A Complete Bibliography of *ACM Transactions on Algorithms*

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**Title word cross-reference**

(2 + ε) [PS19]. (α, β) [BKMP10]. (h, k) [BEJK19]. (k, r) [DFHT05]. (min, +) [CMWW19]. (n - 1) [RW10a]. 1 [KN16]. 1 - 1/e [HTWZ19]. 1.5 [KN16]. 2 [ERV16, Fuj12, GILP16, HCT+11, HVV19, KN16, LMM+21, SS18]. 2 + ε [AGLW18]. 2.5545 [HCT+11]. 3 [CLL+12, FLL+19, Heg06]. 4/3 [HVV19]. 4k² [Tho10a, Tho10b]. β [ADGH21]. F [ALM+20]. H [BCSV20, VYWY10]. K [DM09, BBB20, ABF+18, AMS06, BHW20, BPR+17, CGK20, Cha10b, CV20, CMVZ16, DKR16, DKN17, FHR07, FN10, GIN+17, GHNR10a, GHNR10b, GWZ21, HHL+16, HMS07, Lev09, Li17, LBSZ21, PT16, RRS07, RZ12, WZ16]. k/r [GWZ21]. L [GGI+21]. l₁ [BDW19]. M [HIMŽ19]. n [RW10a]. O(log k) [ACER19]. O(log n) [KK13]. o(mn) [Cha12]. O(n²) [BS06a]. O(n².75) [AFM08]. O(n³) [GT08]. O(n log² n) [KMW10]. O(n log n) [BKM99b, BKM99a]. O(nm) [CMA+19, KMMP07]. O(VE) [DC05]. P₆ [LPV18]. r [GWZ21]. st [BSWN15, KW16b]. t [DP06].

0.8776-Approximation [ABG16].

1-center [YLW08]. 1-median [YLW08].


3-approximation [BPGN09]. 3SUM [Cha20]. 3SUM-hard [Cha20].

4-leaf [BLS08].

Algorithmic [AMS06, BCFN07, GIKW19, HS17]. Algorithms [ASW08, ALM+20, ABF+18, AMW20, AMNS17, AKS21, AFK+18, BGGN16, BBHT17, BKN14, BODD+20, BGH19, BR14, BGN+18, BMM19, BBT12, BCMMS12, BSSX20, BF18, CHA18, Cab19, CLL14, CV20, CFM21, CMVZ16, CDHW09, CMY11, CDP19, DGM18, DHK16, DH18, DPS18, EFM+16, EW20, EN19, EHL+18, ELR+08, FLN14, FLK+20, FLPR12, GS17, GKM16, GLLZ21, HH17, HKKK16, HT21, Har18, Har21, HL13, ISG07, KLP16a, KBNvL20, KX19, KLP16b, KMPS16, Lac13, LNR+14, LMS18, LRS18, LPS+20, MV15, NS16, RS17, SHHA16, Swa16, AAK06, AMR09, AF07, AA14, AR09, AGvS13, AKL10, AKR12, BCD12, BKS12, BAT11, BFK+12, BCM11, BF07, CPR+11, CMM09, CKP12, CJSST07, DFM18, DIO6, DJS+12, EF12, Epp06, FP10, FZ07, GS09, GKL09, GKK+09]. algorithms [GHPT05, HSS07, Iba08, IMY10, JR05, KNS+07, MV08, MN12, PR08, RSS06, SZ10, YLW08, CEGK11].


analytic [SSS+11]. Analyzing [CCW18]. Anarchy [GHLL16, DHMZ12]. ancestor [GRR06]. Ancestors [Gab17]. annotated [GGN06]. Annotations [CCM14]. anonymity [APF+10]. Anonymous [DP14, GMP17]. any [FKW11]. Application [AFH+16, ARS+14, Coh18]. Applications [ACE+20, BR16, DEK21, DHK16, EK20, GIKW19, Hir19, HJT17, KMNS17, KW16a, LPS+20, PrC21, Swa16, AAY10, AG10, AZ08, BB08, DMM+12, FGPS08, FGGV06, FP08, NW07, RRS07, VVV10]. applied [BM08]. Approach [BFHT16, BFGJ16, Gab16, LMMW16, AAA+06, NW07, VB08]. Approximability [BG20, CGNS08]. Approximate [AE08, AC10, AFK+15, BS06a, BCHR20, BSSX20, CW16, FJS14, GMP05, GLNS08, HLS07, LBSZ21, PP18, WY18, AKR12, BFG09, CTSW12, Vis08]. Approximately [FG21]. Approximating [CLN14, CDKL20, Das13, DMR16, FR10, GGI+21, GJL12, GGG10, HLS09, KR16, LMM+21, LMMW16, MR09, Mar10, Nut09, Nut12, Oum08, RT13, WY16, Man12].

Approximation [Adj19, ALM+20, ABF+18, AMNS17, AKS21, AGIF18, ABG16, BR14, BHP19, BKM15, BPR+17, CFM21, CMVZ16, DHK16, DKN17, EFM+16, FGL+20, FKRS19, GKK+09, HKKK16, HHL+16, HW19, HL13, HVV19, IMY10, JMR19, JR05, KK13, KK16, KN16, KW16b, KNS+07, MMS14, M08, NHK08, PS19, Swa16, TY18, BFKS14, BKL07, BPGN09, Bli08, BMK09a, BMK09b, CCKR11, CMO10, DJS+12, DV10, EFKN09, Fuj12, HIMY07, JZ06, Joh10, Kar08, Kar9, LDX09, RS09, SS08a, VH05, CPR+11].
Arborescence [FLK+20, DV10]. Arboricity [ELR20]. arc [GGN06].
ar-annotated [GGN06]. Archipelagos [GRL17]. architectures [NW07].
Arrangement [TY18, NS10]. arrays [FGGV06, LK08]. Arrival [BH19, LS20]. Arrivals [HTWZ19]. Art [BM20].
Arborescence [FLK+20, DV10]. Arboricity [ELR20]. arc [GGN06].
ar-annotated [GGN06]. Archipelagos [GRL17]. architectures [NW07].
Arrangement [TY18, NS10]. arrays [FGGV06, LK08]. Arrival [BH19, LS20]. Arrivals [HTWZ19]. Art [BM20].
Arborescence [FLK+20, DV10]. Arboricity [ELR20]. arc [GGN06].
ar-annotated [GGN06]. Archipelagos [GRL17]. architectures [NW07].
Arrangement [TY18, NS10]. arrays [FGGV06, LK08]. Arrival [BH19, LS20]. Arrivals [HTWZ19]. Art [BM20].
Arborescence [FLK+20, DV10]. Arboricity [ELR20]. arc [GGN06].
ar-annotated [GGN06]. Archipelagos [GRL17]. architectures [NW07].
Arrangement [TY18, NS10]. arrays [FGGV06, LK08]. Arrival [BH19, LS20]. Arrivals [HTWZ19]. Art [BM20].
Arborescence [FLK+20, DV10]. Arboricity [ELR20]. arc [GGN06].
ar-annotated [GGN06]. Archipelagos [GRL17]. architectures [NW07].
Arrangement [TY18, NS10]. arrays [FGGV06, LK08]. Arrival [BH19, LS20]. Arrivals [HTWZ19]. Art [BM20].
Bounded-tree-width [GNSW20]. Bounding [FGPS08]. Bounds
[ACHKP21, BODD+20, BN15, BHD+21, BCK+20, CHGG+17, CDKL20,
CGH17, DLS14, HH17, Har19, JW13, KT18, SCRS17, WY18, AR08a,
AGvS13, BD11, CGK+11, Cha10a, CV07, FGPS08, GHKS08, MSS11, PU07],
box [AHRT05]. branch [GT08]. branch-decomposition [GT08].
Branchings [HHM+18]. Breadth [HKN17]. Breadth-First [HKN17].
Breaking [GS18]. Broadcast [BKN14, CEGK11, EK07, IM12]. Budget
[EFF+15, RS09]. Budgeted [BPR+17]. Buffer
[AER15, CR18, AKM08, CJST07, GS09, RS11b], buffering [LK08]. buy
[BKLP07]. Bypassing [GRSW16]. Byzantine [KKK+10].
Campaigns [AFH+16]. Can [BGMW20, BCM11]. Cannot [BGMW20].
Cap [Coh18]. Capacitated [Li17, BH12, ELR+08, HKRL07, Hir19, JR05].
capacities [MV08]. capacity [AGG10]. carpool [CNP+11]. Carry
[BH19, IP11]. Case
[CHL+20, FGL+19, WNN15, AR08a, AR09, ADHY08, CFK+07, CV07].
Center
[CN19, CGK20, HPJ21, HPST19, ASW08, BH20, DFHT05, YLW08].
Center-Type [HPST19], centralized [Elk11]. Certification
[GT16a, GT16b]. chairman [CNP+11], changes [CFH07]. Channel
[BJKK18, CR12, Soc16]. channels [AZ07]. Checkpointing [BODD+20].
Cheeger [KW16b]. Cheeger-Type [KW16b]. Chordial
[ALM+19, HS07, Iba08]. CIOQ [AR06]. Circuits
[BH19, FGLS19, HS18]. circular [NS10]. Class [HIMZ19]. Classes
[CDP19, KRS19, FP10, GLK10].
Classic [dBBJW21]. Classical [BBHT17]. Classification [GL10].
Clasus
[AFS12]. Clique [CDP19, FGL+19, HKP+18, Oum08]. Clique-width
[CDP19, FGL+19, Oum08]. cliques [I09]. Clocks [ANFS17]. Clones
[BG20]. Closed [CMA+19, CEV21], closest [AKS08]. Closure
[Epp18, Rod08]. Clustering
[ABS10, BH20, FKS19, GLS10, RKH20, ZO08, APF+10, CGK+11, Epp09b, EV10, Lev09].
CNF [CDL+16].
CNF-SAT [CDL+16]. Co [Kra14]. Co-Nondeterminism [Kra14].
coalitions [FKS08]. code [KL06]. Codes [MN18]. Coding [CLL+12]. Coin
[BBHT17]. Collecting [CJJ20, FST17, HKKN12]. collections [CHLS07].
collective [GLPP08]. Color [CLL+12]. Colored [EK20]. Coloring
[CHL+20, FGL+19, SW20b, BNS08, PKS9, DKT11, HKS11, PRV11, SS08a].
Colorings [BCSV20]. Colors [DLS14]. Column
[BSSX20, Joh05, Joh06, Joh07, Khu05, Khu06, Khu07]. Column-sparse
[BSSX20]. combination [GHPT05]. Combinatorial [EF12].
Combinatorial
[AKS17, BST08, FGPS08, GM12, BCN12, FP10].
combinatorics [SSS+11]. Combined [VZ21]. Common
[AW19, CMA+19, Gab17, CLLJ08, CKS05]. Communication [KR16].
community [Z008]. Compact
[AGM+08, BB08, KRX16, CSTW12].

Direction-Constrained [ADD+18]. Discontinuity [CCW18]. Discounted
[MTZ10]. Discovering [FKW11, GRS17]. Discrepancy [EPR13]. Discrete
[AFK+15, BGN+18, BKN21, NW07]. Disjoint
[AW19, KK13, KK16, CK07, CS07, DS11, GW07, ZO08], disks
[CKZ09, GKK+09]. Dissections [Jan05, Vio05]. Disposal
[CHJ+18, SHHA16]. Distances [cab19, GMV09]. Distance
[ACGP16, AFN+18, AFK+15, BPL18, BW21, BGMW20, BKN21, EP16,
GS18, GW20, MA16, WY13, ABS10, AHPSW10, AK12a, BS06a, CSTW12,
CW10, CM07, DMRW09, FR10, GLNS08, HPR14, MR09]. Distances
[Cab19, GMV09]. Distinct [Bla20, KKW12]. Distortion
[Pet09]. Distributed [ASS19, Akr12, Akps10, BHS14, BJKK18, CHL+20,
GKP08, HT21, Kmps16+, PRS20, SCS17, Cmy11]. distributing [FMS+10].
Distribution [HS17, Lcs+19, BH12, CRV11, Vio05]. Distribution-free
[Lcs+19]. Distributed [Wnn15, CDHW09]. Diversification
[Hjt17]. DNA [KSS09]. Do [SZ20]. Domain [Mas21]. Domains
[VZ21, Wim16, Oggw10]. dominance
[BST08, Epp09a]. Dominating
[Ass19, BDH+20, FLST18, GS17, FGPS08, Gklt09, PRS12]. Domination
[HMvw19, LPV18]. Dominator [GT16a, GT16b]. Doors
[Kr18]. Dotted
[alm+12]. Doubling [ACGP16, CGMZ16, CJ18, Cj20, KrX16]. Doubly
[Syz20]. Drawing [BRW16]. Drawings [BLPS13]. Dual
[AD16, DH18, Hir19, WNN15, Bcm11, VB08]. Dual-Pivot
[AD16, WNN15]. due [KKW12]. Dynamic
[AMW20, Alls07, ANFs17, Bcc+10, BFH21,
Bbm19, BJLY17, CN14, CKS19, GS18, HKN17, KP08, MN08, MK+19,
NS14, NS16, OSSW20, RST14, SW20b, Tao14, AKS08, AHTL05, BKS12,
CHLS07, DI06, Elkk11, Epp09a, Gk09, Iba08, LK08, Rod08]. DynamiCS
[FV19, FFM12].

ear [DC05]. Easy [Kpr16]. Edge
[BHRP+20, BK16, CM+19, CHL+20, CK07, Gilp16, GM14, HVV19,
KK13, KK16, KN16, MV15, RKH20, EFKN09, HKS11, MZ12, SS08a].
Edge-Connectivity [KN16, MV15, EFKN09]. Edge-covering
[CMA+19]. Edge-Disjoint [KK13, KK16, CK07]. Edges
[ADD+18]. Edit
[BGMW20, GS18, AK12a, CM07, DMRW09]. Editor
[Gab05]. Editorial
[Alb10a, Alb10b, APP17, BGN+18, Coh21, RRSW16, Sri19, Buc08].
effectiveness [Swa12]. Efficient
[AAK06, AFs18, BS18, CR18, DH18, EN19,
FGK+16, LPV18, MN18, SZ10, AAY10, AF07, ADHY08, MZ12]. efficiently
[AGKS07, Bklp07, Cay10, Heg06]. Eigenvalues
[TY18]. Election
[ARS+14, CKP+19, Gmp17, KKK+10]. element
[CS07]. element-disjoint
[CS07]. Elements
[Bla20]. Elimination
[YB12]. Embedded
[ADF+15, Cab10]. Embedding
[ADD+18, BR16, LDX09]. Embeddings
[AFT19, Aep18, CGR08, ABD+08, CMO+08, IN07]. Emulators
[EN19]. encoding
[FSP08, RRS07]. Encodings
[Gin+17]. End
[KMPS16].
End-to-End [KMPS16]. Energy [AF07, CKP+19, DH18, BCD12, CCL+09].
Energy-Efficient [DH18, AF07]. entity [CPR+11]. Entropy
[CDI+12, GMS19, PU07, AMM07, CCM10, GMV09, MN08]. Entropy-based
[PU07, AMM07]. entropy-compressed [MN08]. Enumerating
[BDH+20, CMA+19]. Enumeration [II09]. Enumerative [HS17].
Environments [NE19]. Envy [SHHA16]. Envy-Free [SHHA16]. equal
[GP08, IMY10]. equal-length [GP08]. Equality [Pre21]. equals [FGGV06].
equations [Epp06]. Equilibria [FGK+16, BCKV06, CV07]. Equilibrium
[CDI+12, GMS19, GMV09, PUW08]. Error [JW13, AKPS10, RS11a]. Errors
[KT19]. Essentially [KPR16]. Estimating [EHL+18, CCM10].
Estimation [BHPR16, BS06a]. Expected [DHPR16, BS06a]. Experimental
[DI06]. Experiments [FGGV06]. explicit [RW10a]. Exploitation [GSV20]. Exploration
[DP14, GP19, TSZ14, AGP+11, CFI+08, DKK06]. Exponential
[ANFS17, CKP+19, DHM+14a, FP13, GKL+09, KLP+16a]. exponentially
[PR08]. expression [BFG09]. extended [HPR14]. extension
[GN14, KMMP07]. extensions [BHZ13]. external [CFL07, LS08].
extreme [GGM10].

face [DS11]. Faces [KBNL20]. Facility
[ABF+18, ANFS17, KS16, ST10, BH12, Fot11, FS11, MV08, Svi10, SS08b].
Factor [Adj19, HHL+16, Cha20, Jac11]. Fair [AKS17, PS16, GMP05, GN14].
False [Pag18]. Families [CEV21, FLPS17, GK16, AG10]. family [ASS08].
Fan [HS18]. Fan-Out [HS18]. Fast [AL13, BHK+16, CN14, C1L7, ES16,
HU20, KKK+10, PT11, WY13, YZ05, BS10, BD11, KSS09, BW10b]. Faster
[AKL+20, BKK+17, BH19, CMV16, CD17, CP12, DGM18, EW20, FLN14,
FZ07, GS17, GW20, HW19, Jez15, Kar08, KKK+18, KX19, KLP16b, LNR+14,
RSS06, BG11, Dji10, Rod08, TM08, MM09]. father [SRS+11]. Fault
[BCHR20, HHL+16, PP16, PP18, SS08b]. Fault-Tolerant
[HHL+16, PP16, PP18, SS08b]. Faulty [KT19]. Feedback
[ALM+19, CCH15, KR18, LRS18, LMM+21, RSS06, Tho10a, Tho10b]. Few
[BHK+16, KBNL20, GW07]. fewer [PR08]. FFT [GKM16]. FIFO [And09].
filter [CDHW09, DH12]. Filters [NE19]. Filtrations [BS18]. Find
[ATG+14, AAY10, RW09]. Finding
[ALLT11, CDEM10, Cab10, CAY10, CSS21, GN08, Heg06, HMS07, KKK18,
MOR13, VWY10, And10, SS08, Joh07]. Fine [dBBJ21]. Fine-grained
[dBBJ21]. finite [BCN12, CFT+08]. Firefighting [ABZ19]. First
First-order \cite{GIKW19}. \textbf{Fixed} \cite{CCDL16}. \textbf{Fixed-Parameter} \cite{BBT12, CM15, CCHM15, DFHT05, DHM14b, MV15, DJP+12, EKS05, KKW12, RSS06, CGK+11]. \textbf{Flajolet} \cite{SSS+11}. \textbf{Flash} \cite{BAT11}. \textbf{Flexible} \cite{AR05}. \textbf{Flip} \cite{BBT12, BCC21}. \textbf{Flow} \cite{AGLW18, KT18, AF07, AKR12, BD07, BFKS14, BKMS11, CMS07, E12, GMT11, IM12, Kar08, TM08]. \textbf{flows} \cite{BEH+10, EKS05}. \textbf{Fooling} \cite{Har18}. \textbf{For-All} \cite{GLPS17}. \textbf{Forbidden} \cite{ACGP16, GJLS17}. \textbf{Forbidden-Set} \cite{ACGP16}. \textbf{Forest} \cite{BBT12, CM15, CCHM15, DFHT05, CGK+11}. \textbf{Fractal} \cite{CRR13, Epp07, Gab09, HT10, LOM06, Mat10, Gab05}. \textbf{Formulas} \cite{KT19}. \textbf{Formulation} \cite{FJS14}. \textbf{Fourier} \cite{MRR06}. \textbf{FPT} \cite{BD11, CDP19}. \textbf{FPTAS} \cite{KKW12}. \textbf{Fractional} \cite{GM14, CKK10b, Kar08, Mar10]. \textbf{Framework} \cite{Coh18, Har16, AKR12}. \textbf{Frank} \cite{Cla10}. \textbf{Fréchet} \cite{AFK+15, BKN21, CW10, HPR14}. \textbf{Free} \cite{CHJ+18, GHLL16, KRX16, SHHA16, BNC08, BDH+20, CKS09, DKT11, FGZ21, LCS+19, LPV18, Saw06}. \textbf{Frequency} \cite{Coh18}. \textbf{Frugal} \cite{AT07}. \textbf{Fully} \cite{BK12, CDP19, FLS+18, Iba08, Jez15, NS14, NS16, OSSW20, AHTL05, Elkh11, Rod08, RO11]. \textbf{Function} \cite{BCP13, DHHK16, DP06, SS09]. \textbf{Functional} \cite{NS14, CMY11}. \textbf{Functions} \cite{BJLY17, CD17, Fel17, MPQS20, MA16, WZ16, AG10, GMT11, Vig14]. \textbf{Fuzzy} \cite{BBB20].

galled \cite{MSS11}. \textbf{Gallery} \cite{BM20}. \textbf{Galois} \cite{AK12}. \textbf{Game} \cite{EFF+15, BCKV06]. \textbf{Games} \cite{ADGH21, FV19, CKN+10, DFM12, FKS08, GMT11, Saw06]. \textbf{Gap} \cite{FP13, HKS+18}. \textbf{Gaps} \cite{ABZ19}. \textbf{gas} \cite{KMM11}. \textbf{Gasoline} \cite{NRS18]. \textbf{Gathering} \cite{DPP14, BKMS11, RS11b, SZ10]. \textbf{General} \cite{DPS18, ES16, ERP16, GMS19, AA+06, JZ06, MR09, ABD+08]. \textbf{Generalization} \cite{BR14, HMM+18, CF05]. \textbf{generalizations} \cite{VB08]. \textbf{Generalized} \cite{ACER19, AFH+16, CN19, CV20, HU20, CGR08, HL06a, Lev09]. \textbf{generate} \cite{BS10}. \textbf{Generating} \cite{BBHT17, BHPR19, Saw06]. \textbf{Generators} \cite{ELMR21]. \textbf{Generic} \cite{MRR06}. \textbf{Genus} \cite{PPSV18, DJ10]. \textbf{Geodesic} \cite{CJ10, K19, OGW10]. \textbf{Geometric} \cite{CGK+11, Cha20, GGI+21, GS18, GRSW16, V14, BCG07, BCH+12, CHP07, Epp09c, GLNS08]. \textbf{Getting} \cite{PUW08]. \textbf{Girth} \cite{DKR16, RT13, DJ10]. \textbf{Gives} \cite{DH18, CFR10]. \textbf{Good} \cite{ADK16, CFP10, K08]. \textbf{grained} \cite{BBJW21}. \textbf{Graph} \cite{BRW16, CMA+19, CDP12, FGL+19, Eul16, GP19, KMZ18, K16, KRS19, SW20b, SYZ20, BKS12, BLP13, CFI+08, DFR09, DHHK14, EFK09, GKL09, RW09, SS09, Wil10]. \textbf{Graphs} \cite{ACGP16, AFT19, ASS19, ADF+15, ADD+18, AKLR20, BDH+20, BSW15, BK16, Cab19, CEV21, CR18, CDP19, CGH17, DHK14, DPH18, ES16, EP16,
EHL +18, ELMR21, FGZ21, FLS +18, FLST18, GILP16, GNSW20, KK13, LR15, LPV18, LMS18, LM19, OSSW20, PPSSV18, WY16, AS07, ALM +12, ASS08, BFKS14, BS06a, BHKK12, BKM09a, BKM09b, BGPV08, BHLR10, Cab10, DC05, Cha12, CEGS11, CSTW12, DS11, DFHT05, Dji10, DKT11, EPR10, Epp09a, Epp09c, GKK10, GT08, HKRL07, HSS07, Iba08, KMW10, KP08, KK06, Lau06, MR09, MZ12, PS10, PRV11, PRS12, RTZ08, RZ12, RST14, VWY10, VH05, YB12. Gray [KL06, MN18].

Greedy [FN20, CKS05, Cla10, CNP +11, FP10, GR10, RS11b]. Gromov [AFN +18].

Group [DHK14, KW16a]. Groups [CZ18, AMR09, AK12b]. Guarantees [TY18, BST08]. Guarding [AFK +18]. Guessing [AGKS07]. Guest [Buc08]. guided [CFI +08].


Indexing [BN14, BCKM20, BFG+16, Pre21, FGGV06]. Individual [Jan05, Vio05]. Induce [FP13]. Inequity [BGLZ09, Blal08]. Infants [GKM16]. Infeasible [BST08]. Injecting [CEK+21, BHMS11, BCH+12, CHLS07, FMMN07, MN08]. Indexing [BN14, BCKM20, BFG+16, Pre21, FGGV06]. Individual [Jan05, Vio05]. Induce [FP13]. Inequity [BGLZ09, Blal08]. Infants [GKM16]. Infeasible [BST08]. Injecting [CEK+21, BHMS11, BCH+12, CHLS07, FMMN07, MN08].
TY18, WY16, BB09, BG11, BLS08, CKK10a, CKL+09, DT11, EPR10,
FP10, GHPT05, Jan05, KMW10, MOR13, NZC11, RW09, VH05, Vio05.

**Linear-Size** [EP16]. **linear-space** [KMW10]. **Linear-Time**
[KKR+20, RS17, BCKM20, BLS08, RW09, VH05]. **Lines**
[DT16, BB09, GLS10]. **Link** [CBFWW15]. **Linking** [Gab17].
**links** [GW07]. **list** [AGKS07, AGvS13]. **Load**
[ABF+18, BHS14, BKK+19, GPSS15, EDKM07, GMP05]. **Load-Balancing**
[BKK+19]. **loads** [And09]. **Local** [BNS19, CHL+20, DP14, ER17, HH17,
Har16, Har18, Har21, PS16, And10, BCM11, KP08, LK08]. **local-ratio**
[BCM11]. **Locality** [Pag18]. **Locality-Sensitive** [Pag18]. **Locating** [KT19].
**Location** [ABF+18, ANFS17, AK18, Cha13, KS16, AGG+09, AMM07, BH12,
BCH+12, CDI+12, Fot11, FS11, MV08, ST10, Svi10, SS08b]. **Locations**
[GLLZ21]. **Logarithmic** [Cha20, EP16, AGP+11, BFKS14].
**Logarithmic-factor** [Cha20]. **Logit** [FV19]. **long** [GN08].
**longest** [EP05]. **loopless** [KL06]. **Lopsided** [Har21, Har16].
**Lopsidependency** [Har16]. **losing** [KM12]. **lot** [ELR+08].
**Lottery** [HPST19]. **Lovász** [Cha18, CDP21, FLS+18, FGL+20, KRX16, NS09, KP08, Pet09].
**Low-dimensional** [NS09]. **Low** [CHA18, CDP21, FLS+18, GMW20, KMNS17, KLP16b].
**Lower** [ACHKP21, BN15, BCK+20, CDKL20, DLS14, Kra14, KT18, SCR17, Soc16,
Svi10, AR08a, AGvS13, CGK+11, Cha10a, MSS11]. **Lower-bounded** [Svi10].
**LP** [CCW18, HKS11, Li17, MMS14, VZ21]. **LP-based** [MMS14].
**LZW** [Gaw13].

**Machine** [GSV20, HJ15, JMR19]. **Machines**
[SZ20, CKK10b, GP08, GLP06, TM08]. **maiden** [EP05]. **Maintaining**
[AHTL05, Elk11]. **Maintenance** [HKN17, HKM+12]. **majorization**
[GMP05]. **Makes** [SHHA16]. **Makespan** [GNR15]. **Making** [Ruz09].
**malleable** [JZ06]. **Management** [AER15, AKM08, CJST07].
**Many** [BKMV20, BRFF+12, Joh06]. **Many-visits** [BKMV20]. **map** [DFHT05].
**Mapping** [CDD+15]. **Market** [FGK+16]. **Markets** [BGH19]. **Markov**
[FBV09, MTZ10]. **marriage** [HIMY07, IMY10]. **mask** [BF09].
**Massey** [KY13]. **Massively** [CDP21]. **MAST** [BPGN09]. **Matching**
[AKLR20, BFH21, BG14, CCW18, CCL+12, CHL14, DPS18, EHL+18,
FLN14, Gaw13, HTWZ19, Jez15, LS20, NS16, PS19, ALLS07, BFG09, DC05,
CS11, CM07, GGN06, HLS07]. **matching-covered** [DC05]. **matchings**
[AFS12, GKK10, GKP08, IKM+06, KMMP07, KR16, Mes14, RW10b, VH05].
**Matrices** [DHS16, FLS+18, GMW20, KMNS17, KLP16b]. **Matrix**
[FGL+20, SWY22, WY13, KY13, YZ05]. **Matroid** [CLL14, GNR16, Swa16].
**Matroids** [FLS19, KKR19, KW14, LMPS18]. **Max** [AKS17, ABG16, BR14,
BCC21, BJLY17, KT18, PRV11, PS16, BD11, CRZ20, GS17]. **Max-coloring**
[PRV11]. **Max-CSPs** [CRZ20]. **Max-Flow** [KT18]. **Max-Leaf** [BD11].
**Max-Min** [PS16]. **Max-Sum** [BJLY17]. **maxima** [DMM+12]. **Maximal**
[BFH21, Har19, NS16, PS10, Epp09a, GKP08, IKM+06]. **Maximin**
Maximization [BF18, BFS19, CHJ+18, BNGK+09].
Maximizing [Fei17, GPSS15, MS17, WZ16].
Maximum [ER17, GMW20, KMSN17, LS20, MMS14, PS19, CMM09, DV10].
Maximum-Cut [ER17]. MaxMin [GNR16]. may [EK06]. Mazing [AGLW18].
mean [HL06b]. meanders [BS10]. meandric [BS10]. Means [BBB20].
Measure [GS17, AZ08, FGPS08]. measures [ABS10].
Mechanism [CKK10b]. mechanisms [AT07]. Median [BPR+17, HHL+16, Li17, Swa16, Cha20, YLW08].
Metrics [CGMZ16, CJ18, CJJ20, CGR08, GS09]. Middle [BKK17, MN18].
Mighty [DS19]. Migration [BBM19, GSV20, GHKS06, GHKS13]. Min [AKS17, BR14, BSWN15, DHK16, GHT18, PS16]. Min-Cut [GHT18].
Min-Knapsack [DHK16]. Min-Max [BR14]. minima [BLW09]. Minimal [BDH+20, FGPS08].
Minimization [HL13, AF07]. Minimize [RKH20, AAG09, EK06, TM08]. Minimizing [BD07, BKMSS11, DHM+09, DHM14b, FS11, GLP06, HL06b]. Minimum [ABF+18, AKLR20, BCK+20, BBT12, GPSS15, GNR15, HS18, HVV19, INV16, MV15, MM09, PRS20, TY18, AGM+08, ABD+08, BCD12, CKL+09, CLLJ08, CKS05, CS08, Fuj12, GKLTO9, HL06a, HLS09, JR05, KKW12, Lev09, Nut12, PR08]. Minimum-Cost [MV15, AKLR20, Nut12]. Minimum-Flip [BBT12]. Minimum-Load [ABF+18]. minmax [YLW08].
minmax-regret [YLW08]. Minor [CEV21, LR15, RW09]. Minor-closed [CEV21].
multilabeled [BHMS11]. Multilevel [KJ16]. Multipartite [EJK08]. multiparty [FIM+06]. Multiple


O-efficient [AY10, MZ12]. Oblivious [BFCF+17, CCW18, CR18, FV16, FLFR12, HKRL07, Har21]. Obstacles [AFS18, CW15]. occurrences [BCN12]. Odd [CSS21, FGL+19, KW14]. off [DFR09]. offline [BNS08]. one [CDEM10, Fot11]. Online [AGGP21, BODD+20, BJKK18, BHD+21, BFS19, CHJ+18, CKS09, DH18, EV06a, GSV20, GP08, HTWZ19, JLS12, KB06, LS20, LMMW16, MNS12, AAA+06, AAG09, AKL10, BNS08, BF07, CCL+09, CJST07, CNP+11, EV10, GSO9, GMP05, IM12, PU07, PRV11, YZ12, HCT+11, LK08]. open [BS10, GHKS06, GHKS13]. Opt [ERV16]. optical [AZ08]. Optimal [AL13, AGvS13, AD16, BN15, BDW19, Bla20, BRW16, CMA+19, CDJS17, CWN18, CI17, CEK+21, DH18, DKK06, Elm17, Gaw13, GLPS17, GMS19, GIN+17, GT08, GRSW16, HT21, Hau07, JVW13, LMS18, LMMW16, PRS20, Pre21, ADHY08, BKMV20, CMM10, CMO+08, CMM09, DMRW09, FCFM09,
FSP08, GK09. **Optimal-Time** [CEK+21]. **Optimality** [DS08, CNP+11]. **Optimally** [EK06, KS08, TM08, Wil10]. **Optimization** [BGGN16, BHLR10, BPR+17, GM12, GNR16, AAA+06, GJL12, Vig14, MNS12]. **Optimizing** [CCL+09]. **Oracle** [BSWN15, EP16, LR15, CSTW12]. **Oracles** [BHPR+20, GW20, Har21, KK06, WY13, BS06a, GLNS08]. **Order** [HL13, BF07, BM08, GIKW19]. **Order-Preserving** [HL13]. **Ordered** [KR19]. **Ordering** [BR16, CFR10, AFM08, CDHW09, DH12, KB06, HKM+12]. **Ordinal** [ABD+08, GRR06, HSM12]. **orientations** [FLM+12, FSP08]. **orientering** [CKP12]. **Orthogonal** [BRW16, Cha13, CW16, CW21, BLPS13]. **Other** [BCK+20]. **out-trees** [BRFF+12]. **Outlier** [KKK18]. **Outliers** [CN19, FKRS19, HPST19]. **output** [ST08]. **output-density** [ST08]. **P2P** [NW07]. **Packet** [KMP16]. **packets** [JLSS12]. **Packing** [BKK17, GGI+21]. **particle** [AKS08]. **Pairs** [KT18, Cha12, DI06, MTZ10, RS11a]. **Pairwise** [Cab19, GW07]. **pants** [Epp09b]. **Parallel** [CDP21, DH12, FN20, HH17, Har18, Har21, CKS09, GKK+09, Han07]. **Parameter** [BBT12, CM15, CCHM15, DHM14b, MV15, DFHT05, RSS06, CGK+11]. **Parameterized** [AMW20, BFPP18, BCK+20, BM20, CFM21, CHLT14, FLS+18, GWZ21, KW16a, LNR+14, LRS18, LPS+20, RS17, GJL12, HLS07]. **Parametric** [Epp18, FBV09]. **parentheses** [LY08]. **Parity** [CLL14]. **Partial** [GMW20, JS07, KMNS17, MSS11]. **Partially** [ADF+15, HKN17]. **Partition** [LR15, CLLJ08, CKS05, SS09, ZO08]. **Partitioning** [AD16, SYZ20]. **partitions** [CAY10]. **Party** [KR16]. **pass** [Fot11]. **passes** [DFR09]. **Path** [AGLW18, AZ08, BCHR20, EK20, EP16, GWZ21, HMG16, AT07, DI06, HS07, MZ12]. **Path-Reporting** [EP16]. **Paths** [AFS18, CW15, CR18, GW20, KK13, KK16, LBSZ21, WY13, Cha12, CK07, DS11, ELK05, EPR10, GW07, HS06, HSM07, KMW10, KK06, MTZ10, RS11a, RZ12, Wil10]. **Pattern** [Gaw13, GGN06, Jez15, ALLS07, CS11]. **peeling** [ALLT11]. **peg** [BS06b]. **Perfect** [AKLR20, BG21, GKK10, HHM+18, AG10, BCKV06]. **perform** [BCM11]. **Performance** [HJ15]. **periodic** [BCSM12]. **Periodicity** [EMS10]. **Periods** [MPQS20]. **Permanent** [DHM+14a, And09]. **Permanently** [BFK21]. **Permutation** [Win16]. **Permutation-Invariant** [Win16]. **Permutations** [BBHT17, EPR13, RW10a]. **permuterm** [VF10]. **Persistent** [Cha13]. **Perturbation** [BHW20]. **Phase** [BBM19, CFH07, FP10]. **Phase-based** [BBM19]. **Philippe** [SSS+11]. **Phylogenies** [HHM+18]. **piece** [EP11]. **Piecewise** [MA16]. **Piecewise-Linear** [MA16]. **Piles** [DEK21]. **pipelined** [CDHW09, DH12]. **Pivot** [ADK16, AD16, WNN15]. **Placement** [EFM+16, GKK+09]. **Planar** [ASS19, AKLR20, BSWN15, BK16, Cab19, CEV21, DHK14, EHL+18, KK13, KKR19, KBnvL20, PPSV18, WY16.

Relaxation [Li17, VZ21, ABD+08, GGG10]. relaxed [DM09]. Relax
[EFM+16]. Rendezvous [FP13, TSZ14, KKM11]. rent [BKLP07].
rent-or-buy [BKLP07]. Reordering [AER15]. Repairmen
[HKKK16, FHR07]. Repeats [CCKN19]. repetitions [AAG09].
Relay [EFM+16]. Rendezvous [FP13, TSZ14, KKM11]. rent [BKLP07].
Reordering [AER15]. Repairmen
[HKKK16, FHR07]. Repeats [CCKN19]. repetitions [AAG09].
Relay [EFM+16]. Rendezvous [FP13, TSZ14, KKM11]. rent [BKLP07].
Reordering [AER15]. Repairmen
[HKKK16, FHR07]. Repeats [CCKN19]. repetitions [AAG09].
Reordering [AER15]. Repairmen
[HKKK16, FHR07]. Repeats [CCKN19]. repetitions [AAG09].
Relay [EFM+16]. Rendezvous [FP13, TSZ14, KKM11]. rent [BKLP07].
Resampling [Har21]. reservation [BM08]. residents [KMMP07].
[JMR19, CCKR11, GN14]. respect [CGK+11]. response [FFM12, PUW08].
Restore [CMR18, FTK20]. Restricted [AKS17, MPQS20, PS16, BNL07].
restriction [GGG10]. restrictions [AMS06]. Results
[BG21, EW20, GRSW16, CPR+11, GHKS06, GHKS13, HIMY07, KNS+07].
Retractions [FGZ21]. Retroactive [DIL07]. Reversal [CBFWW15].
Revisited [ABH+18, CK07, HPR14, NS09]. Ride
[GNR15, GHNR10a, GHNR10b]. right [DMM+12]. Robust
[ARS+14, GN16, HS06]. roommates [CF05]. Rooted
[CLNV14, KLO6, Saw06]. roots [Lau06]. Roundtrip [RT08]. Route
[CMVZ16]. Routing [AZ07, ADPP07, CGMZ16, CBFWW15, GMT11,
KRX16, AGM+08, CSTW12, HKRL07, KP08, RTZ08]. Rule [HJ15]. Rumor
[DFS14].
s [BRFF+12, CRV11]. S-T [CRV11]. Salesman [AKS21, DT16, BHKK12].
samples [EMS10]. Sampling
[CHGG+17, Coh18, BCEG07, FSP08, GKK10, MPV10, PT11]. Santa
[AFS12]. SAT [CDL+16]. Satisfaction [GRS17, CMM09, SS09]. savings
[BS07]. Scalable [BKN14, IM12]. Scalably [EP12]. Scale [KRX16].
Scale-Free [KRX16]. Scaling [BCP13, DPS18, AA14]. schedule [Will01].
Scheduling [AFH+16, BKN14, JH15, JMR19, KMP16, LMMW16, SZ20,
AZ07, BCD12, BNL07, BNGK+09, BCSM12, CCL+09, CEGK11,
CKK10b, CRR09, DIP+12, EP12, EV06a, EO06, GHKS06, GHKS08, GP08,
HAL12, IM12, JZ06, JLS12, GHKS13]. Scheme
[BKM15, BKM09a, BKM09b, CSTW12, LDX09, SS08a]. Schemes
[BKK+19, FGL+20, FKR19, HW19, JMR19, KRX16, IMM08, KAR08, KP08,
Kor10, NH08]. SDD [KL16b]. Search
[Cha13, ER17, GMW20, PS16, STK16, JS07]. Searching
[AAHP+16, ACY12, FG08]. seat [BM08]. secretary [BH13]. secrets
[AGKS07]. Secure [FIM+06, PR12]. Seeds [KKR+20]. Segmentation
[ADV+16]. Selection
[AFH+16, AFK+15, CMR18, EHR16, GIN+17, Cha10a, Han07]. Self
[Elm17]. Self-Adjusting [Elm17]. Selfish [BHS14, ADPP07]. Semi
[KR16]. Semi-Streaming [ER16, PS19]. Semicontinuous [AFK+15].
Semidefinite [DHS16]. sender [EK06]. Sensitive [Pag18]. Sensitivity

T [CRV11]. Tabulating [Sha16]. Tandem [CCKN19]. Tangents [AW19].
tardiness \[\text{KKW12}\]. Tardos \[\text{Har16, HS17}\]. tasks \[\text{EV06a, HL06b, JZ06}\].

Tau \[\text{SW20a}\]. Taxes \[\text{CKK10a}\]. techniques \[\text{GGG10}\]. Telling \[\text{CDD}^+15\].

Terminals \[\text{KBVnL20}\]. Terrain \[\text{AFK}^+18, \text{AAY10}\]. Terrains \[\text{DHPR16}\].

Test \[\text{GSNW20}\]. Testers \[\text{CDJS17}\]. Testing \[\text{ADF}^+15, \text{AK12b, CDJS17, CS08, ELR20, Epp09c, LCS}^+19, \text{RT14, EMS10, FLM}^+12\]. Text \[\text{BN14, BFG}^+16, \text{Pre21, ALLS07, CHLS07, FMMN07, MN08}\].

texts \[\text{BFG09}\]. Their \[\text{ACE}^+20, \text{KMNS17, AG10}\]. Theorem \[\text{HHM}^+18\]. Theoretical \[\text{BBB20}\].

Theory \[\text{HTJ17}\]. thick \[\text{KT08}\]. Thin \[\text{BKK17, KT08}\]. Three \[\text{DKT11}\]. Three-coloring \[\text{DKT11}\]. Throughput \[\text{BNGK}^+09, \text{CCL}^+09, \text{GR11}\].

Three-coloring \[\text{DKT11}\]. Throughput \[\text{BNGK}^+09, \text{CCL}^+09, \text{GR11}\].

Tight \[\text{BODD}^+20, \text{BHD}^+21, \text{BD11, CHGG}^+17, \text{CGH17, CV07, DJS}^+12, \text{FN20, KPR16, Soc16, WY18, CDEM10, KBVnL20, MSS11}\]. Time \[\text{AW19, ATG}^+14, \text{BKMV20, BKK17, BSWN15, BKM15, BG14, BGMW20, CBFWW15, CCKN19, CEK}^+21, \text{CRR09, DHM}^+14a, \text{GLPS17, GMP17, GT16b, HKN17, KKR}^+20, \text{KX19, LR15, LRS18, PRS20, RS17, RKH20, SS18, SHHA16, WY16, AF07, AHRT05, AZ07, AK12b, BD07, BCD12, BNGK}^+09, \text{BS06a, BCKM20, BPGN09, BKMS11, BCMSM12, BL08, Cha10a, Cha12, DKT11, EPR10, EDKM07, GHT18, GKM06, GLP06, GT08, HO06b, IM12, JS07, KMMP07, KMW09, LD09, MOR13, NC11, RW09, TM08, VH05}\].

Time- \[\text{BKMV20, PRS20}\]. time-dependent \[\text{CRR09}\]. time-space \[\text{Cha10a}\].

time-varying \[\text{AZ07}\]. Times \[\text{BH19, GPSS15, JMR19}\]. Tiny \[\text{Sol13}\].

Tolerant \[\text{BCHR20, HHL}^+16, \text{PP16, PP18, SS08b}\]. tolls \[\text{Swa12}\].

Tools \[\text{AK18}\]. Top \[\text{GIN}^+17, \text{AHTL05}\]. Top- \[\text{GIN}^+17\]. Topological \[\text{FLST18, AFM08, Kl06, HKM}^+12\].

Tossing \[\text{BBHT17}\]. total \[\text{BGLZ09, GLP06, KK12}\]. Tournaments \[\text{LMM}^+21, \text{CFR10}\]. Tours \[\text{CKS19, GGG10}\]. Tower \[\text{DS08, BS06b}\]. Tracking \[\text{Bla20, YZ12}\].

Tractability \[\text{DHM}^+14b, \text{GRS17, CGK}^+11\]. Tractable \[\text{CM15, CCHM15, HIMZ19, RS06}\].

Tradeoff \[\text{CCDL16, RS09}\]. Tradeoffs \[\text{GMP17}\]. Trading \[\text{DFR09, BCFN07}\]. Traffic \[\text{DP14, ADPP07}\]. train \[\text{Wi10}\]. Trajectories \[\text{ADV}^+16\]. Transform \[\text{CI17, AL13, NC11}\].

Transforms \[\text{BHK}^+16, \text{MRR06, JW13}\]. transitive \[\text{Rod08}\]. Translation \[\text{BKN21, AHPW10}\]. transpositions \[\text{FZ07}\]. Transversal \[\text{KW14}\].

Traveling \[\text{AKS21, DT16, BHKK12, FHR07}\]. Treasure \[\text{TSZ14}\].

Tree \[\text{Adj19, AGP}^+11, \text{BGMW20, CJK20, CS19, DHHK14, FV16, FLK}^+20, \text{GT16a, GT16b, KBVnL20, ADHY08, BG11, BKM09a, BKM09b, CMS07, DMRW09, Epp09b, Fuj12, GNSW20, HMS12, JR05, PR08, BD11}\].

Trees \[\text{ACE}^+20, \text{ABZ19, AFN}^+18, \text{BEJK19, BBT12, BFKR21, FP13, GT16a, GT16b, GMP17, GMS19, HST15, HK17, NS14, PRS20, STK16, TLT21, ABDD^+08, AHTL05, BHMS11, BRFF}^+12, \text{CPR}^+11, \text{CS07, CS08, DP06, DM09, FSP08, GRR06, GKS}^+11, \text{HS06, HMS12, KL06, MSS11, RRS07, RNO11, Saw06, ZO08}\].

Treewidth \[\text{FLS}^+18, \text{LMS18, BFK}^+12, \text{MOR13}\]. triangle \[\text{Bl08, DKT11}\]. triangle-free \[\text{DKT11}\]. triangulation \[\text{CD}^+12\]. triangulations \[\text{OGGW10}\].

tries \[\text{JS07}\]. trim \[\text{Fuj12}\]. Truncation \[\text{LMS18}\]. Truthful \[\text{AGG10}\].

TSP \[\text{AFHS20, BKMV20, BHD}^+21, \text{Bl}^+08, \text{CJ18, CJ20, CS19}\].
ERV16, Man12, dBBJW21]. Tutte [DHM\textsuperscript{14a}]. Tverberg [ASW08]. Two [AW19, Adj19, BK16, CHLT14, FP10, HS18, HW19, KK16, KR16, WY18, dBBJW21, DS11, GP08]. Two-Dimensional [CHLT14, HW19, WY18]. Two-Edge [BK16]. Two-face [DS11]. Two-Party [KR16]. Two-phase [FP10]. Type [HPST19, Kra14, KW16b, CGR08].


Uncapacitated [KS16]. uncertain [ACY12, MNS12]. Uncertainty [AHH\textsuperscript{+}16, GM12, GNR16]. uncrossable [Nut12]. undirected [Cha12, CEGS11, MZ12]. Unequal [CF20]. unweighted [BS06a, Cha12, RZ12]. Update [GHT18, AGvS13]. Updates [BJLY17].


Vectors [CW21]. Vehicle [GNR15]. Verification [KMZ18]. version [BNLT07]. Vertex [ALM\textsuperscript{+}19, CHGG\textsuperscript{+}17, CCHM15, HTZW19, LRS18, LMM\textsuperscript{+}21, DS11, GKP08, HL06a, Kar09, Kor10, RSS06, Tho10a, Tho10b, VB08, Vis08]. vertex-disjoint [DS11]. Vertex-Weighted [HTZW19]. vertical [GK09]. Very [EN19]. Via [KLP\textsuperscript{+}16a, APF\textsuperscript{+}10, AGKS07, ANFS17, AK18, AFK\textsuperscript{+}15, AKR12, BKK17, BPR19, CCW18, EPR13, FGPS08, GGI\textsuperscript{+}21, GKK10, GGG10, GKP08, GM14, HH17, HKS11, HIMZ19, HHM\textsuperscript{+}18, KW14, MOR13, Nut12, PT11, RS17, WY13]. video [EK06]. video-on-demand [EK06]. visits [BKMV20]. Voronoi [DHPR16]. Voting [ADGH21]. vs [GMP17, RS11b].

wait [EP05]. Walks [CMA\textsuperscript{+}19, DGG\textsuperscript{+}20, SS18]. Walsh [CI17]. Warping [GS18]. Waste [SHHA16]. Weak [AFT19, FCFM09]. weakly [HSS07]. Weight [PS19, KM12]. Weighted [Adj19, ALM\textsuperscript{+}20, CCW18, CV20, DHK14, DPS18, HTZW19, Mes14, AKL10, BD07, CEV21, CFR10, GR10, GKP08, KKW12, WY10, VH05, Wil10].

Weighted- [ALM\textsuperscript{+}20]. Weights [DKN17]. Well [FV19, BCM11].

Weak [AFT19, FCFM09]. weakly [HSS07]. Weight [PS19, KM12]. Weighted [Adj19, ALM\textsuperscript{+}20, CCW18, CV20, DHK14, DPS18, HTZW19, Mes14, AKL10, BD07, CEV21, CFR10, GR10, GKP08, KKW12, WY10, VH05, Wil10].

Well-Behaved [FV19]. Well [FV19, BCM11].

Width [AN16, CR220, MTK\textsuperscript{+}19, CP19, FGL\textsuperscript{+}19, GNSW20, Mar10, Oum08]. Windows [BNLT07]. Winrose [ADD\textsuperscript{+}18]. wins [CFR10]. Wireless
REFERENCES

Hal12, KMPS16, AZ07, BKMSS11, EF12, NHK08, PR12. Without
Cla10. Word [Cha13]. Words [CCKN19, BCN12, KSS09]. Workspace
AW19. World [DGG+20], worst [ADHY08, BF07, BM08, CV07],
worst-case [ADHY08, CV07]. Writing [KS08]. Writing-all [KS08].

Yao [BGLZ09].


References

[AA14] Susanne Albers and Antonios Antoniadis. Race to idle: New algo-

[Albers:2014:RIN] rithms for speed scaling with a sleep state. ACM Transactions on


[AAA+06] Noga Alon, Baruch Awerbuch, Yossi Azar, Niv Buchbinder, and

[Alon:2006:GAO] Joseph (Seffi) Naor. A general approach to online network op-


[AAG09] Noga Alon, Yossi Azar, and Shai Gutner. Admission control to

[Agarwal:2016:NNS] minimize rejections and online set cover with repetitions. ACM


[AAHP+16] Pankaj K. Agarwal, Boris Aronov, Sariel Har-Peled, Jeff M.


[AAK06] Pankaj K. Agarwal, Boris Aronov, and Vladlen Koltun. Efficient

[Agarwal:2016:NNS] algorithms for bichromatic separability. ACM Transactions on
References


Adjiashvili:2019:FTB  

Aspnes:2010:ASM  

Abraham:2020:RST  

Adamaszek:2019:LKC  

Abraham:2016:FSD  

Abboud:2021:SCH  
REFERENCES


REFERENCES

Adjiashvili:2019:BAF

Aumuller:2016:HGM

Auletta:2007:RSU

Aronov:2016:STN

Amir:2012:CDC

Anagnostopoulos:2018:RES

Avigdor-Elgrabli:2015:ICA
REFERENCES

Albers:2007:EEA

Adany:2016:ANG

Ajtai:2016:SSI

Antoniadis:2020:PET

Avraham:2015:DSF

Ashok:2018:EAT
2018. CODEN ???? ISSN 1549-6325 (print), 1549-6333 (electronic).


Andreev:2009:SSL


Azar:2010:TUF


Azar:2021:OSD


Alon:2007:GSE


Anagnostopoulos:2018:MAU


Abraham:2008:CNI


Ambuhl:2011:TEL

Christoph Ambühl, Leszek Gasieniec, Andrzej Pelc, Tomasz Radzik, and Xiaohui Zhang. Tree exploration with logarith-


REFERENCES


Aumann:2012:DIG


Agrawal:2019:FVS


Agrawal:2020:PAA


Arya:2007:SEB


Amanatidis:2017:AAC


Alagic:2009:QAS

REFERENCES

2009. CODEN ???? ISSN 1549-6325 (print), 1549-6333 (electronic).


[Alon:2006:ACS]


[Alman:2020:DPP]


[Andoni:2016:WPS]


[Andrews:2009:IFP]


[Andersen:2010:LAF]


[An:2017:DFL]


[ARS+14] Baruch Awerbuch, Andrea Richa, Christian Scheideler, Stefan Schmid, and Jin Zhang. Principles of robust medium access and


Andrews:2007:RSM


Anshelevich:2008:PDU


Ben-Aroya:2011:CAF


Blandford:2008:CDV


Berend:2009:LAC


Blomer:2020:CTS

Bacher:2017:GRP


Bienkowski:2019:DBF


Bocker:2012:IFP


Bansal:2010:DPI


Bibak:2021:ISC


Baptiste:2012:PTA

REFERENCES


REFERENCES


REFERENCES

REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES


REFERENCES

Barbay:2008:ARA


Borradaile:2016:TEC


Bjorklund:2017:CTS


Berenbrink:2019:IAD


Becchetti:2007:SCM


Borradaile:2009:ASS

REFERENCES


REFERENCES

Bringmann:2021:DFD


Baswana:2012:FDR


Blaser:2008:NAA


Blasiok:2020:OST


Biedl:2013:MOP


Brandstadt:2008:SLT


Bruss:2009:IAI

F. Thomas Bruss, Guy Louchard, and Mark Daniel Ward. Inverse auctions: Injecting unique minima into random sets. *ACM Trans-


Bar-Noy:2009:TMR


Bar-Noy:2007:WSR


Bun:2019:HHS


Bar-On:2020:TBO


Berry:2009:LTA


Barbay:2018:ACS

REFERENCES


REFERENCES

2006. CODEN ???. ISSN 1549-6325 (print), 1549-6333 (electronic).


REFERENCES


Chekuri:2012:SMP


Chee:2019:DCW


Calinescu:2011:IAA


Chan:2009:OTE


Chakrabarti:2010:NOA


Chakrabarti:2014:ADS

REFERENCES


[CDJS17] Deeparnab Chakrabarty, Kashyap Dixit, Madhav Jha, and C. Se-  
shadhri. Property testing on product distributions: Optimal  
testers for bounded derivative properties. *ACM Transactions on  
1549-6325 (print), 1549-6333 (electronic).

[CDKL20] Eden Chlamtác, Michael Dinitz, Guy Kortsarz, and Bundit  
Laekhanukit. Approximating spanners and directed Steiner for-  
est: Upper and lower bounds. *ACM Transactions on Algorithms*,  
16(3):33:1–33:31, June 2020. CODEN ????, ISSN 1549-6325  
abs/10.1145/3381451.

[CDL+16] Marek Cygan, Holger Dell, Daniel Lokshtanov, Dániel Marx,  
Jesper Nederlof, Yoshio Okamoto, Ramamohan Paturi, Saket  
Saurabh, and Magnus Wahlström. On problems as hard as CNF-  
SAT. *ACM Transactions on Algorithms*, 12(3):41:1–41:??, June  
2016. CODEN ????, ISSN 1549-6325 (print), 1549-6333 (elec-  
tronic).

[CDP19] David Coudert, Guillaume Ducoffe, and Alexandru Popa. Fully  
polynomial FPT algorithms for some classes of bounded clique-  
2019. CODEN ????, ISSN 1549-6325 (print), 1549-6333 (elec-  

[CDP21] Artur Czumaj, Peter Davies, and Merav Parter. Graph sparsi-  
fication for derandomizing massively parallel computation with  
low space. *ACM Transactions on Algorithms*, 17(2):16:1–16:27,  
June 2021. CODEN ????, ISSN 1549-6325 (print), 1549-6333  

CODEN ????, ISSN 1549-6325 (print), 1549-6333 (electronic).


REFERENCES

Cohen:2008:LGG


Carmo:2007:QPI


Ciriani:2007:DSS


Chitnis:2021:PAA


Coppersmith:2010:OWN


Cygan:2017:TKB

REFERENCES


REFERENCES


[CHAN:2020:DEC]


[COLE:2014:TDP]


[CHERAGHCHE:2017:NOD]


[CHAN:2018:RCD]


[CHAN:2020:UPP]

REFERENCES


Cheng:2017:FSS


Chrobak:2007:IOA


Chekuri:2007:EDP


Caragiannis:2010:TLA


Christodoulou:2010:MDF


Carr:2009:CCN

REFERENCES


REFERENCES


REFERENCES


Coppersmith:2011:OOG


Cohen:2018:SSF


Cohen:2021:E


Cygan:2012:EFE


Czyzowicz:2012:HMA


Chakaravarthy:2011:DTE


REFERENCES


REFERENCES


REFERENCES


REFERENCES


Dieudonné:2014:GDM


Duan:2018:SAW


Dinitz:2008:OAS


DeVerdier:2011:SVD


Disser:2019:SAN


Dumitrescu:2016:TSP


Drescher:2010:AAM

REFERENCES


REFERENCES


Emek:2016:SCI


Elmasry:2008:MPQ


Evans:2006:OSV


Elkin:2007:IAR


Eiben:2020:CPP


Even:2005:NDP

Elkin:2005:CAS


Elkin:2011:SFD


Elmasry:2017:TOS


Even:2021:SRA


Even:2008:ACR


Eden:2020:TBA


Ergun:2010:PTS

Elkin:2019:EAC

Edmonds:2005:MAL

Edmonds:2011:CCR

Edmonds:2012:SSP

Elkin:2016:LSL

Eppstein:2006:QAM

Eppstein:2007:FSI


REFERENCES


REFERENCES

1:??, December 2009. CODEN ???? ISSN 1549-6325 (print), 1549-6333 (electronic).


**Fakcharoenphol:2007:TRP**


**Feigenbaum:2006:SMC**


**Feigenbaum:2014:APF**


**Friggstad:2019:ASC**


**Fotakis:2008:ACG**


**Fu:2011:DAH**

REFERENCES


REFERENCES


REFERENCES


REFERENCES


structures for selection and top-
v k queries. ACM Transactions on
1549-6325 (print), 1549-6333 (electronic).

parameterized convex optimization problems. ACM Transactions
on Algorithms, 9(1):10:1–10:??, December 2012. CODEN ????. ISSN
1549-6325 (print), 1549-6333 (electronic).

tanov, and Saket Saurabh. Uniform kernelization complexity of

[GK09] Yoav Giora and Haim Kaplan. Optimal dynamic vertical ray

[GKK+09] Leana Golubchik, Sanjeev Khanna, Samir Khuller, Ramakrishna
Thurimella, and An Zhu. Approximation algorithms for data

matchings via uniform sampling in regular bipartite graphs. ACM

[Gaspers:2009:ETA] Serge Gaspers, Dieter Kratsch, Mathieu Liedloff, and Ioan Tod-
REFERENCES


REFERENCES

Guerraoui:2008:CMA


Gilbert:2017:ASR


Gao:2010:CLH


Guha:2012:AUR


Grohe:2014:CSF


Goel:2005:AMF


Glacet:2017:TVI


REFERENCES

Gortz:2015:MMM

Gupta:2016:RMO

Grohe:2020:IIT

Goldwasser:2008:ONS

Gorain:2019:DGE

Gerke:2015:MML

Gordon:2010:CWT
REFERENCES


Geary:2006:SOT


Ganian:2017:DAT


Guruswami:2016:BUS


Gamzu:2009:IOA


Gaspers:2017:SMC


Gold:2018:DTW

REFERENCES


REFERENCES

Halldorsson:2012:WSP

Han:2007:OPS

Harris:2016:LMT

Harris:2018:DPA

Harris:2019:DCB

Harris:2021:ORO

Han:2011:NUB
Xin Han, Francis Y. L. Chin, Hing-Fung Ting, Guochuan Zhang, and Yong Zhang. A new upper bound 2.5545 on 2D Online
REFERENCES


<table>
<thead>
<tr>
<th>Reference</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henzinger:2017:STM</td>
<td>Monika Henzinger, Sebastian Krinninger, and Danupon Nanongkai. Sublinear-time maintenance of breadth-first spanning trees in par-</td>
</tr>
</tbody>
</table>
REFERENCES


REFERENCES

Hochbaum:2013:AAM


Hazay:2007:APM


Hassin:2009:AMQ


Hershberger:2007:FSS


He:2012:SOT


Hermelin:2019:DWS


He:2016:DSP

REFERENCES

September 2016. CODEN ????. ISSN 1549-6325 (print), 1549-6333 (electronic).


REFERENCES


Hsu:2020:NAF


Hunkenschröder:2019:AAM


Heydrich:2019:FAS


Ibarra:2008:FDA


Ito:2009:EIC


Irving:2006:RMM


Im:2012:OSA

[IM12] Sungjin Im and Benjamin Moseley. An online scalable algorithm for average flow time in broadcast scheduling. *ACM Transactions
REFERENCES

Immorlica:2008:LCM


Iwama:2010:AAS


Indyk:2007:NNP


Im:2016:MLS


Izsak:2011:CPM


Irani:2007:APS


Jacobs:2011:CFA

16:1–16:??, March 2011. CODEN ???? ISSN 1549-6325 (print), 1549-6333 (electronic).


REFERENCES

May 2007. CODEN ???? ISSN 1549-6325 (print), 1549-6333 (electronic).


REFERENCES


Katriel:2006:OTO


Kisfaludi-Bak:2020:NET


Khuller:2005:PC


Khuller:2006:PC


Khuller:2007:PC


Kowalik:2006:OBL

REFERENCES


REFERENCES


REFERENCES

Kortsarz:2016:SAA


Krivelevich:2007:AAH


Kolluri:2008:PGM


Korman:2010:LSV


Korman:2008:DRS


Kratsch:2016:PLC


Konrad:2016:ASM

REFERENCES

Korman:2018:DDP


Klemz:2019:OLP


Kratsch:2014:CNC


Kreutzer:2019:PKW


Konjevod:2016:SFC


Kowalski:2008:WAD

Krishnaswamy:2016:IMU


Kao:2009:RFD


Kaplan:2008:THT


Krauthgamer:2018:CLB


Kannan:2019:LEF


Kratsch:2014:CMR


Koutis:2016:LAG

REFERENCES

Krauthgamer:2016:CTA


Koiliaris:2019:FPT


Kaltofen:2013:MBM


Lacki:2013:IDA


Lau:2006:BRG


Lokshtanov:2021:ACP


Liu:2019:DFJ


[Lokshtanov:2021:AFV] Daniel Lokshtanov, Pranabendu Misra, Joydeep Mukherjee, Fahad Panolan, Geevarghese Philip, and Saket Saurabh. 2-

**Lubbecke:2016:NAO**


**Lokshtanov:2018:DTL**


**Lokshtanov:2018:KAG**


**Lokshtanov:2014:FPA**


**Lopez-Ortiz:2006:F**


**Lokshtanov:2020:CSI**


REFERENCES


REFERENCES


[MR09] Sharon Marko and Dana Ron. Approximating the distance to properties in bounded-degree and general sparse graphs. *ACM


REFERENCES


REFERENCES

Nguyen:2009:LDL

Naor:2010:DCA

Navarro:2014:FFS

Neiman:2016:SDA

Nutov:2009:ACA

Nutov:2012:AMC

Naor:2007:NAP


REFERENCES


**Pemmaraju:2011:MCO**


**Panagiotou:2010:MBS**


**Polacek:2016:QPL**


**Paz:2019:AMW**


**Pritchard:2011:FCS**


**Patrascu:2016:IRL**

REFERENCES

Pandurangan:2007:EBB

Pruhs:2008:GBR

Rottenstreich:2020:CHM

Russo:2011:FCS

Roditty:2008:FSF

Raman:2007:SID

Rabani:2016:ESI
REFERENCES


Rabani:2009:BAT


Roditty:2011:APS


Rosen:2011:RVB


Ramanujan:2017:LTP


Raman:2006:FFP


Rue:2014:DPG

REFERENCES


REFERENCES

2010. CODEN ????. ISSN 1549-6325 (print), 1549-6333 (electronic).


REFERENCES

Solomon:2013:SES


Srinivasan:2019:E


Sanders:2008:AAS


Swamy:2008:FTF


Scott:2009:PCS


Schmid:2018:CWP


Salvy:2011:PFF


REFERENCES

Swamy:2016:IAA


Sun:2021:QMT


Soltan:2020:DBC


Shalita:2010:EAG


Stein:2020:SWY


Tao:2014:DRS


Thomasse:2010:KFV

REFERENCES


REFERENCES


