** [GEKO19]. **Market** [McN87, NK89, WPBB01]. **Market-Based** [WPBB01]. **Markets** [IJJ93]. **Mass** [McN87]. **Massive** [GNB11, dSSB⁺⁰⁸, CdVL⁺¹⁸, GVR⁺²¹]. **Massive-Scale** [GNB11]. **Massively** [BBDR95, CH94, CBW95, CB95, Dem90, DCLS19, HVWS09, HVSW09, HS93, HZ91, JL89, Jon92, LPJ98, MA15, MPG93, Mon89, NZ93, PK04, SBF90, SCB⁺⁹⁵, SK92, TMW⁺⁹⁹, AHB⁺¹⁶, BCLP17, GEKO19, IJB22, KHS⁺¹⁹, KRR19, KDH18, NMAE13, RMV⁺¹⁹, SPHW18, YJZN22]. **match** [Ozs16]. **Matching** [ZC92, HFV⁺¹²]. **Materials** [EGG05, GKN⁺⁹⁶, KVVY⁺⁹⁰, Nak99, WLC91, ZOF90, MPD⁺¹², PHF21]. **Mathematical** [Mon89]. **Mathematics** [Don89]. **MATLAB** [BK07, Lus09b, ZZG⁺¹⁴]. **Matrices** [KC92a, KC92b]. **Matrix** [AGL⁺⁸⁷, Chu99, DL09, GG11, IYV04, MCG04, NKR90, BDC21, BJWS20, DEKV92, EHTW21, GG14, GGO16, HDL⁺¹⁵, MSHPV18, PHF21, SCR11, SMK⁺²⁰, WZH⁺²⁰, YYD19, YLL⁺¹⁴]. **matrix-free** [PHF21, SMK⁺²⁰]. **Matrix-vector** [GG11, GGO16, YLL⁺¹⁴]. **matter** [GHHS15, HYY⁺²²]. **Maximization** [GLGLB⁺¹¹]. **Maximizing** [PIR⁺²⁰]. **MCell** [CBSB01, CBB⁺⁰⁴]. **MCHF** [SYF96]. **Means** [BRT⁺⁹²]. **Measure** [BH06]. **Measurement** [MSMW07, FU12]. **Measuring** [FGJ⁺⁰⁴, Har11, KKS04, SB04]. **mechanically** [MBvdG13]. **Mechanics** [HOPB92, Her88, Ytt97]. **Mechanism**

[DZRS99, SK20]. **mechanisms** [CDG⁺21, GGMJF⁺20]. **Media** [PGTS10]. **medical** [THH⁺13]. **Medicine** [SSNM92]. **Mediterranean** [CDG⁺14]. **Medium** [MHW15]. **Meetings** [Ano91c, Ano91d, Ano91e, Ano92i, Ano92j, Ano92k, Ano92l, Ano92m, Ano93b, Ano93c, Ano98c]. **Melting** [MWC⁺05]. **Member** [HTSK90]. **memetic** [NC18]. **memoization** [CGGC⁺16]. **Memoriam** [Mar91]. **memories** [TKSK88]. **Memory** [AH93, AD93, BFL99, BMWD87, Bri10, BEF⁺95, CDT05, CWG09, CB95, FSS13, GJMS88, GSHL03, Gir02, HC10, HL10, HD05, JLL04, JMC05, MWAR⁺87, MCW⁺00, NPT⁺06, NTKP06, WT99, YRA⁺02, YK04, YIN⁺11, ZC92, BH12, CHT⁺19, DEKV92, DCN17, HTD⁺14, HGMW12, IK18, JO92, KDO16, LFB⁺15, LCZ⁺15, RMV⁺19, SPN14, SB19, THDS19, Wal18, WZHG17, YIYD19, SS10]. **Memory-Aware** [SS10]. **memory-efficient** [RMV⁺19]. **merger** [HLH⁺19]. **Merging** [YBA⁺03]. **Mesh** [DFS⁺05, HT04b, Mav02, MCW⁺00, SR05, WCE95, WCDS99, DCLS19, ZMG⁺21]. **Mesh-Iterative** [MCW⁺00]. **Meshes** [Ytt97, KC18]. **Meso** [GGS01]. **Meso-Scale** [GGS01]. **Message** [Ano93d, Ano94b, CWG09, MPI98, BBG⁺14, SMZ⁺18, ZKRA14, BC14, BBH⁺06, BRU05, Cot04, GL04, IBC⁺10, KKDV03, KKD05, LK10, SWHP05, SLG95, TGT05]. **Message-Passing** [Ano93d, Ano94b, CWG09, MPI98, SMZ⁺18, SLG95]. **Messages** [JW06]. **Messaging** [KFM⁺10]. **Metacomputing** [FK97, GS99]. **METADOCK** [ICPSG18]. **metaheuristic** [ICPSG18]. **Metaheuristics** [QH08, TPG⁺18]. **Metal** [TBB⁺22, NMAE13]. **metal/polymer** [NMAE13]. **Metals** [Cla91]. **Metascheduling** [Mat03]. **Method** [DP05, FCLG07, Man97, SG91, Tis97, de 89, Ade21, BBDH14, FIMU19, HLZ⁺20, KKB⁺21, MMHL11, MMDA19, MGFP20, OKTR11, PH19, SPHW18, TKSK88, YZZW21, YB12, CKE08, SBBS06]. **Methods** [AD93, ACG⁺90, AGL⁺87, BMWD87, CC95, CSV91, FWSW02, HOPB92, HJ96, MC90, MG87, Meu88, MR90, PHC⁺10, RR96, SCFK04, TXD⁺07, THL88, AAB⁺21a, AAB⁺21b, CMN12, DTL⁺21, EKF⁺19, IYK16, ICPSG18, JdSA⁺17, KLR⁺21, KFM⁺21, Lai93, Mon12, SMK⁺20, ŚCKW19, UZM⁺14, Nag89]. **Metric** [HE01, DHL16]. **Metrics** [CMS⁺11, Num04, Ste04]. **Mexico** [Bus87]. **MFIX** [MAF⁺22]. **MFIX-Exa** [MAF⁺22]. **MHD** [ACG⁺90]. **MIC** [HLS⁺17, SHK⁺18]. **Micro** [BWB⁺10, SKS⁺13]. **Micro-benchmarks** [BWB⁺10]. **micro-ischaemic** [SKS⁺13]. **Microbenchmarks** [JLL04]. **Microcanonical** [BMT89]. **microfluidic** [KDH18]. **micromagnetics** [YJZN22]. **Microprocessors** [WT99]. **Microscopic** [YFH⁺96]. **microscopy** [RPdB⁺19, TKA⁺17]. **microstructure** [TBB⁺22]. **Microtasked** [MSK92]. **Microtasking** [HA91]. **microthreaded** [Udd17]. **MICs** [TKA⁺17]. **Middleware** [BA01, CKPD99, CDCV06, EDSV06, MCS⁺06]. **Migration** [KLJ87, UB95, QHCC17]. **millions** [LYL⁺16]. **MIMD** [AH93, BOD⁺91, FFNP97]. **Mimicking** [ACD07]. **Mini** [BGB⁺18, Gen88]. **Mini-applications** [BGB⁺18]. **Mini-Supercomputers** [Gen88]. **MiniApps** [MDH⁺18]. **minimal** [LBP18]. **Minimization** [Rao02, LPB⁺16]. **Minnesota** [Aus92, ATD⁺88]. **MiPax** [HKK88]. **MIPSPRO** [CW05]. **Missing** [Mar87d]. **Missions** [SKB01]. **Mixed** [Ano02b, BDL⁺07, AAB⁺21a]. **mixed-precision** [AAB⁺21a]. **MM** [MFP⁺17]. **MM2** [PUR94]. **MMF** [LNK22]. **Mobile** [FP02, QWIC02, YBA⁺03]. **Mode**

[LRT07, HHSM19]. **Model** [ATN⁺00, ACD07, ABAS87, BFLL99, BE07, BFNV07, BG02, BMT89, BRT⁺92, CBW95, DVC88, GS05, GP93, Ish91, JLO05, Kep04a, KJ05, KM95, LR07, LPJ98, PPR03, SSSW91, SG09b, SG09a, SR05, Ste09a, TD08, VFD04, VC89, WBG06, WHL03, AGC⁺19, AWWG19, ABH⁺18, CDL20, CDG⁺14, CMHB15, DAB⁺12, EDB19, EMP⁺18, EAG⁺19, GDKWS15, IYK16, KKL⁺19, LBP18, LNK22, MKM⁺19, PMP⁺20, SDF⁺17, TNLP13, WDH⁺15, YWL⁺14, Cow08, CJK⁺05, DVW⁺12, DEE⁺12, DJC05, ESW⁺12, HVKW05, JLO05, KTWL18, LJO05, MS05, MW12, PLS05, WD05]. **Modeled** [WJS⁺90]. **Modeling** [AS00, AGHR19, BCZM07, BELF07, CWHP99, CC95, CTD⁺05, DR06, DDM87, DSD⁺91, DCN17, EGG05, EDS95, HVWS09, HVSW09, JO90, MOK00, MWC⁺05, Men00, MCU⁺13, Rad18, SG91, SVBP13, SK92, THC⁺96, THL88, WSCZ05, YK07, YW93, CVJ12, CHWS20, DCM⁺17, GSK⁺15, JKBW18, MMHL11, OWC⁺21, SE12, SK20, SKP⁺22, UCZ⁺15]. **modelling** [QHCC17, STS17]. **Models** [ARR99, BV11, BRGR11, BR03, BBD00, DGD⁺04, DFC90, Gir02, HD05, HAF⁺96, IJ93, Kal09b, LJO05, LR09, LRO10, MA89, PA11, PS87, RW03, Ste04, Ste09b, UB95, VDB04, WOS08, WW92, ZC92, de 89, Ade21, BH17, DTD14, DEL⁺12, EJD⁺19, HCC⁺22, HLS⁺17, JMM⁺21, KdOCR⁺20, KBY⁺19, MEK⁺19, MTW⁺22, MDH⁺18, SCD⁺19, VSHN14, WKLW19]. **Modern** [BDG⁺00, WET⁺19, ESW⁺12, SB19]. **Modified** [HB90]. **Modisazure** [ACF⁺11]. **modular** [AFGQO19]. **Module** [PLS05]. **Modulo** [Gro03]. **Molecular** [BYT91, CGB⁺94, CH94, CWG09, CSY10, DQFW90, DGD⁺04, DVC88, DFC90, KVY⁺90, MP94, Nak99, NHG⁺96, AKC⁺19, AKW19, HXW⁺13, KFJ20, KNPS21, PIR⁺20, SDI⁺19]. **molecule** [JMM⁺21]. **Monitor** [BH06, SSU⁺12]. **Monitoring** [LWOB97, MR04, PHB04, SC09, Spr06, VR00]. **Monte** [BEH⁺90, CH94, DFT⁺15, FSS13, LM03, LPB⁺16, MWAR⁺87, MB87, MFP⁺17, SABD13, SSSW91, SSR⁺14, VSS⁺13, ZK93]. **mortar** [LPB⁺16]. **Morton** [Wal18]. **MOSFET** [VSS⁺13]. **MOSFETs** [MV20]. **MOTEUR** [GMLP08]. **motif** [FAB⁺21]. **motion** [NSI20]. **Motions** [DFC90]. **moulded** [WSD⁺14]. **movement** [PG18]. **Moveout** [LT90]. **moving** [BG22]. **MP** [AEPR92, Del93, DH96, Lai93, LT88, MYC92, MSK92, YW93]. **MP/416** [THL88]. **MPH** [HD05]. **MPI** [SLG95, Ano94b, Ano01a, BBG⁺10, BCG⁺10, BBS99, BBG⁺14, BF01, BBDH14, BBH⁺13, BIC⁺10, BHK⁺06, BBC⁺00, BRM03, Bri10, CBL10, DJJ⁺19, DLB07, DGB⁺14, FD04, FCLG07, FSC⁺11, GFD05, GVF⁺18, HC10, HGMW12, IMS16, KWEF18, KMH⁺14, LRG⁺16, LRT07, kLCCW07, MS02, MMDA19, OL05, OGM⁺16, RTRG⁺07, SCB14, SSB⁺05, SDJ17, SC04b, SIC⁺19, THDS19, YSP⁺05, ZKRA14, SZC12]. **MPI-2** [HGMW12]. **MPI-Based** [FSC⁺11]. **MPI-IO** [BIC⁺10, LRT07]. **MPI-OpenMP** [MS02]. **MPI/OpenACC** [OGM⁺16]. **MPI/OpenMP** [MMDA19]. **Mpi/Openmp/GPU** [SZC12]. **MPI2** [MPI98]. **MPI.T** [GVF⁺18]. **MPICH** [BHK⁺06, Cot04, GL97, TRG05]. **MPICH-G2** [Cot04]. **MPICH-V** [BHK⁺06]. **MrBayes** [KPST18]. **MRI** [SKS⁺13]. **Much** [RAGW93]. **Multi** [BKRSR09, BH12, Bri10, KDH11, OKTR11, SSR⁺14, TNBG07, YK04, APD⁺15, BGM15, BGO20, CAE⁺13, CZR⁺11, DAC⁺14, HCC⁺22, IKMS⁺19, IK18, KTWL18, KKL⁺19, KILL13, LDW⁺12, LVA⁺13, LNSMMA15, MGFP20, PSV⁺16, TKA⁺17, VSS⁺13, VMPW20, VOL⁺14, YFS⁺14]. **multi-** [PSV⁺16]. **Multi-Core** [Bri10, BH12, KDH11, SSR⁺14, CAE⁺13,

KILL13, LDW⁺¹², LNSMMA15, TKA⁺¹⁷, VOL⁺¹⁴, YFS⁺¹⁴. **Multi-Criteria** [BKRSR09]. **multi-GPGPUs** [APD⁺¹⁵]. **Multi-GPU** [OKTR11, BGM15, KTWL18, KKL⁺¹⁹, VMPW20]. **Multi-Hop** [TNBG07]. **Multi-Level** [YK04]. **multi-order** [CZR⁺¹¹]. **multi-physics** [DAC⁺¹⁴, HCC⁺²²]. **multi-processor** [BGM15]. **multi-projection** [MGFP20]. **multi-scale** [IKMS⁺¹⁹]. **multi-step** [BGO20]. **multi-subband** [VSS⁺¹³]. **multi-tasking** [IK18]. **multi-threaded** [LVA⁺¹³]. **Multiblock** [KDL01, Ytt97]. **Multibody** [BGI⁺⁹⁹]. **Multicommodity** [NK89]. **Multicomponent** [HD05, SVN09]. **Multicomputer** [Man97]. **Multicomputers** [MOK00]. **Multicore** [CWG09, BSK14, BSH⁺¹⁶, DTD14, DDKK19, LWT⁺¹¹, MPD⁺¹², MBC⁺¹⁸, OPW⁺¹², THH⁺¹³]. **multicores** [BH17]. **Multicriteria** [CJ06]. **Multidimensional** [HLW00]. **Multidisciplinary** [BGB⁺⁹⁶, KDO16]. **Multidomain** [KS05]. **multifold** [PIR⁺²⁰]. **Multifrontal** [AD89, AD93, BMWD87]. **Multigrid** [DMT97, SC04a, AG18, BGO20, DTL⁺²¹, GEKO19, HRW19, ZZG⁺¹⁴]. **Multilevel** [DW97, EGG05, WCDS99, Sta19]. **Multimodal** [FWSW02]. **Multiparadigm** [AS00]. **Multiphase** [ZC92, FIMU19, HBKR21, YZZW21, ZB20]. **Multiphysics** [EW22, KMW⁺¹³, LJO05, MCW⁺⁰⁰, MWC⁺⁰⁵, PK04, MC21, ZMG⁺²¹]. **Multiple** [DLG06, MYCR06, Mor89b, Nak99, BLOR18, BDFVP15, HGWN14, KDO16, MDH⁺¹⁸, RDG12, SKS⁺¹³]. **multiplication** [EHTW21, GGO16, SCR11, YLL⁺¹⁴]. **multiplications** [WZH⁺²⁰]. **Multiply** [GG11]. **Multipole** [CKE08, KMPJ08, IYK16, KKB⁺²¹, YB12]. **Multiprocessing** [Ano87a, DD91, YM91]. **Multiprocessor** [AD89, BS88, DEKV92, KPR17]. **Multiprocessors** [AD93, DD91, Gir02, Wad99]. **Multiprogramming** [MA89]. **Multiprotocol** [BHK⁺⁰⁶]. **multiscale** [CDG⁺²¹]. **Multistage** [GMWG10]. **Multitasking** [MYC92, THL88, UF89]. **multithreaded** [HFV⁺¹²]. **Multithreading** [BBG⁺¹⁰]. **Multiunit** [GCL93]. **muscle** [IKMS⁺¹⁹]. **Musings** [Luc09]. **Myth** [Ano87c]. **NAMD** [NHG⁺⁹⁶]. **Nankai** [BAM⁺¹⁶]. **nanometre** [CHW⁺¹⁵]. **nanoparticles** [KFJ20]. **Nanophase** [Nak99]. **NAS** [BBB^{+91a}]. **NASA** [MAB07, PLS05]. **National** [ABF⁺⁰⁸, BBB^{+91b}, Bus87, Don89, DGH⁺⁹³, HGD91, UB95, BEW16, All88, Blo87, Mir90, Web91]. **Navier** [Mav02, SBF90]. **nCube** [CL95]. **Near** [Arn07, KFJ20]. **Near-Lossless** [Arn07]. **nearest** [DSH⁺¹⁶]. **NEC** [Mor89a]. **Neck** [GKB93]. **Need** [GS09, Ste09a]. **Needs** [Ano87e, HBSM03]. **neighbour** [DSH⁺¹⁶]. **Nek5000** [MGS⁺¹⁵, WZH⁺²⁰]. **NEMO** [EMP⁺¹⁸]. **NERSC** [HBSM03]. **NES** [AMC⁺¹⁸]. **nests** [RCAE⁺²⁰]. **Net** [AEG⁺⁰³]. **Netlets** [Rao02]. **nets** [BDC21]. **NetSolve** [CD97]. **Network** [ACD07, AM00, AB01, AMC⁺¹⁸, BL99, BSCC03, BGF02, CD06, CD97, CK01, Chu99, DD06, DFMD94, LC06, MOK00, NZ93, PHB04, RS03, WEPB12, ABH⁺¹⁸, OF17, VEMR17]. **Network-Based** [AM00]. **Network-Enabled** [CD97, DD06]. **network-on-chip** [VEMR17]. **Network-theoretic** [WEPB12]. **Networked** [FWSW02]. **Networking** [Ano87e]. **Networks** [AKP08, CHZ02, FP02, Gum00, JMP02, Mar89a, MAJJS03, QWIC02, RES87, TNBG07, VLO⁺⁰⁸, VRB⁺¹⁹]. **Neural** [AM00, Her88, RES87, BDC21, VRB⁺¹⁹]. **neuroimaging** [KdOCR⁺²⁰, MRD⁺¹⁵].

neuron [CHWS20]. **neutron** [BSH⁺16, DFT⁺15, SSR⁺14]. **Newton** [DTL⁺21, GKMT00]. **Newton-multigrid** [DTL⁺21]. **Next** [DE03, HT04a, MFB⁺19, ZKRA14]. **next-generation** [MFB⁺19, ZKRA14]. **NMR** [BHK⁺88]. **No** [Ano87c]. **Nodal** [FSN08]. **Node** [KHP⁺04, BGO20, IK18, KL13]. **node-level** [IK18]. **nodes** [HYH⁺20, TNLP13]. **NOE** [CGB⁺94]. **NOE-Restrained** [CGB⁺94]. **noise** [ALL13, WLFH16]. **Non** [BCG⁺10, CAK⁺07, GSHL03, uITH07, AWWG19, RDG12, SLL⁺19]. **Non-Data-Communication** [BCG⁺10]. **Non-Dedicated** [CAK⁺07, GSHL03]. **non-deterministic** [SLL⁺19]. **non-Hermitian** [RDG12]. **non-hydrostatic** [AWWG19]. **Non-Polynomial** [uITH07]. **nonblocking** [DJJ⁺19, WLFH16]. **nondeterminism** [CRS⁺19]. **Nonequilibrium** [YW93]. **nonhydrostatic** [AGC⁺19]. **noninteracting** [PMP⁺20]. **noniterative** [IMB⁺19]. **Nonlinear** [AK91, ABAS87, HT04b, KVY⁺90, DTL⁺21, GEKO19, JRT16, KLR⁺21]. **nonstationary** [DTL⁺21]. **Nonsymmetric** [KC92a, KC92b, MC90, Ma00]. **Normal** [YRA⁺02, Haj93]. **North** [LC90]. **Northern** [UB95]. **Note** [DT17, Cec20, DT18, DT19, WD18, WD19, WD21]. **Notice** [Ano17a]. **Novel** [CGB⁺94, DGJ09, FWZ91, SG07, Cec20, HTD⁺14, PNFC16]. **Novo** [NKiN⁺08]. **NSF** [Bra91, Sci92, Sal87]. **NSF-Sponsored** [Sal87]. **NT** [Ano01a, CLP⁺99]. **NuChart** [TDM⁺17]. **NuChart-II** [TDM⁺17]. **Nuclear** [FSS13, IHMM87, LDLD19]. **nucleon** [LDLD19]. **NUMA** [Jea13, MKM⁺19, OPW⁺12]. **Number** [Ano92h, FG97, FU12]. **Numbers** [BEF⁺95]. **Numerical** [ABF⁺99, ABB⁺94, DMT01, DE03, Ede93, IJ93, LWL05, Nag89, PR95, PPR03, PBD⁺01, Poz97, RAB⁺15, RIF01, RKKC90, SG91, THDC09, AAB⁺21a, AAA⁺22, BG22, BBA⁺21, BSS15, MAB⁺13, MKM⁺19, SDF⁺17]. **Numerically** [Mah90, WJS⁺90]. **Nvidia** [BLU⁺22, KNPS21]. **NWChem** [JDD18].

O [BCP⁺20, DLY⁺98, DEL⁺12, IBC⁺10, KKCB98, KES⁺17, LPJ98, MMD98, MS95, NFK98, OWO98, PH91, SW01, SR98, TLG98, TD08, TNCC21, WWA⁺11]. **Oak** [ABF⁺08, DGH⁺93, HGD91]. **Object** [NHG⁺96, SE12]. **Object-Oriented** [NHG⁺96]. **Objective** [PPK09]. **oblivious** [CHT⁺19]. **observable** [RAB⁺15]. **observations** [ZKRA14]. **obstacle** [CCBS11]. **Obstacles** [MBF⁺11]. **Occupancy** [GLGLB⁺11]. **Ocean** [Cow08, HAF⁺96, JO90, KJ05, KM95, WSCZ05, CDG⁺14, EMP⁺18]. **oceanographic** [CBA⁺18]. **October** [OL05]. **ODE** [BCCL09, BH99, KR11]. **Off** [SR05]. **Offers** [Ano87a]. **offline** [dRADS⁺18a]. **Offload** [BRU05]. **Offloading** [GWKN08, HCCG20]. **Ohio** [BBW90]. **Oil** [KR94, KR95]. **OLCF's** [NBE⁺22]. **On-Board** [SPTT08]. **on-Demand** [EW06]. **On-Line** [LWOB97]. **On-the-fly** [GSA⁺19]. **One** [GFD05, LRT07, TGT05, Udd17]. **One-IPC** [Udd17]. **One-Sided** [GFD05, LRT07, TGT05]. **Ongoing** [MEK⁺19]. **Online** [FAB⁺21, LC06]. **Onto** [QH08]. **Open** [LWOB97, BSW⁺14, CGW19, GCSK13, AEG⁺03]. **OpenACC** [MGS⁺15, OGM⁺16, QHCC17]. **OpenCL** [ASAK19, CLBS17, RGB⁺18, RRJ⁺20]. **OpenDDA** [DGJ09]. **Opening** [PRT90]. **OpenMOC** [BSH⁺16]. **Openmp** [SZC12, BF01, BBDH14, BBC⁺00, HHSM19, LRLG19, MS02, MV20, MMDA19, OPW⁺12, THDS19]. **OpenMP-parallel** [HHSM19]. **Operating** [CW01, EDSV06, HI12, HI13, IH15].

Operation [BBR10, BHdR09]. **operational** [CBA⁺18]. **Operations** [FCLG07, GFD05, MS09, TRG05, TGT05, GG14, KMH⁺14, ŚCKW19]. **Operators** [FSN08, GRC08, ZM07, LMT⁺12]. **Opportunities** [Ano87a, Cap09, KMW⁺13]. **optical** [GSK⁺15]. **Optimal** [BR03, FG97, DEQO21, LTPK17]. **Optimisation** [BGB⁺18, VSS⁺13]. **Optimization** [AKP⁺18, ABB⁺94, BFLL99, BGB⁺96, BELF07, CGST19, HL10, HA91, IYV04, KMH⁺14, LT88, PPK09, RW03, SCD⁺19, SCB⁺95, SR05, TXD⁺07, TRG05, YLL⁺14, ABH⁺18, BRGR11, BH12, FIMU19, IMW⁺13, KES⁺17, NMAE13, SDJ17, SHK⁺18, UZM⁺14, WD21, YWL⁺14]. **Optimizations** [PSV⁺16, DCD⁺13, Jea13, PUR94, WKLW19]. **Optimize** [KKCB98, GVF⁺18]. **Optimized** [MSK92, THDS19, IK18]. **Optimizing** [AKC⁺19, DDKK19, FSS13, GG11, KILL13, MAB⁺13, MCG04, Mor89a, NSI20, TGT05, WCE95, WCDS99, BJWS20, EJD⁺19]. **Optorsim** [BCM⁺03]. **Order** [CC95, uITH07, THL88, CZR⁺11, KFM⁺21, LH19, OGM⁺16, PFGDM20, ŚCKW19, THDS19]. **ordering** [Wal18]. **orderings** [AKW19]. **ordinates** [DMSMG18]. **Organic** [CBL06]. **Organization** [FWSW02, FKT01]. **Organized** [BGF02]. **Organizing** [CBL06, GHZ10]. **Oriented** [Hua03, NHG⁺96, CMN12]. **Orography** [GS05]. **oscillatory** [SPHW18]. **OSWALD** [RGB⁺18]. **other** [CBA⁺18]. **Our** [WW92]. **outlooks** [RAB⁺15]. **output** [Lap22, LCZ⁺15, WVL⁺16]. **Overarching** [Kep04b]. **Overhead** [HYH⁺20, MSMW07]. **Overheads** [BCG⁺10, GNB11]. **Overlap** [BBDR95, BRU05, INY⁺14]. **Overlapping** [PR95, DJJ⁺19]. **overset** [KBY⁺19]. **Overview** [AGR⁺03, DFP⁺96, DJC05]. **P** [MAB⁺13, GNB11, SSU⁺12]. **P4** [Mat95]. **PACE** [NKP⁺00]. **Pacific** [JO90]. **Package** [RIF01, SYF96, QSX⁺20]. **PACO** [BQOS21]. **Pair** [Fro91]. **PAM** [CEL⁺97]. **PAM-CRASH** [CEL⁺97]. **Panel** [Sal87]. **PANORAMA** [DCM⁺17]. **Papers** [Lee03, Moh09, OL05, DT11, KKDV03]. **PAPI** [JDAD19]. **papillomavirus** [ABH⁺18]. **Par-BF** [LGDH16]. **Paradigm** [BGB⁺96, DCL⁺08]. **Parallel** [AWS01, AAC⁺97, AS00, APD⁺15, AK91, AM00, AHB⁺16, AEPR92, ABB⁺94, BGG05, BDP01, BCCL09, BBB⁺91a, BCZM07, BOD⁺91, BYCB05, BK07, BBDR95, BBC⁺00, BSH⁺16, BG00, BEF⁺95, BGB⁺96, BH99, CCH⁺88, CCZ07, CE00, CDH⁺93, CL95, CCBS11, CH94, CBW95, Cho01, CSV91, Chu99, CEL⁺97, CB95, CM97, CJK⁺05, DEKV92, DLY⁺98, Dem90, DIB00, DFS⁺05, DZRS99, DMT01, DZDR95, Ede93, EGG05, EDS95, FG97, Gaf88, GCCC⁺03, GKN⁺96, GKP97, GDS17, GP93, GGS01, GL97, GKMT00, HKK88, HVWS09, HVSW09, HR97, HdV18, HLW00, HJ96, HT04b, HS93, HZ91, IBC⁺10, JLO05, JL89, Jon92, KDL01, KC92a, KC92b, KT99, Kok88, KR11, KS05, Lap22, LJO05, LPJ98, LWOB97, Lus09b, MC90, MS09, MMD98, MA15, MS02, MSMW07, MT89, MWAR⁺87, MPG93, Mat95, Mav02, MD99, MWC⁺05]. **Parallel** [McR87, Meu88, MBF⁺11, Mon89, Mor89b, MSK92, MS95, NK89, NKR90, NKiN⁺08, NHG⁺96, NZ93, NFK98, NKP⁺00, OWO98, ODD07, Pan92, Pan97, PR95, PPR03, PC08a, PK04, RW03, RR96, RS03, SBF90, SWW94, SABD13, SW01, SS89, SPTT08, Sha88, SCB⁺95, SM06, SR98, Sim90, SSNM92, SG91, SK92, SBG10, SMW87, TBA⁺17, TLG98, TMW⁺99, TR92, Tis97, TD08, UB95, VLO⁺08, VSHN14, WSCZ05, WG07, YRA⁺02, YHG⁺07, YW93, Ytt97, ZK93, ZCZ⁺13, Ade21, AKW19, dRADS⁺18a, dRADS⁺18b, BLC17, BH12, BCLP17, CSC19, CMHB15, DKMT18, DAB⁺12,

DEL⁺¹², DCLS19, EJD⁺¹⁹, GBB18, GHL15, GHHS15, HLW⁺¹⁶, HLZ⁺²⁰, HLS⁺¹⁷, HHS19, IVG⁺²⁰, IMH⁺¹¹, IMH⁺¹², ICPSG18, ILCLG20, IJB22, IKMS⁺¹⁹, JdSA⁺¹⁷, KT94, KHS⁺¹⁹, KRR19, KES⁺¹⁷, KDH18, Kum89, LPG88, LGDH16, LSLR⁺²⁰, LWT⁺¹¹, LBP18, MV20].
parallel [MFB⁺¹⁹, MJD16, MS19, MSKM21, NMAE13, NSI20, PH19, QSX⁺²⁰, RMV⁺¹⁹, SPHW18, Sta19, SMZ⁺¹⁸, SB19, TRS13, TPG⁺¹⁸, THDS19, WV⁺¹⁶, WEPB12, YJZN22, ZWS21, DP05, KJ05, KKDV03, KKD05, LK10, Nag89].
Parallel-algorithm [AHB⁺¹⁶].
parallelisation [BSW⁺¹⁴, RCAE⁺²⁰, VSS⁺¹³, WSD⁺¹⁴].
Parallelism [ACM88, CFK⁺⁹⁴, MYC92, VRRL18, dSSB⁺⁰⁸, DMSMG18, DTL⁺²¹, Jon12, KDNE18]. **Parallelization** [AJL⁺⁹⁷, CDL20, CBV97, Cow08, Cza03, DGP⁺⁹⁷, GCD97, HE01, KM95, LP10, LVA⁺¹³, MCW⁺⁰⁰, Reu92, WBG06, CIWI17, CDG⁺¹⁴, MFP⁺¹⁷, MMDA19, Ozs16, SZC12]. **Parallelizing** [AFL⁺¹⁸].
Parameter [FBBC03, KFJ20, SH93].
Parameterizations [WD05]. **Parameters** [LR09]. **ParaScope** [CCH⁺⁸⁸].
PARCOACH [SCB14]. **Park** [UB95].
Parkbench [HL00]. **Parmetis** [LDGR03].
PaRSEC [ML20]. **Part** [HVWS09, HVSW09, SR05]. **Partial** [Key09, Meu88, RMS⁺¹⁸, KS89, YZC⁺¹⁵].
Participate [Mar87c]. **Particle** [DR06, DDM87, MB87, MD99, MR90, PGTS10, ABH⁺¹⁸, MBF⁺²¹, NSI20, WET⁺¹⁹].
particle-in-cell [WET⁺¹⁹]. **particles** [PMP⁺²⁰]. **Partition** [LQJG16].
Partitioned [MHW15, SBG10, ABD⁺¹⁸, ABG⁺¹⁹, LGDH16]. **Partitioner** [SR05].
Partitioner-Centric [SR05]. **Partitioning** [LR07, SR05, WCDS99, Ytt97, BJWS20, SABD13]. **Partitions** [WCE95]. **Passing** [Ano93d, Ano94b, BC14, BBH⁺⁰⁶, BRU05, CWG09, Cot04, GL04, IBC⁺¹⁰, KKDV03, KKD05, LK10, MPI98, SWHP05, TGT05, SMZ⁺¹⁸, ZKRA14, SLG95]. **PASSION** [KKCB98]. **Passive** [MBF⁺¹¹]. **Patching** [BH00]. **Path** [Luc09, MAF⁺²², SDJ17]. **Paths** [Rao02]. **patients** [SKS⁺¹³]. **Pattern** [BE07, APD⁺¹⁵, SKS⁺¹³]. **Patterns** [Cho01, GRC08, GKB93, SR98, dRADS^{+18b}, BRR17, DKMT18, EEL15, HGMW12, WEPB12]. **Patterns/Operators** [GRC08]. **PC** [CDT05, CK01, LWL05, Ste01]. **PCISPH** [VMPW20]. **PCs** [AWS01]. **PDE** [CCO⁺¹⁹, CHT⁺¹⁹, DTL⁺²¹, FMR⁺²⁰]. **PDEs** [Ma00]. **Peaks** [TC10]. **PERFECT** [BCK⁺⁸⁹]. **Performance** [AS00, ATN⁺⁰⁰, Ano87b, Ano87f, Ano94a, Ano94c, Ano95b, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a, Ano98b, Ano98a, Ano99, Ano00, Ano01a, Ano01b, ARR99, Aus92, Bai88, BGI⁺⁹⁹, Bar09, BAA⁺⁰⁶, BCK⁺⁸⁹, BBDH14, BWB⁺¹⁰, BGB⁺¹⁸, BBA87, BFN07, BRM03, BRT⁺⁹², BBD00, BDG⁺⁰⁰, BELF07, CDQS04, CWHP99, CC95, CK01, CDP⁺⁹⁴, CAK⁺⁰⁷, CSY10, CEL⁺⁹⁷, CB95, CJK⁺⁰⁵, Dar00, Del93, DH96, DGD⁺⁰⁴, DGJ09, DBA⁺⁰⁹, lSD89, EHTW21, EAG⁺¹⁹, FGC⁺⁰⁵, FGJ⁺⁰⁴, FSC⁺¹¹, FSN08, FFR⁺¹⁰, FU12, Gun00, HIT⁺¹⁴, HVWS09, HVSW09, HR97, HL00, HLW00, HSLK11, IS96, IKY⁺¹⁰, IHMM87, JLL04, JMC05, KBA00, Kep04a, KHP⁺⁰⁴, KJ05, KDL01, KWB06, KS09a, Kuc04, KUE⁺⁰⁰, LR07, LR09, LS90, LRLG19, LWL05, LD07, MSMW07, Mav02, MA89, Men00, MJ04, MMN09, MSK92, NFK98, NPT⁺⁰⁶]. **Performance** [NTKP06, NKP⁺⁰⁰, Num04, OCC⁺⁰⁸, PPK⁺⁰⁴, PB19, PF16, Poz97, PLS05, QHCC17, QWIC02, RIF01, RBL08, SBF90, Sab91, SWHP05, SSQ08, SCB⁺⁹⁵, SM06, SVN09, SC09, Spr06, SKB01, Ste01, Ste04, SBG10, SFP02, SBBS06, SW04, SB19, THC⁺⁹⁶, TMW⁺⁹⁹, TAR⁺⁰⁸, THDC09, VC89, VR00, VDB04, Wad99, WT99, WFBF04, WG07, WD05, Yel04, YK04,

YIN⁺¹¹, YSP⁺⁰⁵, ZLGS99, AKC⁺¹⁹,
 ATD17, AKP⁺¹⁸, AFGQO19, BLC17,
 BBA⁺²¹, BRGR11, BCP⁺²⁰, BSH⁺¹⁶,
 BAP⁺¹², CGGC⁺¹⁶, CGW19, Cec20, CS14,
 CZR⁺¹¹, CMHB15, CHWS20, DTDP14,
 DCM⁺¹⁷, DWT⁺¹⁹, DVW⁺¹², DHL16,
 DAC⁺¹⁴, ECG⁺¹³, EKF⁺¹⁹, EKD⁺¹²,
 Fem90, FMR⁺²⁰, GVF⁺¹⁸, GHL15, GR17,
 GMWG10, GSND20, GS18, GSK⁺¹⁵,
 GGO16, Har11, HLW⁺¹⁶, HCCG20, IYK16,
 IFA15, INS⁺²⁰, JKD⁺¹¹, JDAD19, KDH11,
 KL13, KNPS21, KMM16, LDLD19, LST15,
 LPB⁺¹⁶, LWT⁺¹¹]. **performance**
 [MAB⁺¹³, MSPSI15, MCU⁺¹³, MW12,
 MSKM21, NMAE13, PPC⁺¹⁶, PSV⁺¹⁶,
 SFLC18, SSR⁺¹⁴, SZ11, STS17, SK20,
 SKC10, TR17, TGP19, TKA⁺¹⁷, TNLP13,
 UCZ⁺¹⁵, VRB⁺¹⁹, WLG⁺¹⁸, WKLW19,
 WLFH16, WD19, WD21]. **Periodic**
 [ZBMK11]. **PERMAS** [AJL⁺⁹⁷].
persistent [KV19]. **Perspective**
 [Bar09, YHG⁺⁰⁷, PS12]. **Perspectives**
 [Ano92n, MP95, Sab91]. **perturbation**
 [KdOCR⁺²⁰]. **perturbative** [MFP⁺¹⁷].
Pervasive [Ald89]. **petaflop** [RWM17].
petaflops [TAM⁺¹⁶]. **Petascale**
 [Cap09, Her09, HXW⁺¹³, WWA⁺¹¹,
 JKD⁺¹¹, MKM⁺¹⁹]. **Petascale/Exascale**
 [Cap09]. **PEZY** [YIME19]. **PEZY-SC**
 [YIME19]. **PGAS** [GDKWS15, NMI⁺¹⁹].
pH [MP94]. **Phase** [CBL10, CDH⁺⁹³,
 FWZ91, HSLK11, YCHH90, CDL20,
 CRS⁺¹⁹, KDH18, RPdB⁺¹⁹, VSHN14].
phase-contrast [RPdB⁺¹⁹]. **phase-field**
 [VSHN14]. **PHAT** [MJGL13]. **Phi**
 [HCCG20, LSES20]. **PhiTM** [MMDA19].
Photon [MWAR⁺⁸⁷]. **phylogenetic**
 [KPST18]. **Physical** [Chu99, SR98, WD05].
Physical/Logical [Chu99]. **Physician**
 [Wit92]. **Physics** [DSD⁺⁹¹, KDH11, MR90,
 DAC⁺¹⁴, GHHS15, HCC⁺²², NBE⁺²²].
Pieces [Mar87d]. **Pipeline**
 [BFLL99, BKRSR09]. **Pipelined**
 [TRS⁺¹⁰, MSKM21]. **pipelines**
 [KdOCR⁺²⁰]. **pipelining** [LQJG16].
Pittsburgh [RS88]. **pivoting** [YZC⁺¹⁵].
Pixel [HC08]. **placement** [DJJ⁺¹⁹].
Planet [Mar89b]. **Planning** [CDCV06].
Plasma [CDD⁺⁹⁰, FU12]. **Plasmas**
 [ACG⁺⁹⁰, DDM87, WET⁺¹⁹]. **plastic**
 [WSD⁺¹⁴]. **plate** [NMAE13]. **Platform**
 [LJC⁺¹⁰, PMS⁺⁰⁴, PLS05].
Platform-Adapted [PMS⁺⁰⁴]. **Platforms**
 [BLRR01, BMR06, Eyr06, MYCR06,
 OCC⁺⁰⁸, dRADS^{+18a}, ABG⁺¹⁹, BJWS20,
 BBG⁺¹⁸, BSH⁺¹⁶, Cec20, DDKK19,
 GSND20, IYK16, IMW⁺¹³, MPD⁺¹²,
 MFB⁺¹⁹, MFP⁺¹⁷, MBF⁺²¹, PPC⁺¹⁶,
 SHK⁺¹⁸, SB19, UZM⁺¹⁴, Ano19]. **Play**
 [Pan97]. **PLW** [LD07]. **pMATLAB** [BK07].
POEMS [BBD00]. **Point** [BSBF89, HC10,
 Ma00, MC21, CDL⁺¹⁹, LH18]. **Point-block**
 [MC21]. **Point-SSOR** [Ma00].
Point-to-Point [HC10]. **Pointers** [LRT07].
points [CdVL⁺¹⁸]. **Poisson**
 [GGS01, KRR19]. **polarizable** [KFJ20].
policies [BLOR18]. **Policy** [EW06].
Pollution [DFH⁺⁹⁶]. **Polyacetylene**
 [ZOF90]. **Polyenes** [AEPR92]. **polymer**
 [NMAE13]. **Polymers** [DFC90].
Polynomial [uITH07]. **Polytetrafluoro**
 [DVC88]. **population** [OWC⁺²¹]. **Porous**
 [PGTS10, MPD⁺¹²]. **Portability** [WD05,
 DWT⁺¹⁹, GS18, LNK22, QHCC17, TGP19].
Portable [BDG⁺⁰⁰, FCLG07, GL97, PLS05,
 EKF⁺¹⁹, HLH⁺¹⁹, SB19]. **Portals**
 [BRM03]. **Porting** [LNK22, MCR⁺¹⁷,
 Mic09, SHK⁺¹⁸, KNPS21, WD19]. **pose**
 [BE17]. **Positive** [Ald89]. **Post** [BBH⁺¹³].
Post-failure [BBH⁺¹³]. **Potential**
 [CGW19, YZZW21]. **Potentials**
 [DGD⁺⁰⁴, THDS19]. **Power**
 [BHdR09, Dem90, TNBG07, Ade21,
 CGGC⁺¹⁶, LSES20, PPC⁺¹⁶, SFLC18,
 UZM⁺¹⁴, BQOS21]. **Power-Aware**
 [BQOS21]. **power-line** [Ade21].
Power-Saving [TNBG07]. **Powerful**
 [Mor89b]. **PowerPC** [MAB⁺¹³]. **PRACE**

[Mic09]. **Practical** [Cho01, WKLW19]. **Practice** [BR03]. **Practices** [PK04]. **Pragmatic** [DCD⁺13, Eyr06]. **Precision** [Ano02b, BDL⁺07, AAB⁺21a, AFGQO19, Bai20, LH18]. **Preconditioned** [MG87, IVG⁺20]. **Preconditioner** [BBS99, de 89, IJB22, RMS⁺18]. **Preconditioners** [CE00, Cho01, Ma00]. **Preconditioning** [MC21]. **Predict** [VS03]. **Predicting** [BE07, WLC91, MCU⁺13]. **Prediction** [FFR⁺10, HL00, KUE⁺00, NKP⁺00, SCB⁺95, BAM⁺16, BBA⁺21, GCSK13, MKM⁺19]. **Predictions** [RIF01, TLdS22]. **preeminent** [YB12]. **Preemptive** [BBH⁺06]. **Preface** [Ano17b, Bak01, Bam12, BO08, CCF⁺06, CCD⁺06, CJZ08, DDS00, DKD07, DT97, DT01, Don02a, Don02b, Fow05, IK02, Kah07, KZ07, MD06, OL05, Pat05, PC08b, Wal03, YD07, dA03]. **Prefetching** [BIC⁺10, CZR⁺11]. **prefix** [Ozs16]. **Preprocessing** [DMT97]. **Preprocessors** [Ano01a]. **Pressure** [WLC91]. **Pricing** [BBMB19, YB07]. **Prime** [Ano92h, Sim90]. **Principal** [DF08]. **Principles** [DQFW90, GKN⁺96, TMWS91, HIT⁺14]. **Priori** [Cho01]. **Priority** [PBB⁺20]. **Privacy** [Mar89a]. **Prize** [ds21, BBD⁺17]. **probabilities** [Haj93]. **Problem** [CDH⁺93, CSV91, DL09, UF89, CCBS11, RRJ⁺20]. **Problems** [BGG05, CD97, FG97, FBW⁺87, GGS01, MR90, NK89, NKR90, SWW94, uITH07, TRS⁺10, TMMR10, DTL⁺21, KC18, Lai93, MC21, MBHF15, SPHW18]. **Procedure** [CGB⁺94]. **Process** [AM00, FGC⁺05, GCL93, SC04b, KILL13, WSD⁺14]. **Processes** [MWC⁺05, GSK⁺15]. **Processing** [AK91, FP02, GLGLB⁺11, KHP⁺04, LP10, MA15, MT89, Mor89b, MSK92, NTD10, OWO98, PC08a, PMS⁺04, Sal87, SPTT08, SWG⁺03, VLO⁺08, YW93, BE17, BLC17, CLG13, CMN12, DMQS12, GHHS15, KDO16, LQJG16, PH91, RDG12, RWM17, SFLC18, YZZW21, ZCZ⁺13].

Processor

[MPG93, RRV06, SBF90, SK92, BGM15, DJJ⁺19, MAB⁺13, MMDA19, Mon12, PH19]. **Processors** [Bri10, BDG⁺00, LR07, LT88, MWAR⁺87, Mor89b, TMW⁺99, AGC⁺19, BBG⁺14, CZR⁺11, MBC⁺18, MSPSI15, PSV⁺16, SB19, THH⁺13, YIME19]. **Product** [MCG04, BDC21, Eri88, ŠCKW19]. **Production** [MSK92, MDH⁺18, SH93]. **Productivity** [Bar09, FGJ⁺04, KKS04, Kep04a, Kep04b, Kuc04, SB04, Ste04]. **Profiling** [MSMW07, SGFC09]. **Program** [Kit90, NHG⁺96, WG07, Fem90, KJ05, Web91]. **Programmability** [CCZ07, CLSS09]. **Programmable** [HC08]. **Programme** [HT04a]. **Programmer** [BEK⁺18]. **Programmer-guided** [BEK⁺18]. **Programming** [BBG⁺10, BV11, BF01, BDG⁺00, CCH⁺88, CWG09, Cza03, EGG05, Gan88, Gir02, Kal09b, KKS04, Kok88, Lus09b, Mat95, NPT⁺06, PA11, PBAL09, Poz97, RW03, Sha88, SCB⁺95, SMW87, VEMR17, WLB92, BH17, CCBL18, EDB19, GBB18, GDKWS15, HLS⁺17, IVG⁺20, LBP18, MGB12, MDH⁺18, SB19]. **Programs** [ACM88, DLB07, GL04, HC10, LWOB97, NZ93]. **Progress** [AGL⁺87, BRU05, CAE⁺13, DJJ⁺19, MEK⁺19]. **Project** [BHK⁺06, CBB⁺96, ESD⁺22, PK04, BCC⁺01, DBA⁺09, DBM⁺11, EW22, Ger21, Mic09, OKTR11, PS87, PHB04, Wit92]. **projection** [MGFP20]. **projects** [ACF⁺11]. **Promising** [Gir02]. **Propagation** [GKN⁺96, ALE⁺20, ASAK19]. **Properties** [ACG⁺90, DFS⁺05, WLC91, ZM07, AKW19, PHF21]. **proposal** [ZKRA14]. **prospectus** [Bra91]. **Protein** [ACD07, BHK⁺88, Jon92, RGB⁺18, DSH⁺16]. **Protocol** [TNBG07]. **Prototypical** [WLVL⁺96]. **Provided** [LS06]. **Providing** [GKP97, SLL⁺19]. **Proximal** [NZ93]. **Pruners** [SLL⁺19]. **pulse** [ASAK19]. **Purity** [HC08]. **Purpose** [CKE08, Gus04, BE17]. **Purpose-Based**

[Gus04]. **Pushing** [THH⁺13]. **PVM** [BDG⁺95, Mat95, SYF96]. **PVMGeant** [DZDR95]. **PVODE** [BH99]. **PyCOMPSs** [TBA⁺17]. **Python** [FKA⁺17, LD07, RCAE⁺20, TBA⁺17].

Q [KMH⁺14]. **Qaulity** [Mat03]. **QCD** [Din91, JC12]. **QCDOC** [DGD⁺04]. **QM** [MFP⁺17]. **QM/MM** [MFP⁺17]. **QoS** [BSCC03]. **Quadrics** [YSP⁺05]. **Quadtrees** [CL95]. **Quality** [PK04]. **quantitative** [WLG⁺18]. **Quantized** [Ham91]. **Quantum** [DFC90, FBW⁺87, IKY⁺10, KVY⁺90, Liu90, SSSW91, ARPY19]. **Quarks** [BOD⁺91, BEH⁺90]. **Quartic** [uITH07]. **quasi** [YLL⁺14]. **quasi-diagonal** [YLL⁺14]. **Quasigeostrophic** [KM95]. **Quda** [JC12]. **Query** [SWG⁺03]. **Querying** [CHZ02]. **Questions** [PPS09, CGW19]. **Queuing** [Ish91]. **Quintessential** [HCC⁺22].

RA [AMC⁺18]. **Radar** [MPG93, SVBP13, ZCZ⁺13]. **radial** [EKF⁺19]. **Radio** [CBB⁺96, CLG13, VFJ⁺15]. **radiosity** [SABD13]. **Radiotherapy** [DCCS10]. **RaftLib** [BLC17]. **Raid** [Pla09]. **Raid-6** [Pla09]. **railway** [CGGC⁺16]. **random** [PNFC16]. **Randomly** [CYT⁺02]. **Range** [BBA87, MHW15]. **Ranger** [BWB⁺10]. **ranking** [AMC⁺18, DHL16]. **rapid** [JMM⁺21]. **Rare** [BB02]. **rate** [BBG⁺14]. **rationale** [BBH⁺13]. **ratios** [HBKR21]. **ray** [EEL15, PS12, CDH⁺93]. **raycasting** [BH12]. **rays** [PS12]. **rCUDA** [PIR⁺20]. **Reaching** [CIWI17]. **Reacting** [LP10, MYC92]. **Reaction** [Koi90, BG22]. **Reactions** [ASW91, Reu92, TWK87]. **Reactive** [PGTS10, AKC⁺19]. **Reactor** [FSS13]. **Read** [RWM17]. **Reading** [Ano02r, Ano02s]. **Ready** [Sim90]. **Real** [BE17, KK01, NRR97, ODD07, TAR⁺08, VR00, WLC91, Wri12, YIME19, EHTW21, HPW⁺16, MJGL13, WZHG17]. **Real-Time** [KK01, NRR97, VR00, Wri12, BE17, YIME19, MJGL13, WZHG17]. **real-world** [HPW⁺16]. **Realistic** [BR03, LC06]. **realizations** [DEQO21]. **Reciprocating** [YK07]. **Recognition** [BE07, RES87, CdVL⁺18, SKS⁺13]. **Reconfigurable** [BCC⁺06, RRJ⁺20]. **Reconfiguration** [LK01, IMB⁺19]. **Reconstruction** [CSY10, FFR⁺10, BGM15, SSCF19, THH⁺13]. **Recovery** [BB02, BBH⁺13, HRW19, Sta19]. **rectangle** [Haj93]. **Recurrent** [SMW87]. **Redistribution** [DP05, JW06, RRV06, SS10]. **reduce** [APD⁺15, CGW19]. **Reduced** [BFL99]. **Reduced-Dimensionality** [BFL99]. **Reducing** [BLOR18, BGO20, CdVL⁺18, CSC19, DLY⁺98, JMC05]. **Reduction** [NRR97, ATL⁺15, FAB⁺21]. **References** [Ano02p, Ano02q]. **refined** [Sta19]. **Refinement** [BDL⁺07, HT04b, SR05, ZMG⁺21]. **region** [SPNB14]. **region-based** [SPNB14]. **Regional** [KM95, CDG⁺14, MTW⁺22, WSCZ05]. **Regression** [VS03]. **related** [BQOS21]. **Relational** [MS09]. **Relative** [PUR94, VC89]. **Relativity** [RIF01]. **release** [ELEB21]. **Reliability** [TNLP13, BEK⁺18]. **Remeshing** [LDGR03]. **Remote** [BB02, DP05, NTKP06, HGMW12]. **Remotely** [VLO⁺08]. **Renaming** [BPBL11]. **rendering** [BH12]. **repeatable** [NDMR20]. **Replication** [BCM⁺03, BCR⁺14]. **Report** [Buz89, Sal87]. **Representations** [AS00, WW92, CRS⁺19, DF18]. **Reproducibility** [Bai20, IVG⁺20, MEK⁺19, NDMR20, PBE⁺19, SLL⁺19]. **reproducible** [IGDQO19]. **Request** [DD06]. **required** [CdVL⁺18]. **Requirements** [LPJ98]. **Research** [Ano87a, Aus92, ABB⁺94, Bus87, Cap09,

CDP⁺⁹⁴, Don89, Duk91, IHMM87, KHK⁺⁰⁹, Mar88a, Mir90, Pan97, SG09b, SKC10, TR92, BBW90, KT94, PBB⁺²⁰, EM89, dS21]. **reservation** [GSA⁺¹⁹, Mat03]. **reservation-based** [GSA⁺¹⁹]. **Reservoir** [AWS01, Ewi88, KR94, KR95, PR95, ZC92, MS19]. **Resilience** [BBA⁺²¹, CGG⁺⁰⁹, BCR⁺¹⁴, CBD⁺¹⁷, LFB⁺¹⁵]. **Resiliency** [AAA⁺²²]. **Resilient** [BPR18, CGW19, KS05, RMS⁺¹⁸]. **Resolution** [DFS⁺⁰⁵, HB90, MAB07, WOS08, CHW⁺¹⁵, DVW⁺¹², NBE⁺²², WDH⁺¹⁵]. **resolutions** [TLdS22]. **resolved** [KBY⁺¹⁹]. **resolving** [LNK22]. **resonance** [JKBW18]. **Resource** [AAF⁺⁰¹, EW06, FBBC03, MFK09, Mat03, WPBB01, YB07, CDRV15, MRD⁺¹⁵, PIR⁺²⁰]. **Resources** [QH08]. **respiratory** [GGMJF⁺²⁰]. **Response** [BBC⁺⁰⁰, ZOF90]. **Restart** [SSB⁺⁰⁵]. **restoration** [APD⁺¹⁵]. **Restrained** [CGB⁺⁹⁴]. **Results** [BMR06, GNTLH97, Jea13, PUR94, WLVL⁺⁹⁶, BRGR11, BSH⁺¹⁶]. **Rethinking** [KES⁺¹⁷]. **Retracted** [IMH⁺¹²]. **Retrospective** [Mar88b]. **reuse** [JCK21]. **Reverse** [HHSM19, QHCC17]. **Reverse-mode** [HHSM19]. **Review** [Bus87, Con88, Mar88a, Nag89]. **Reviewers** [Ano20c]. **Reviews** [Don87, Mar87a, Mar87b, McR87]. **Revisited** [MS09, SZ11]. **RF** [HTWS08, YW93]. **ride** [VFJ⁺¹⁵]. **Ridge** [ABF⁺⁰⁸, DGH⁺⁹³, HGD91]. **Rigid** [Nak99]. **Rigid-Body-Based** [Nak99]. **Rings** [RRV06]. **RISC** [Gro03]. **RISC-Based** [Gro03]. **RNA** [SCB⁺⁹⁵]. **road** [TDM⁺¹⁷]. **Roadmap** [THDC09, DBM⁺¹¹]. **Rocks** [Pap11]. **Role** [Pan97, Sab91, DMJS19]. **Roles** [MMS88]. **roll** [HRW19]. **roll-forward** [HRW19]. **Rolling** [FFNP97]. **Roothaan** [MMDA19]. **Routines** [CDQS04]. **Routing** [CHZ02, MOK00]. **RTX** [BLU⁺²²]. **Run** [DLY⁺⁹⁸, BDC21, LYL⁺¹⁶]. **Runge** [KR11, RR96]. **Running** [Fra05, MGB12]. **runs** [CdVL⁺¹⁸, SLL⁺¹⁹]. **Runtime** [AJL⁺⁹⁷, BH00, Dar99, GGMJF⁺²⁰, Kal09b, LS06, PG18, HI12, HI13, IH15, LRLG19, WKLW21]. **Runtime-compilation** [PG18]. **S** [Lai93, WOG95, LYL⁺¹⁶]. **S-3800** [WOG95]. **S-MP** [Lai93]. **SAM** [LNK22]. **SAMCEF** [GCD97]. **Sampling** [MR04]. **San** [Mai87]. **Santos** [BCP⁺²⁰]. **SAR** [AAC⁺⁹⁷]. **SARA** [SBWS99]. **SARS** [CDG⁺²¹]. **SARS-CoV-2** [CDG⁺²¹]. **Satellites** [BKS⁺⁰⁷]. **saturation** [CIWI17]. **Saving** [TNBG07, SKSG19]. **Scala** [SFP02]. **Scalability** [BCYS11, DR06, FSC⁺¹¹, FMR⁺²⁰, GS05, HLW00, KC18, MWC⁺⁰⁵, YIN⁺¹¹, DAB⁺¹², MW12, SPHW18]. **Scalable** [CD06, CHZ02, DW97, DMT01, FKT01, HGMW12, IBC⁺¹⁰, JSSZ09, MCW⁺⁰⁰, MS05, MAJJS03, SDJ17, SFP02, WLB92, ZLGS99, ZRÇ⁺⁰⁶, dPIdA03, BG22, DEE⁺¹², EKF⁺¹⁹, AAT⁺²⁰, GEKO19, HLH⁺¹⁹, JMM⁺²¹, JBOT19, KHS⁺¹⁹, TDM⁺¹⁷, YB12, ZB20]. **Scalar** [Ish91, OCC⁺⁰⁸, FU12, KS89]. **scalar-type** [FU12]. **Scale** [AS00, AK91, BDP01, Ber92, BBA87, BCC⁺⁰⁶, CWHP99, Ewi88, Fra05, GGS01, Gun00, GNB11, Her09, HLW00, HSLK11, Joh01, Key09, KUE⁺⁰⁰, LT88, LC06, MPS15, Mor89b, NKR90, Nak99, PS87, SD87, YRA⁺⁰², ZRÇ⁺⁰⁶, dSSB⁺⁰⁸, AAA⁺²², AMB⁺¹⁸, BAM⁺¹⁶, BLOR18, BEK⁺¹⁸, DCM⁺¹⁷, EEL15, FAB⁺²¹, GDKWS15, GMWG10, HIT⁺¹⁴, HYY⁺²², HRW19, IKMS⁺¹⁹, INS⁺²⁰, JBOT19, LM03, LDW⁺¹², MBHF15, MJD16, MRD⁺¹⁵, STP⁺¹³, SIC⁺¹⁹, VOL⁺¹⁴, YIME19, ZKRA14]. **scales** [BEW16, PBE⁺¹⁹]. **Scaling** [CGB⁺⁹⁴, CK01, CLM⁺¹⁶, GHHS15, ZM07, GR17, INY⁺¹⁴, MKM⁺¹⁹, SKSG19]. **Scattering** [MBF⁺¹¹]. **scene** [SABD13]. **Schedule** [SBWS99]. **Scheduler** [LS06, TR17]. **Scheduling**

[ATN⁺00, BKRSR09, BPK⁺07, BR03, BBH⁺06, CJ06, CCRV20, CKPD99, CBL06, DLG06, Eyr06, JW06, KCC⁺06, LJC⁺10, MYCR06, SG07, TR17, WvNM⁺06, ABD⁺18, ABG⁺19, BPR18, GSA⁺19, HLC⁺19, Jon12, LQJG16, Mat03, ML20, OPW⁺12]. **schema** [ICPSG18]. **Scheme** [BG00, GS05, DMSMG18, IKMS⁺19, KPR17, KHS⁺19]. **Schemes** [BS88, BSS15, BBMB19, SZC12]. **Schrödinger** [BFL99, IKY⁺10]. **Schwarz** [GKMT00, NCA21, PR95]. **SCIARA** [SDF⁺17]. **SCIARA-fv3** [SDF⁺17]. **Science** [All88, Blo87, CD97, CDH⁺97b, Don89, Duk91, GKN⁺96, GL09, HBSM03, HT04a, HWP03, Joh01, Mai87, Mer87, Nas92, RS88, Sab91, Web91, WWA⁺11, ADMP18, ACF⁺11, CMS⁺11, SKP⁺22]. **Sciences** [NKR90, DGH⁺93]. **Scientific** [AS00, BAA⁺06, BBA87, BJK07, DT99, DT11, DT17, Fol90a, Gaf88, GL97, HME90, Hab90, HLP⁺03, JLL04, JMC05, KPM⁺96, KWB06, LS90, Mar87a, OCC⁺08, Sal87, SE92, vLRA⁺03, ASHH16, CMS⁺11, CDL⁺19, CBD⁺17, DPA⁺18, DMJS19, DMQS12, DT19, DCD⁺13, DAC⁺14, EKD⁺12, FKA⁺17, GSND20, IMB⁺19, LWT⁺11, MGB12, PBB⁺20, PBE⁺19, SIC⁺19, TDG⁺19]. **sclerosis** [SKS⁺13]. **scope** [SK20]. **screening** [ICPSG18, ILCLG20, MSPSI15]. **SE** [DEE⁺12, KJH96]. **Sea** [LPJ98, CDG⁺14]. **Search** [VDB04, CSC19, FTB13, PFGDM20, RRJ⁺20]. **Search-Based** [VDB04, FTB13]. **Searches** [FBBC03]. **Second** [uITH07]. **Second-Order** [uITH07]. **Secondary** [SCB⁺95]. **sectioning** [KPR17]. **Seeing** [LPG88]. **Seeking** [Bar09]. **Segmentation** [Kal09a]. **Seismic** [CDH⁺97b, OWO98, ZRÇ⁺06, QHCC17, SFLC18, TAM⁺16]. **Select** [KKDV03]. **Selected** [DT11, OL05]. **Selecting** [DEQO21]. **Selection** [CY08, DTD14, LTPK17]. **Selective** [RES87]. **selector** [dRADS⁺18a]. **Self** [BGF02, CBL06, DE03, FWSW02, GHZ10, NC18]. **self-** [NC18]. **Self-Adapting** [DE03]. **Self-Organization** [FWSW02]. **Self-Organized** [BGF02]. **Self-Organizing** [CBL06, GHZ10]. **Semantic** [FP02]. **Semantics** [FGC⁺05]. **semi** [KRR19, MBHF15]. **semi-Lagrangian** [KRR19]. **semi-synchronised** [MBHF15]. **Semiconductor** [FWZ91, PHC⁺10, Lai93, Rad18, TKS88]. **Semiconductors** [Cla91]. **Sensed** [VLO⁺08]. **Sensor** [AKP08, BB02, BGF02, CYT⁺02, CHZ02, FP02, JMP02, QWIC02, STP⁺13]. **Sensors** [FWSW02]. **separated** [CvG11]. **September** [OL05]. **Sequence** [Jon92, MP18]. **sequencing** [MBC⁺18]. **Sequential** [WG07, CDL20]. **Serial** [NK89, NKR90]. **Series** [ACD07, Mar88a]. **Server** [CD97, DD06]. **Servers** [CD06]. **Service** [HLP⁺03, Hua03, Mat03, WHL03]. **Service-based** [HLP⁺03]. **Service-Oriented** [Hua03]. **Services** [AEG⁺03, CBA⁺18, ECG⁺13, ZKRA14]. **Sesam** [BBA87]. **Set** [JLL04, PTGB02]. **sets** [CDL⁺19, LGDH16]. **Severe** [WJS⁺90]. **shallow** [EKF⁺19, EAG⁺19, LVA⁺13]. **shallow-water** [EAG⁺19]. **Shape** [WCDS99]. **Shared** [AH93, BMWD87, Bri10, BEF⁺95, CDT05, CWG09, Gir02, HC10, LRT07, MWAR⁺87, NPT⁺06, WG07, ZC92, BH12, DEKV92, KDO16, SB19, THDS19]. **Shared-Memory** [AH93, CWG09, BH12, DEKV92, SB19]. **shared/distributed** [THDS19]. **Shelf** [LPJ98]. **SHMEM** [BBDH14]. **Should** [Pan92]. **shuffle** [HPW⁺16]. **shutdown** [BLOR18]. **Side** [HTSK90, kLCCW07]. **Sided** [GFD05, LRT07, TGT05]. **Sidney** [Mar91]. **Sieves** [CH94, Mon89]. **Signal** [FP02, PMS⁺04]. **Signals** [Arn07]. **Silent** [BSS15]. **silico** [MSPSI15]. **silicon** [HXW⁺13]. **similarity** [LFB⁺15]. **Simple** [Kal09b, SC04b, SBWS99]. **Simulate** [BMT89, GMWG10]. **simulated** [KKL⁺19].

Simulating[BEH⁺90, Din91, Haj93, VMPW20].**Simulation**[AWS01, ABF⁺99, BDP01, BHdR09, BFNV07, CK01, Cla91, CB95, CM97, DCCS10, DZDR95, Ewi88, FFNP97, GCL93, GP93, HTSK90, IKY⁺10, Koi90, KR94, KR95, LP10, LWL05, LC06, MKG90, Nak99, PPK09, PR95, PS87, PHC⁺10, Reu92, RKKC90, TWK87, WBG06, WBMY90, ASAK19, ARPY19, BLU⁺22, BG22, BSW⁺14, CHW⁺15, DAC⁺14, HCC⁺22, HLH⁺19, HYY⁺22, HXW⁺13, IKMS⁺19, JKD⁺11, JRT16, KDO16, KDH18, LPB⁺16, MTW⁺22, MS19, NBE⁺22, STS17, TSH⁺19, TAM⁺16, TBB⁺22, Udd17, VOL⁺14, WET⁺19, WH20, WSD⁺14, YIME19, ZB20].**Simulation-Based** [PPK09]. **Simulations**[ABAS87, BG00, BYT91, BRT⁺92, CBSB01, CBB⁺04, CH94, DLY⁺98, DFMD94, FSS13, GGS01, Ham91, HKK88, HSLK11, HZ91, KDH11, KT99, KWB06, MD99, MHS11, NKiN⁺08, PGTS10, PK04, RTRG⁺07, SSSW91, SKP⁺22, THC⁺96, AAA⁺22, AKC⁺19, AKW19, BEW16, CCO⁺19, CGST19, CDG⁺21, CMN12, CHWS20, DFT⁺15, FIMU19, FT19, GGMJF⁺20, HBKR21, HPW⁺16, IMW⁺13, IJB22, JBOT19, KFJ20, KMW⁺13, KBY⁺19, KHS⁺19, LVA⁺13, MFP⁺17, MAF⁺22, PPC⁺16, PMP⁺20, Rad18, RAB⁺15, THDS19, YWL⁺14]. **Simulator**[BCM⁺03, CGGC⁺16, VSS⁺13, IKY⁺10].**simulators** [AHB⁺16]. **Simultaneous**[ABAS87, DTL⁺21, TNLP13]. **Single**[BCJ01, TR17]. **Singular** [Ber92]. **situ**[AGHR19, ARPY19, BCLP17, CAA⁺20,MFB⁺19, PBB⁺20]. **situation** [GCSK13].**Six** [WOG95, KRR19]. **six-dimensional**[KRR19]. **SKA** [VFJ⁺15]. **skeletonisation**[BE17]. **Skeletonization** [DIB00]. **Skewers**[HC08]. **skinny** [EHTW21]. **SLA** [QH08].**Slouching** [Lus09a]. **small**[JMM⁺21, PUR94, WZH⁺20]. **Smart**[MBF⁺11, Gro03]. **sMC** [KPST18]. **Smith**[RGB⁺18]. **Smoothed** [PGTS10]. **SOA**[DCL⁺08]. **SOA-Based** [DCL⁺08]. **Social**[NKR90, KTWL18]. **Sodium** [DQFW90].**Soft** [AG18, GHHS15, RMS⁺18, YZC⁺15].**Software** [ADMP18, Ano87c, Ano87f, BV11,BCC⁺01, BFNV07, CDP⁺94, Dar99, DW97,DE03, DBA⁺09, DBM⁺11, DGP⁺97, DJC05,

Fol90a, GCD97, GKMT00, Her09, KS09b,

LRO10, LQJG16, LDB⁺06, MM90, PPS09,PA11, PK04, SG09b, CYZ⁺20, CSC19,DTL19, ESD⁺22, GSND20, JDAD19,JdSA⁺17, JC12, KNPS21].**Software-defined** [ADMP18, JDAD19].**Soil** [CWHP99, MTW⁺22]. **soil-structure**[MTW⁺22]. **Solaris** [Ano01a]. **Solid**[DQFW90, SK92]. **Solidification**[MWC⁺05, SHK⁺18]. **Solution**[BHK⁺88, BDL⁺07, CGB⁺94, MR90,

PRT90, RS03, uITH07, TMMR10, CSGM17,

CCBS11, CvG11, CMN12, ESW⁺12,MEK⁺19, RDG12]. **Solutions**[Fro91, WD19]. **Solve**[BCCL09, CDH⁺93, CDL20]. **Solved**[CSV91]. **Solver** [BGG05, BH99, CM97,HR97, KDL01, Mav02, PR95, AKP⁺18,AFL⁺18, BSW⁺14, CDL20, CHT⁺19,EKF⁺19, ESW⁺12, HHSM19, KC18,KRR19, KDH18, MV20, OGM⁺16,RMV⁺19, RWM17, YJZN22, ZZG⁺14].**Solvers** [DR06, GGS01, Key09, KR11,ATL⁺15, EAG⁺19, FMR⁺20, MSHPV18,MSKM21, NCA21, WKLW21]. **solves**[SZ11]. **Solving** [BS88, BEF⁺95, CD97,

HT04b, ILJ93, KS89, Kum89, Man97, NZ93,

SBF90, WT99, Ade21, ALE⁺20, ML20].**Some** [Gir02, PPS09]. **Sometimes**[RAGW93]. **Sonic** [WW92]. **Sorting**[Arn07, BSK14]. **sound** [MJGL13]. **Source**[CYT⁺02, BSW⁺14, MJGL13]. **sources**[PBB⁺20]. **Sowing** [GL97]. **Space**

[FBBC03, JSSZ09, MHW15, ODD07, SBG10,

DTL⁺21, FU12, HLW⁺16, MPD⁺12].**space-aware** [HLW⁺16]. **space-parallelism**

[DTL⁺21]. **Spaceborne** [SKB01]. **SPAI** [BBS99, Ma00]. **spanning** [dAVCM⁺19]. **spare** [HYH⁺20]. **Spark** [KWEF18]. **Sparse** [AD93, Ano02a, AGL⁺87, BJWS20, Ber92, BELF07, Cho01, GG11, HR97, IYV04, KC92a, KC92b, MC90, Ma00, Man97, MCG04, SZ11, SCFK04, UF89, WT99, ASHH16, ATD17, BDC21, CvG11, GG14, GGO16, MSHPV18, ML20, MGFP20, SCR11]. **Sparsity** [Cho01, IYV04]. **spatial** [SPHW18, WDH⁺15]. **Spatially** [WBG06]. **Spatially-Explicit** [WBG06]. **spatio** [STP⁺13]. **spatio-temporal** [STP⁺13]. **Special** [BV11, BM13, BH17, BQOS21, BE18, Cec20, CKE08, DT97, DT99, DT06, DT13, DT17, DT19, HdV18, KM20, MPI98, Mas19, MFB⁺19, ME14, Nag93, OV13, PA11, WH20, WD19, WD21, Yel04, dS21, SDS12]. **Special-Purpose** [CKE08]. **specialization** [CBM13]. **Species** [BB02]. **Specific** [BH06, CDH⁺97b, PHF21]. **Spectral** [BG00, CB95, DFS⁺05, FSN08, Tho90, DEE⁺12, EAG⁺19, MGS⁺15, WZH⁺20, ZB20]. **Speed** [Ano87d, BAM⁺16, Mar87a]. **Spherical** [KMPJ08]. **spike** [CDG⁺21]. **Spiral** [PMS⁺04]. **Spline** [Fro91]. **Splines** [uITH07]. **Splitting** [IS96]. **Spotch** [DGRK17]. **SpMV** [BJWS20, DEQO21]. **Sponsored** [Sal87]. **Spotlight** [MPG93]. **Spread** [GKB93]. **SRP** [MJGL13]. **SSOR** [Ma00]. **Stability** [ACG⁺90, BE07, FWZ91, KdOCR⁺20]. **Stacking** [BBR10]. **Standard** [Ano94b, Don02a, Don02b, MPI98, MSKM21, THH⁺13, Poz97]. **Standards** [Pan92]. **StarPU** [HGWN14]. **stars** [HLH⁺19]. **StarSs** [PBAL09]. **State** [CBV97, DKMT18, KNPS21, MYCR06, WLC91]. **State-of-art** [KNPS21]. **Static** [BLRR01, BR03, dRADS⁺18b, QSX⁺20, SCB14, TR17]. **Stationary** [SCFK04]. **Statistical** [EGMP93, EJD⁺19, FWSW02, Her88, MR04, NRR97, VDB04, ZM07]. **Status** [MB87]. **Steady** [MYCR06]. **Steady-State** [MYCR06]. **Steering** [GKP97, KWB06, VR00]. **Stefan** [CSV91]. **stellar** [HCC⁺22]. **Stencil** [HCCG20, APD⁺15, PHF21, WKLW19, YFS⁺14]. **stencil-based** [WKLW19]. **stencil-reduce** [APD⁺15]. **stencils** [SB19]. **step** [BGO20]. **stepping** [BSS15]. **Stiff** [BCCL09]. **Stochastic** [AK93, ABAS87, LP10, NZ93, CCRV20]. **Stokes** [Mav02, SBF90, ZZG⁺14]. **Storage** [KR11, GG14]. **store** [KV19, KES⁺17]. **Storm** [WJS⁺90]. **Strategies** [BCM⁺03, FBBC03, GWKN08, MOK00, WPBB01, EMP⁺18, HCCG20, MRD⁺15, OPW⁺12, SCD⁺19, SIC⁺19, SDF⁺17, SKSG19]. **Strategy** [MCW⁺00, SVN09]. **stratified** [AMC⁺18]. **stream** [BLC17, DKMT18, LBB17]. **streamed** [GG14]. **streaming** [BRGR11, MAB⁺13]. **Strong** [MKM⁺19, INY⁺14]. **strongly** [ZZG⁺14]. **Structural** [YCHH90, MJD16, PUR94]. **Structure** [BH06, CGB⁺94, CBL10, CSY10, FWZ91, Jon92, KT99, Liu90, SCB⁺95, SYF96, TMW⁺99, HTD⁺14, HIT⁺14, KC18, LDLD19, MTW⁺22]. **Structure-Specific** [BH06]. **Structured** [LDGR03, Ma00, SR05, WBG06, Ytt97, RV15, ZMG⁺21]. **Structures** [BHK⁺88, DFC90, FFR⁺10, GCL93, GG11, HB90, HA91, JP93, DSH⁺16, EMP⁺18, JKBW18]. **Studies** [CHT⁺19, CBW95, DQFW90, HOPB92, HE01, LS06, SABK94, BCYS11, GDKWS15, LDLD19, SSR⁺14, PB19]. **Study** [ASW91, BF01, CDH⁺97b, DJJ⁺19, GLGLB⁺11, GL97, HL10, HLS⁺17, JW06, KKCB98, KR94, KR95, LC90, MMD98, PPK⁺04, Sci92, TXD⁺07, WGI90, WLB92, WJS⁺90, WW92, BSW⁺14, BDFVP15, CGGC⁺16, CMS⁺11, DTL19, IFA15, IMB⁺19, KC18, LFB⁺15, MBvdG13, MCR⁺17, OF17, RRJ⁺20, SMK⁺20, TKA⁺17, THC⁺11, WZH⁺20, YWL⁺14].

Studying [BCM⁺03, BOD⁺91]. **subband** [VSS⁺13]. **subcellular** [CHW⁺15]. **Subdomains** [FG97]. **Subgrid** [GS05]. **Subprograms** [Don02a, Don02b]. **Subroutines** [KJH96, JO92]. **Subsetting** [ZRÇ⁺06, AMC⁺18]. **substitution** [DTD⁺14]. **substructures** [SCR11]. **successful** [CBA⁺18]. **Suggestions** [Ano02r, Ano02s]. **Summary** [Moh09, Sal87]. **Summations** [NDMR20]. **submit** [NBE⁺22]. **Sunway** [WZH⁺20]. **Supercluster** [HBC⁺08]. **Supercomputer** [ATD⁺88, Ano87b, Ano91b, Ano91a, Ano92g, Ano92e, Ano92f, Ano93a, Ano94a, Ano94c, Ano95b, Ano95a, Ano96a, Ano97b, Ano97c, Ano97a, BBW90, CL95, CLP⁺99, Con88, MKG90, Mai87, McN89, MM90, MA89, Mir90, Mor89a, MR90, Nas92, Sci92, SB04, Web91, WOG95, BCP⁺20, Bra91, FU12, KMH⁺14, NBE⁺22, SDI⁺19, Duk91, MAB07, Mar88a]. **Supercomputing** [OCC⁺08]. **Supercomputers** [Ald89, ABF⁺99, AGL⁺87, Bai88, BSBF89, BCK⁺89, BWB⁺10, BYT91, Bro88, CDD⁺90, DDM87, Gen88, Mar89a, McN89, MG87, NKiN⁺08, YM91, ZC92, DCD⁺13, HI12, HI13, IH15, PH91, SLL⁺19, WET⁺19, ZBMK11, Gen88, Bus87, Mar87b]. **Supercomputing** [All88, Blo87, DFP⁺96, EM89, Eri88, Gan88, GKN⁺96, LC90, Mar89b, McN87, MMS88, Nas92, NBB⁺96, Nun87, RS88, SABK94, Aus92, BBB⁺91b, Bra91, BBW90, KT94, MP95, TR92, All88]. **Superconductors** [JP93]. **Supersonic** [MYC92]. **supervised** [HGWN14]. **Supplemented** [SBBS06]. **Support** [BBG⁺10, BV11, BCC⁺01, CBB⁺04, CFK⁺94, Dar99, Gro03, YSP⁺05, RMV⁺19, SKZ⁺18]. **Supporting** [ZRÇ⁺06]. **SUPRENUM** [MST88]. **surface** [BCYS11, MCR⁺17]. **surfaces** [DF18]. **survey** [AAB⁺21a, ESD⁺22, GR17, JdSA⁺17]. **survive** [GGMJF⁺20]. **Sustained** [MSK92, TAR⁺08]. **SVD** [NS21]. **Swapping** [SC04b]. **swarm** [ABH⁺18]. **SwinDeW** [LJC⁺10]. **SwinDeW-C** [LJC⁺10]. **SWIRL** [VRB⁺19]. **SX** [LT90, Mor89a]. **SX-2** [LT90, Mor89a]. **Symbolic** [Jea13]. **Symmetric** [BGG05, Gir02]. **Symposium** [Mar88a]. **synchronised** [MBHF15]. **Synchronization** [TGT05, SPNB14]. **Synchronous** [DGP⁺97, Jon12, WDW⁺12]. **syntax** [JO92]. **Synthesis** [CBB⁺96, Kep04a, Wri12]. **Synthetic** [MPG93, SVBP13, ZCZ⁺13]. **System** [AM00, BGI⁺99, BCJ01, CL95, CLF87, CTD⁺05, CJK⁺05, DVW⁺12, DJC05, ESW⁺12, GHM⁺10, GS99, GHJ10, GNB11, HLP⁺03, JLO05, JLL04, LDB⁺06, MWM⁺08, MST88, SSB⁺05, SG09a, uITH07, SBG10, SFP02, WLVL⁺96, CVJ12, DEL⁺12, HLW⁺16, IBC⁺10, JC12, LDW⁺12, MEK⁺19, ML20, SKS⁺13, SH93, TNLP13, DCCS10, EDSV06, GCCC⁺03, MHW15, SM06, WSCZ05]. **System-Initiated** [SSB⁺05]. **Systems** [ATN⁺00, AGL⁺87, BGG05, BCCL09, BV11, BS88, BHdR09, BSCC03, BRT⁺92, BDL⁺07, CJ06, Cap09, CW01, CY08, CBW95, Dar00, Del93, DFH⁺96, GJMS88, GNB11, Her09, HT04b, Kal09b, KK01, KR11, LP10, MC90, Ma00, Man97, MCW⁺00, MR04, NKP⁺00, Sim90, SDA⁺01, SKB01, VC89, WT99, YRA⁺02, de 89, dPIdA03, ABD⁺18, BG22, BLOR18, BBMB19, BCR⁺14, BAP⁺12, CSGM17, CAE⁺13, CAA⁺20, CvG11, DHL16, FU12, GCSK13, GBB18, HI12, HI13, IFA15, IH15, IK18, KTWL18, Kum89, LSES20, LST15, LRLG19, LWT⁺11, LVA⁺13, LH19, OPW⁺12, RV15, RDG12, SCD⁺19, TKA⁺17, WD19, YB12, ZWS21]. **T3D** [ABF⁺99]. **T3E** [BBS99, Ma00, SBBS06]. **Tables** [vLRA⁺03]. **TaihuLight** [WZH⁺20]. **tailored** [FTB13]. **tale** [Hea15]. **tall** [EHTW21]. **Target** [BG02]. **targetDP** [GS18]. **Task**

[BR03, CKPD99, CFK⁺94, CCBL18, PBAL09, CDL20, CHT⁺19, EDB19, ELEB21, MBHF15, ML20, OPW⁺12, SMZ⁺18]. **Task-Based** [PBAL09, CCBL18, CDL20, CHT⁺19, EDB19, ELEB21]. **task-parallel** [SMZ⁺18]. **Tasking** [JMP02, IK18]. **Tasks** [GHZ10, WvNM⁺06, CCRV20, HTD⁺14, HLH⁺19]. **Tau** [SM06]. **Taxol** [CGB⁺94]. **TCGMSG** [Mat95]. **Technical** [Don02a, Don02b]. **Technique** [ODD07, WGI90, ASHH16]. **Techniques** [Arn07, BDL⁺07, FFR⁺10, KM95, VS03, INY⁺14, MSHPV18, UZM⁺14]. **Technologies** [AAB⁺21c, AB01, Dar99]. **Technology** [BB02, Dar00, Mer87, VFJ⁺15]. **Tefloin(R)** [DVC88]. **Telescopes** [Wri12]. **Tevisualization** [HME90]. **Template** [Poz97, BLC17]. **templates** [AAT⁺20]. **Temporal** [BPBL11, CY08, STP⁺13, WDH⁺15]. **tensor** [ŠCKW19]. **tensor-product** [ŠCKW19]. **Teraflop** [HLW00]. **Teraflop-Scale** [HLW00]. **Teraflops** [SS99, TAR⁺08]. **TeraGrid** [Har11]. **Terapixel** [ACF⁺11]. **terminology** [CAA⁺20]. **Testbed** [BCC⁺06]. **Testing** [CDT05, KDL01]. **Texas** [Nas92]. **texture** [IMH⁺11, IMH⁺12]. **Tflop** [LYL⁺16]. **Tflop/s** [LYL⁺16]. **Thanks** [Ano20c]. **Their** [LRO10, Mar87b, RES87, Haj93, PUR94]. **Thelma** [OKTR11]. **Theme** [Hau94]. **Theoretic** [FWSW02, WEPB12]. **Theoretical** [ASW91]. **Theory** [BR03, Mer87, Mor89a]. **Thermochemical** [vLRA⁺03]. **Thermodynamics** [GKH⁺91]. **Thin** [MD99, GSK⁺15]. **Thin-Film** [MD99]. **Thinning** [DIB00]. **third** [PFGDM20, Lee03]. **third-order** [PFGDM20]. **thousands** [GHHS15]. **Threaded** [BBG⁺10, LVA⁺13]. **threads** [DJJ⁺19]. **Three** [BCZM07, BWB⁺10, CSY10, DD91, EGG05, LT90, MT89, TWK87, BE17, CRS⁺19, LSS93, YFS⁺14]. **Three-Dimensional** [BCZM07, CSY10, EGG05, LT90, MT89, BE17, LSS93, YFS⁺14]. **three-phase** [CRS⁺19]. **Throughput** [GHM⁺10, McN89, AGHR19, CMN12, GVR⁺21]. **throughput-oriented** [CMN12]. **Tianhe** [CLM⁺16, HXW⁺13, LYL⁺16]. **Tianhe-1A** [HXW⁺13]. **Tianhe-2** [CLM⁺16, LYL⁺16]. **tightly** [NOM⁺19]. **tiled** [TRS13]. **Tiling** [SCFK04]. **Time** [ACD07, BPBL11, KK01, LJC⁺10, MBF⁺11, Nak99, NRR97, Sim90, VR00, Wri12, BE17, BDC21, BSS15, DTL⁺21, LST15, MJGL13, QHCC17, WZHG17, YIME19, YJZN22]. **Time-Dependent** [MBF⁺11]. **time-domain** [YJZN22]. **time-simultaneous** [DTL⁺21]. **time-stepping** [BSS15]. **times** [MP95]. **Tissues** [BCZM07]. **Titanium** [YHG⁺07]. **Tokamak** [DSD⁺91, KPM⁺96]. **Tolerance** [Cap09, FGC⁺05, GKP97, GL04, JSSZ09, KWB06, BBA⁺21, LRG⁺16, MSHPV18, SKZ⁺18, SMZ⁺18, YZC⁺15]. **Tolerant** [BHK⁺06, FD04, WvNM⁺06, ASHH16]. **tomographic** [BGM15]. **Tomography** [CDH⁺97b, FFR⁺10]. **Too** [RAGW93]. **Tool** [LRO10, WBF04, Ytt97, Eri88, GPO⁺20, IMS16, SDI⁺19, TDM⁺17, UCZ⁺15]. **Toolbox** [CD06, RMV⁺19]. **Toolkit** [FK97, LJO05, Poz97, Pap11, JLO05, LJO05, NPT⁺06]. **Tools** [CBM13, DW97, DMT01, DT06, GRC08, LDB⁺06, MWC⁺05, MM90, Pan97, PA11, SS89, SKZ⁺18]. **Toolset** [NKP⁺00]. **top** [WET⁺19]. **Top500** [Fei99]. **topological** [PHF21]. **Topologies** [MOK00, SW04]. **Topology** [Chu99, GJMV18, KPR17]. **Topology-aware** [GJMV18, KPR17]. **toroidal** [IMW⁺13]. **Total** [YCHH90, RMV⁺19]. **Toys** [SS99]. **Trace** [JKD⁺11, NRR97, BDFVP15]. **Trace-based** [JKD⁺11]. **traces** [LSES20]. **tracing** [PS12]. **Tracking** [BGF02, BG02, CYT⁺02, FIMU19, NSI20, RPdB⁺19]. **Trade** [SR05].

Trade-Off [SR05]. **Traffic** [BG02]. **train** [PNFC16]. **Training** [AM00]. **trait** [WLG⁺18]. **Transfer** [MAJJS03, ATL⁺15, KT94]. **Transfers** [VS03]. **Transform** [DL97, BDFVP15, GLGLB⁺11, LDW⁺12]. **transformation** [WDW⁺12]. **Transformations** [YCHH90, TGP19]. **Transforms** [KNP⁺87, MJ04]. **Transition** [YSN90]. **Translations** [KMPJ08]. **transmission** [ABH⁺18]. **transparent** [CIWI17]. **Transport** [ABF⁺99, DR06, DSD⁺91, KVY⁺90, MMD98, MWAR⁺87, MB87, BSH⁺16, DMSMG18, DFT⁺15, SSR⁺14]. **traversal** [FT19, GLZS14]. **Tree** [SWW94, FT19]. **Trees** [LK01, JCK21, KPST18, dAVCM⁺19]. **Trends** [Ano87e, Fol90a, Tho90, Bus87]. **Triana** [HTWS08]. **triangle** [PS12]. **triangular** [SZ11]. **Tridiagonal** [BS88, Kum89]. **trillion** [TSH⁺19, TAM⁺16]. **trillion-atom** [TSH⁺19]. **Trondheim** [Buz89]. **Trough** [BAM⁺16]. **truly** [KT94]. **TSP** [WG07]. **tsunami** [AHB⁺16, BAM⁺16]. **tumor** [KKL⁺19]. **tuned** [WKLW21, YB12]. **Tuning** [Cza03, Kal09a, MJ04, RDG12, TM99, VDB04, Yel04, BH12, CH13, KFJ20, TRS13, THC⁺11, WZH⁺20]. **Turbine** [MKG90, KBY⁺19]. **Turbulence** [CDD⁺90, KPM⁺96, LWL05]. **Turbulent** [CB95]. **Turkey** [BE07]. **Turkish** [BE07]. **Turnaround** [MP95]. **Twenty** [TSH⁺19]. **TweTriS** [TSH⁺19]. **Two** [HE01, Rao02, Hea15, HLH⁺19, KS89, KDH18]. **two-dimensional** [KS89]. **Two-Paths** [Rao02]. **two-phase** [KDH18]. **Type** [CK01, FU12, JP93]. **Type-II** [JP93]. **typical** [FU12].

U.S. [Fem90, Kit90]. **UK** [HT04a]. **Ultra** [WOS08, BLU⁺22, DVW⁺12, HIT⁺14]. **Ultra-High** [WOS08, BLU⁺22]. **ultra-high-resolution** [DVW⁺12].

ultra-large-scale [HIT⁺14]. **ultrafast** [EEL15]. **Ultrascale** [NKIN⁺08]. **ultrashort** [MV20]. **Ultrasonic** [ASAK19]. **ultrasound** [JRT16]. **unblocked** [IGDQO19]. **Unconstrained** [LT88]. **Uncovered** [Ano92h]. **uncovering** [SLL⁺19]. **Understanding** [ALL13, BWB⁺10, GSND20, GNB11, MSKM21, WW92]. **Unified** [SMZ⁺18, AGC⁺19]. **Unit** [LP10, LQJG16, RDG12, RWM17, YZZW21, ZCZ⁺13]. **Units** [GLGLB⁺11, MA15, NTD10, Tho90, BE17, CLG13, CMN12, DMQS12, GHHS15, KDO16, PH19, SFLC18]. **universe** [RAB⁺15]. **University** [Nas92, ATD⁺88, Aus92, GNTLH97, SSNM92]. **Unprecedented** [NBE⁺22]. **unpredictable** [GSA⁺19]. **Unroll** [MCG04]. **unsplit** [SZC12]. **unstable** [NC18]. **Unstructured** [DMT97, Mav02, MCW⁺00, WCE95, KC18, WDW⁺12]. **unsupervised** [ZCZ⁺13]. **usable** [KT94]. **Usage** [FCLG07, PIR⁺20]. **Use** [CDL⁺19, Cho01, DD91, GGMJF⁺20, MFOAGE18, TSKK88, Mar87b]. **Used** [DFH⁺96, ESD⁺22, GSND20]. **User** [FCLG07, LS06, LRG⁺16]. **user-level** [LRG⁺16]. **User-Provided** [LS06]. **Users** [Pan97]. **Using** [BHK⁺88, BKS⁺07, BCR⁺14, BBC⁺00, CGB⁺94, CWHP99, CDH⁺93, CL95, CKE08, CYT⁺02, CBV97, CW05, FD04, GLZS14, GNTLH97, HAF⁺96, HLW00, HE01, HC08, JLO05, Joh01, KDH11, LRT07, LWL05, Man97, MAB07, MCG04, MSK92, QWIC02, QH08, Rao02, SBWS99, TM99, THL88, VLO⁺08, VS03, WGI90, WOG95, ABH⁺18, ASAK19, APD⁺15, BE17, BCYS11, BGB⁺18, CGGC⁺16, CDL20, CIWI17, CLBS17, DWT⁺19, DFT⁺15, EKF⁺19, FSC⁺11, GVR⁺21, GDKWS15, HYH⁺20, IMH⁺11, JC12, KDO16, KBY⁺19, KTWL18, KL13, LST15, LPB⁺16, LNK22, MDH⁺18, MJD16, MJGL13, MGFP20, NSI20, Pap11, PNFC16, PH19, SABD13,

SKS⁺¹³, VMPW20, YZC⁺¹⁵]. **Utility** [LS06, YB07]. **Utility-Driven** [YB07]. **utilization** [DCD⁺¹³]. **utilizing** [AAB^{+21a}, SKZ⁺¹⁸].

V [BHK⁺⁰⁶]. **vacuum** [BLU⁺²²]. **validation** [SCB14]. **Value** [Ber92, Bus87, uITH07, SG91, KV19, KES⁺¹⁷]. **variability** [MSKM21]. **Variable** [BBR10, BGB⁺⁹⁶, AMC⁺¹⁸, Bai20, BSK14, ZZG⁺¹⁴]. **Variable-Complexity** [BGB⁺⁹⁶]. **variation** [LTPK17]. **Variational** [NK89]. **vascular** [JKBW18]. **Vector** [AGL⁺⁸⁷, Bai88, CSV91, DD91, Fro91, Gaf88, LT88, LRBS89, MC90, MG87, MCG04, OCC⁺⁰⁸, BDC21, GG11, GGO16, KS89, SCR11, YLL⁺¹⁴]. **Vectorization** [AD89, Reu92, Haj93, NDMR20, SMK⁺²⁰]. **Vectorized** [IHMM87, MB87, TSK88, YW93]. **Vectorizing** [HVKW05]. **Venice** [OL05]. **Verbs** [OF17]. **Verification** [CY08, BRR17]. **Version** [JLO05]. **versioned** [CBD⁺¹⁷]. **Versus** [PC08a, RTRG⁺⁰⁷, GSA⁺¹⁹, GLGLB⁺¹¹, HCCG20]. **Very** [HRM89, KNP⁺⁸⁷]. **VF** [DEKV92, DD89, DD91]. **VF/600J** [DEKV92]. **Via** [MR04, ATL⁺¹⁵, BWB⁺¹⁰, CSV91, DEQO21, DTL⁺²¹, ELEB21, Mat03, QHCC17]. **viability** [LFB⁺¹⁵]. **Vibrational** [DFC90]. **Video** [dPIdA03]. **Video-on-demand** [dPIdA03]. **View** [Kep04b, DFT⁺¹⁵]. **VII** [McN89]. **Virginia** [GNTLH97]. **Virtual** [BAP⁺¹², BEF⁺⁹⁵, DFH⁺⁹⁶, FKT01, HWP03, KKDV03, KKD05, LK10, THC⁺⁹⁶, WLVL⁺⁹⁶, GVR⁺²¹, ICPSG18, ILCLG20, IK18, MSPSI15, SSU⁺¹², CBB⁺⁰⁴]. **Virtual-machine-based** [BAP⁺¹²]. **virtualization** [KL13]. **Vis5D** [HAF⁺⁹⁶]. **viscosity** [ZZG⁺¹⁴]. **Vision** [Hab90, LAV09, Sha88, BE17, MBHF15, PNFC16, LPG88]. **vision-based** [BE17]. **Visual** [DFP⁺⁹⁶, DL97, Koi90, WW92, APD⁺¹⁵].

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