A Bibliography of Publications about Bitcoin and Digital Cash Systems

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Title word cross-reference

$1.2M$ [McM13]. $10$ [Pop17a]. $100\times$
[CEN14]. $145$ [Cim19]. $190$ [McK19].
$1m$ [Sou13]. $2$ [Goo18]. $28.5$ [Gre13].
$3.3$ [Cim18a]. $37$ [Lee13]. $400$ [Nak18].
$400M$ [Gal18]. $530$ [YWW+18, YWS+18].
$62m$ [Nic17]. $735$ [Osb18b]. $\delta$
[LL17b, LL17c]. $PCS$ [KLR+17a]. $N$
[ZGR17]. $n/2$ [XHST20]. $t$ [PCP20].

- Bitcoin- [BS17a]. -privacy [LL17b, LL17c].

/ACM [TODM19].

1 [BH15]. 150 [Woo14]. 16th [Ker12]. '17
[ACM17c]. 17th [Sad13]. 18-Month [De18].
[DWC+17, FSW14, GDP+17, KLM17, LSO+15, LF16, Liv20, ZP17a, GJK+20].

anchored [NNGV19].

Ancient [Ber17].

anderen [Six17e].

Andrew [Ano16c, SM-16].

Android [Chi13, Duc13, Seg18].

Announcement [SPB17].

Announces [Men19].

Annual [OF15].

Anomaly [Bog17].

Anonymity [BLS17, BNM+14, HJ15, JMM14, KKM14, OKH13, RH11, RH13, SMD14, VFL17a, VFL17b, WLY17, BS+20, DKJ19].

Anonymization [WBK+17].

Anonymizing [DS15, WLS+16].

Anonymous [BSCG+14, BK17c, CLJ+21, Chr13, GM17, HBG16, MGGR13, ML14, MuF16, SCG+14, MY11, SJX+20, ZLF+19a, ZMH+18].

answer [Pec12].

Answers [Pav18].

Anti [Alz19, Bra13, AB20].

Anti-Counterfeiting [Alz19, AB20].

Anti-Theft [Bra13].

Anwendung [WLS17].

Anwendungsfall [FRSU17], anything [Nor17a], apologizes [Gal18].

App [BCM16, MCS+21], apparent [Osb18a].

Appetite [Osb18a].

Applicability [Scr18, Álv18].

Application [Bik16, But13b, CDD17, DXR+17, GGN16, HG15, Jas18, Kue18, OOF+17, Son18, Sve16, Zam19, AAE19, DSM+17, GL16, IFD+19, Sar21, ACW17, WLS17].

Application-Specific [Son18].

Applications [ACA+19, Ant21, Big20, BLN17a, BLNN17b, CM16, GH05, HLC+17a, Kat16, LLH+20, MGM+17, McC18, OF15, Pan18, SG19, SHL+20, SC20, VMAA17, WDL17, WB17, Zha19, CK16, CXL18, DHH18b, DM20, ES16, GKL15, KAP20, MPSW19, MFB+20, MCLH19, MFE+20, Pi16, TVK+20, WDL+18, XLL+19, ZWH+20, ZZ16, dORM+20].

Applied [Wu19, IKY05].

Apply [Int14].

applying [NML19].

Approach [CSX+17, DH17, GWF+21, HRF17, KK17a, LWZ+21, Liu19, LSH13, MZWX21, Mis17, MMT16b, NSNF17, Nia19, Not19, RAH+15, RFM+18, SCYP17, SOA17, XWL+19, Yan21, Bar17, BS20, CLS19b, CLS20, DMR19, FOA17, GLW+20, HVM+18, MFE+20].

Approaches [EBD+20, SPZ+20, JO13].

Approximation [KD16].

Approval [AH12].

Approximate [DDX17, VDK16].

April [ACM17a, ACM17b, ACM17d, JRB+17, OF15, Sad13, Unl14].

AR/VR [Per20].

Architectural [AS14, WLL+13].

Architecture [AS14, CCH+20, LLH+20, LST+17, PPR+20, RBL+17, SRP20, SNKG20, VDG19, Wer18, HSY20, KAP20, LML+19, RKP19].

Architectures [FS16].

Archival [LS17].

Areas [CFGH16].

Argentina [McL13].

Arms [Mat14, Pec13].

arrest [Ano18j].

Art [Swe16, Zei16].

Artificial [LZC+17, SG19, SRP20, Che18, DXW21, DNZ+19, GS20b].

Arvind [Ano16c, SM-16].

AS-level [FSW14].

Asia [ACM17a, ACM17a].

ASIC [KZVT17, MKGT16a, MKGT16b, TVK+20].

ASICs [Bon14b].

Aspects [Dre17a, Eva14, Sch98].

Assessing [SBL19, YCM20].

Assessment [Ano18g, BBH18, Mai18, Gof19].

Asset [BW17, GZH+14, KMOD17, Wi16].

Asset-Based [KMOD17].

Assets [CNS20a, NCS17, WSN18, CAMS20, Nor17c, WHJ17, WHJ20].

Assisted [DNY17].

Associated [Van14b].

Assurance [LN17].

Asymmetric [BK17b].

Asynchronous [PSS17].

Atomic [MPSP17, ZAE20].

Atomically [MCHM17, MHM17].

Attack [BS16, BRS17, Kan17, Ker18b, KKS+17b, SPB17, TSL+17, Bee16, PR16].

Attacked [Sou13].

Attacker [Goo18, Osb18a].

Attackers [Kan18].

Attacks [ABL+18a, AZV17, ABC17, CGGN17, CPNX20, GAK17, JLG+14, Ker18a, KKS+17c, LJJ15, MSH17, SGDT19, VTM14, WB17, Ano18e, Ano18k, CEW15, CSC16, FTS+20, Fir18, Ker18b, KKS+17a, MLYL20, NAH15, QHW+20, SGM20, Xu16, XGS+20, YTLD19].

Attention [AT16ab, AT16ac, AT16ae, AT16af, AT16ag, AT16ah, AT16ai, AT16aj, AT16ak, AT16al].
[DL17, ZDL17b, AF16, AFMdM14, BDE+13, Brü17, Cap15, ES16, Gre13, Hol15, MY11, McL13, McM13, MPJ+13, MPJ+16, RKS15, Six17e, ZGH+15]. BitConeView [BDP+15], BitExTract [YSZ+19], BitFlow

[HGDD20], BitIodine [SMZ14], bitstrings [HS97], Bitter [BBSU12], bivariate [PCP20], BIX [Muf16], Blockchain [vdHEM+17]. Bitter [Cha83, WZQ+17], Blinded [VR15]. Bitter [HS97]. Bitter [HGDD20]. Bitter [JMK17, JL17, Jas18, JBK+19, JGL+20, JWNS19, Joh18, Kab17, KDS+20, KBTT20, Kad18, KFN+17, Kan20, KPP+20, Kar16, K1, KK17a, KG17, KAP20, KKT16, KJ17, KJ18, KK20a, KXSS21, KLZ+21, Kla19, KET+17, KUEE17, KUEE18, Koc17, KAKC20, KÖn20, KFR18, Kri19, Ksh17a, Ksh17b, Ksh18a, KV18, Ksh20, Kue18, KVL19, KFTS17, Kuz19b, KK17b, LLH+20, Las17, Lau17, LL16, LL17a, LMWL17, LM17, LHW20, LQYG19, LMH16, LN17, LR17, LLL17, LZY+17, LABK17, LWY+19, LFZ+21, LST+17, LK17, Lim18, LSM17, LP17b, LPW17a, LP17c, LP18a, LPW18, LP18b, Liu16, Liu19, LGGB+21, LX17, Lus18, Lnu17, MHL20, MZL20, MM16, MAh18, MAi18, MAli18, ME17, MHH+16, MSC15, McC18, MCLH19, MCS+21, MZWX21, Mer19, MCJ17, MHWK16, MK15, Mis17, MRR+21, Moh19, MRR+21, MRR+20, Mor17a, Mor17b].

Blockchain [Mor17, Mor17d, Mor17e, Mor17i, MZH, MG17, MGDEK17, MGDEK18, NRP+20, NNGV19, Nar19, NGS+19, NSNF17, Nia19, aNOE17, NGHS17, NML19, NYZ+20, NCS17, Not19, O19, OOF+17, OA17, ØH16, OJ17, OE16, OEO17, ØY17, PPR+20, PK19,
Blockchain-Driven [HSB17b, HSB17a, HSB17d, HSB18f, HSB18e, HSB18h].
Blockchain-Empowered [HWCL17].
Blockchain-Enabled [AAAO20, DCZ 21, Du21, KV18, Las17, LQYG19, LN17, MZLW20, BKM 17, NML19, SRP20, MRG18, MFE 20, YPDC20, ZWX20a, ZZW 21].
Blockchain-LI [YNS16].
Blockchain-Okosysteme [Sto17].
Blockchain-oriented [IPSP17, PPMT17].
Blockchain-Powered [QFLM17].
Blockchain-supported [BAR21].
Blockchain-Technologie [DF17b, DF17a, HP17, HP18, TNM17, BP17].
BlockchainDB [EHBA +19].
Blockchained [Lei16, LTMW19].
Blockchains [ADA17, BNMH17, BLBS17, BDP17b, BS17b, BS18, Bog17, BTvdH20, Bys19, CDZ 20, CDE 16, DdFP18, DL17, DWC 17, EMEHR17, EBD 20, EN17, GvRS17, GKW 16, Gos17, GG17, HS16c, HM16, Her17, Her19, KD20, LSK17, LDH17, LNZ 16, MDAP16, MAP16, MBC17a, MM17, MHH16, O C17, Pec17b, PdWWS16, RM19, RBS17, Six17e, Spo17, SDK 17, Vuk17, Yer17, ZZj17, van20, Ano18a, BHMB21, BANT20, CV18, Cro18, EHA 19, FD20a, HZLH19, LLZY20, Nor17c, SKA 20, Vra17, WSL 19, WM19, WZW 20, Xue16, ZA20, PdWWS16, RBM17].
blockchange [Gal18].
blocc [Tun18].
block [EAvM20].
BlockIoTIntelligence [SRP20].
BlockNDN [JZLL17].
Blocks [Abr18, DCK17, GRK15, JSK 17, Swe16, Bra15b, FZC 20].
BlockSecIoTNet [RKP19].
BlockSim [AvM18].
Blocktime [Swa16].
Blocktrees [JCG17].
Bloom [GCKG14].
Bloomberg [Ron13].
blossoming [PM17].
Blueprint [Swa15a, Swa15b].
Blues [K.13].
BlueWallet [BDWW14].
Boards [CGJ 17].
Bolta [GM17].
Bonaire [Ker12].
Bond [LS17].
Bonneau [Ano16c, SM 16].
Book [Ano16c, Lev17, SM 16, Cha14].
Book-smart [Lev17].
Bookcoin [HDM 14].
bother [Pal18].
Botnet [DH17, Goo18].
Botnets [AMLH15, SGDT19, AMLH18].
bound [Dry14, Tro15b].
Boundaries [MDAP16, MAP16].
Bounding [LL17b, LL17c].
Bount [JCHSR16].
Bounty-Based [JCHSR16].
Brain [VBC 17].
Branch [SK18].
Break [LKL 14].
Breaking [LP18c, LP18d, NC17a].
Breaks [GCR18].
Breast [Shu17].
Bridging [Dan17a].
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Bringing [Dre17c, FDT17, FMR 16, MBB 15].
Brixton [Hil14].
Broadcast [MPSP17].
Broader [YWS 18].
broke [Ste17].
Broken [GCR16, GCR18, Ron18].
brother [Cha85].
Browser [Abr18].
BSeIn [LHH 18].
BSRA [VDG19].
Bubble [God15, Kru18, Pop18b].
Bubbles [HHBS18, CF15].
Bubbling [WM18].
bucks [Tun18].
Bug [Chi13, WLXC17].
Bugs [Cou16, WZS19].
Build [IM16, LSM17, RST11].
Building [CCH 20, DFKP13, Spo17, Swe16].
Builds [dCdCM14].
Bulgaria [OF15].
Bullet [McG18].
Bulletin [CGJ 17].
Business [BART17, CWL17, GBP17, Liu18, ME17, MWW 18, Mor17f, WXR 16, Ant20, BHMB21, Hal18, LPGBD 19, PSHW20, RBM17, TT16, TCC16, Uni14, ZW15, ZW17, ZFY16, ZFY17].
businesses [CZ16].
Buy [ECHL16, Ito18, PW17a].
Buyer [HWDD17, HSB18a, HSB18b].
Buyer-Led [HSB18a, HSB18b].
Bytecode [ABBS18].
Byzantine [BSV17, Coe20b, Gra20, LSP82, ML14, TYY 19, VG20, XZ 21].
C2B [Blo18].
C4 [JW16b].
C5 [JW16a].
Caching [SNM17].
Calculus [Kam17].
California [CRS83]. Campaign
[Cim18b, Men19, Seg18]. campaigns
[CGR18]. Can
[AP20, BBH1+13, Ber17, CRdK16, CAMS20, GP17a, HSB17b, HSB18f, Ksh17a, Ksh17b, MBC17a, KFR17, Lew15, Pec17a, SYZ16].
[AAE19]. Capital [DMH18l, McL13, PF18].
Capitalisms [Bhe17a, Bhe17b, DdFP18].
Capitalizations [Ano18f]. Carbon [CE12].
Care [BSLM20, Chu15, DMH18c, LP18c, LP18d].
Careers [Nor17b, Per20]. carrier
[LML+19]. Case [BATB20, CMT+21, FRSU17, Fug19, HS16d, HSB18i, KPP+20, LX17, LN15, LSP+15, RR17, Str18, Yew18, CSLD17, KOJ+20, XLL+19]. Cases
[CDZ+20, Nav17, SG19, Raj18]. Cash
[Ano17a, MGGR13, OO91, WvB14, Bac97, Bac01, BB15, HGDD20, Nak08a, Nak08b, Pan96, Pec12, WLS17]. cash-flow
[HGDD20]. Casinos [Mat13, Pia16].
Categorization [GP+17]. Catena
[TD17b]. Caterpillar [LPGBD+19].
Causality [Unv21]. CBT [GANAHJ17].
CSS’17 [ACM17a]. CDN [AC19]. Cecoin
[QHW+20]. censors [RS21]. central
[Nis16a, Son14]. Centralised [Lei16].
centralization [BS15]. Centralized
[KAKC20, WSZN18]. Centrally [LDH17].
Centric [ACC+17, Hu11]. CEO [Sid14].
Certificate [KKM19, ZKX+17, AHSZ21, CCMN17, LCB+20]. Certificates [Muf16].
Certification
[KLR+17a, KLR+17b, Wey19]. Certified
[AFMdM14]. CertLedger [KKM19]. CFO
[SL20]. Chain
[BAR21, Cou14, HSB17b, HSB17a, HSB17c, HSB17d, HSB18a, HSB18b, HSB18f, HSB18e, HSB18g, HSB18h, HSB18i, Kra16b, Kri19, Nia19, RK17, WCL17, Wu17, XRS+19, XZY+21, YPFY21, Che18, DF17b, GS20b, MFE+20, NNGV19, PB17, SCZ+21, FY19].
Chaining [ET17]. Chains
[GLK17, JSK+17, Alv18, Ler14a, SZ13].
Chaingenuity [ZWX20a]. Challenge
[Tzi18, LWA21, MLYL20]. challenge-based
[ACM17c, BGM20, Big20, BMC+15, CDZ+20, CCA+20, DCD+21, EBD+20, HHH18, HJ15, HJPS16, KAKC20, MWV+18, Mult14a, Nav17, PS16, PPMT17, RDDL17, SK17, Van14b, dCdCM14, ACA+19, And18, HRC19, KS18, MAAN19, MCLH19, SPZ+20]. challenging
[VC15a, VC15b]. Chancen
[Ker14, San14a]. Change
[FWB15, KRL17, Mor17c, Kec15, Pec17b]. changing
[Pal18, TT16, TTC16]. Channel
[AGGM16, BW17, EKK+17, MNS+17, RLT17, TWFO20, ZLL+19b]. Channels
[ABF+16, DW15, GM17, Kra16b]. Chaos
[LB18]. Characteristics
[KLDS20, WLXC17]. Characterizing
[GCL16, MPJ+13, MPJ+16]. charging
[HZLH19, KUE17]. Charles [G17]. chart
[Pec17a]. check [Pal18]. Checks [YWS+18].
Chemotherapy [Shu17]. Cheque
[SV19, KBT20]. China [CP17a, K13, RS21, Son14, Sto20, Unv21, ZZ16]. Chinese
[Son14]. Choice [Kan18]. Choosing
[Dre17d, WK19]. Christ
[BBMS14, CSN14, CMR+16, GP17b].
Church
[BBMS14, CSN14, CMR+16, GP17b]. Cisco
[Def18a]. Cities [IPSP17, Mis17, SNKG20, MZA+20, Sto20, SYZ16]. Citizens [Chi18].
City [Def18a, KAP20, ZWH+20]. CitySense
[IPSP17]. civilisations [DS17a]. Class
[BB17]. Classification
[MT19, SKG12]. clearance
[KBT20]. Clearing
[SV19]. Client
[BC16a, XCG+17, JLX+19]. Clients
[KBP14, GCKG14, MCK19, VCL17].
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[AV17, BR17]. clipboard
[Pal18]. clipboards [Bar18]. clock
[FSY+19]. cloning
[KOJ+20]. closed
[LZDA16].
Closure [MCS18]. Cloud
[BJ19, ECD17, HS16c, JWNS19, Kue18, LQYG19, LST+17,
Mal18, RBB19, SV16, SL18, TSL+17, ABB+19, HZY+19, JO13, MRG18, RLQ+21, WWZ+20, WLL+13, YCX18, ZWGC19.

Cloud-Based [HS16c]. Cloud/Fog
[JWNS19]. Clouds
[KZVT17, MKGT16a, MKGT16b, TVK+20].

Clustering [EZ17, EZ18, EPY17, FOA16, NH17, HLC]
[EZ17, EZ18, EPY17, FOA16, NH17, HLC]
[ABB]

WWZ.

Codes [LSO+15, Pie20]. Coercion [Dim20].

Coercion-free [Dim20]. Coexist [GP17a].

Coffee [ECHL16]. Cognitive
[SKA+20, Che18]. Coin
[Ale18b, IPL+18, KPW19, KJGW17, RMSK14, Goo18, DFKP13, THF17].

Coinbase [KRL17, Far18b, GCD16].

Coincheck [YWS+18, Gal18, Nak18, WREK18, WSZN18, YWW+18]. CoinDash
[Osb18a]. CoinDesk [Sup16, Vig15].

CoinParty [ZGH+15]. Coins
[Ros12, RKS15]. Coinsecure [Cim18a].

CoinShuffle [RMSK14]. CoinTerra
[BH15, BHI+14]. Collaboration [NOT15].

Collaborations [Chi18]. Collaborative
[RBL+17, SDG19, And18, LTMW19, LWA21, MLY120]. Collapse [K.13, Sch14b].

Collateral [KT15, MB17], collected
[Cha14]. Collection [AAD+21, CJW17].

Collective [IM16, KPP+20]. Collisions
[Lar13]. Collusion [YTLD19]. colony
[DXW21]. Colored [Ros12]. Column
[Wel18]. Combat [OOF+17, RAH+15].

Combatting [DN93]. Combining [Raz19].

ComboJack [Bar18, Pal18]. ComChain
[VG20]. come [Ker18b]. Comments
[Sar21]. Commerce [DCZ+21, GWF+21, B3098, SXZ+21, XL+17]. Commercial
[Ger16]. Commissioning [HS16c]. commit
[EAvM20]. CommitCoin [CE12].

Commit [CS15, ZAE20].

Commitments [CE12], committee
[LLZY20]. committee-based [LLZY20].

CommLedger [Moh19]. Common
[DDX17]. communicate [SM20].

Communication [Az19, BLSD17, FDT17, FF17, WCL17, vHEM+17, AR15, LCB+20].

Communications [ACM17a, Bra13].

Communities [Bed18, ACA+19].

Community
[Kee16, RRM18, VGJ15, BB14]. Compact
[SBRS16, SLY17]. Company [SL+20].

Comparative [SL18, DSM+17].

Comparing [Kon20]. Comparison
[CTM19, SCA13, Kat17]. Compatibility
[BBR17, ZGR17]. Compatible [ZP17b].

Competition [HVM+18]. Complete
[Wil13]. Complex [VA15, FD20b].

Complexity [Bhe17b]. Compliance
[ECO17, HV20, Lym14]. Compliant
[Ban18]. Components [SD16a].

Composable [BMTZ17, JKKX16].

compraventa [HA15]. Comprehensive
[RSMS17, NB+16]. Computation
[CGJ+17, DCZ+21, ET17, EL14, KB16, KVV16, LSP+15, BHH19]. Computational
[HWCL17, SC20, Li14a, Li14b].

Computations [ADM14a, ADMM14, KB14, vdHKZ14, ADM16, Bee16, HCW+18].

Compute [But13a]. Computer
[ACM17a, LTKS15, Son16a, Wör16].

computers [Goo18, Hol18]. Computing
[Bec18, BS20, BATH20, DMM18, Her17, JWN19, Kue18, LQY19, LSH13].

TMHT19, Wel18, Fin17b, Her19, HLC19, HS19b, IFD+19, KAP20, KGS+19, ZZW+21].

computing-based [KAP20].

concentration [LP18c, LP18d]. Concept
[HSB17a, HSB18e, Shu17, SDB+17, AC19].

Concepts [KAKC20, BGPW16]. concern
[Ole18]. concerned [Far18b]. Concluding
[Gev16].

Conclusion
[HSB17b, HSB18f, Mor17g]. Concurrency
[DGH17, Kad18, MMSK+17, WB17].

Concurrency-Related [WB17].

Concurrent [OR17, RLT17, XYZ+21].

Condensed [JW16a]. conditions


Crowdsourcing-Based [KK20a]. Cryptocurrency [CRS83, Ale18b, Ano18e, CXS+17, Cou14, DMO+19, GCR16, GP17a, GCR16, KVH17, HY20, JW16a, JW16b, Muf16, OF15, WSL+19].

Cryptocurrency-stealing [LSS14]. crypoeconomics [BDP17a]. Cryptographic [AHWB20, ADO17, GCR16, GP17a, GG17, HY17, HY20, JW16a, JW16b, Muf16, OF15, WSL+19].

Cryptography [Alz19, CSN14, DH76, Fra14, JRB+17, Ker12, Sad13, BBMS14, BCJR15, CMR+16, GP17b, IKY05, Jue04, McC18, WHJ17, WHJ20].

cryptojacking [Ker18b]. CryptoLocker [LZDA16]. Cryptology [CRS83, OF15].


Cure [JZS+17]. Currencies [Ano18d, Cou14, GKD14, Hil14, JW16a, JW16b, Mor17a, Pas15, Spr13, TS16, Ale18b, Ano18e, Cae15, CRdK16, HS16a, Kae15, Lau11a, Lya14, WLS17].

Currency [ACM15, Ali15, Ano12, Ano18j, Ano19b, AHWB20, BBSU12, BBH+13, Car15, DMO+19, EL14, Eva14, GH05, GKČČ14, GZH14, Gri11, Int14, Ker18a, KN12, Lau11b, LCL17, LSH13, MY11, MCS18, Mul14b, Nav17, Pav18, Swa15a, VGJ15, VM15, AF16, BHI+14, Bra15a, BOS15, CXS+S, CRdK16, Dus14, FB17a, Hol15, Ker14, Lee15, Pec16, SI19, San14b, San14a, Six17c, Son16b, SKG13, RF17, TF16, Uri17]. Current [Cou16, Six17a].


Cybercrime [Vas17]. cybercriminal [YV17]. Cybercriminals [Esc18, Fir18].

Cyberphysical [AAA020, BATB20, BLKD20].

Cybersecurity [Fug19, Mal18, DSM+17, MGR18, Gou19].

Cybertrust [Ksh18a, Ksh18b]. Cycle [SW17, Tro14a, Tro15b].

cycles [HDM+14, Tro14b]. Cycling [JKM17].
Cyfer [Gou19].

D&R [Li14a, Li14b]. D2D [HWCL17]. D5 [OA17]. dada [ZWH+20]. DAG [ZWH18].

DAG-based [ZWH18]. Dagger [But13a]. DAGsim [ZWH18]. DAML [KF19]. Dance [Bhe17c]. Dandelion [VFV17a, VFV17b].

DAO [DMH18e]. Dark [BBM+18, Ano16a].

Darknet [KCD17]. Darkweb [GDP+17].

Dashcam [WBK+17]. Dashcams [WBK+17]. Data [AS18, ACW17, ABK17, ADA17, AVA21, ACV17, AAD+21, Ban18, BBG19, BKS19, CGL19, CSN14, DCK17, DMR18, Drel17g, Drel17i, Drel17n, Drel17t, Drel17y, ET17, ECD17, EG17, EN19, FBHS19, FHS+17, Fug19, GWF+21, Hul17, ISM17, JRB+17, Kan20, KMMW17, Ker12, LSL1, LL17b, LL17c, LST+17, Liu16, LGB+21, Mai18, MJ+14, Mis17, MBC+17b, Nar19, NSNF17, RRD17, RDL+20, Sad13, SDT17, SBH17, SV16, SL15, Spo17, SY18, TD17a, TST18, VMMA17, W-B14, Wör16, XAZ17, XAZ18, XWL+19, YW18, YWJ+16, ZCC+16, ABB+19, BHH19, BBM14, BP17b, BCR15, CLS19a, CSL17, CMR+16, DPSNA+20, FBL+20, Far18b, Gir18, GP17b, HZ+19, HXZ+20, JZL17, JOL13, Lee15, LFX+20, LML+19, MHL20, MZA+20, Pal18, RWG21, RCD+19, SM20, Six17a, WMD+20, WWZ+20, YCX18, ZWGC19, GANAHHJ17].

data-based [WWZ+20]. Data-Centric [Hul17].

Data-driven [DMR18]. data-level [CSLD17]. Database [DHE16, WB17, EHB+19, NGS+19].

Database-Backed [WB17]. Databases [AAG17, FYK+17, Moh17, BANT20].

Datacenter [MKGT16a, MKGT16b, TVK+20].

datastore [RST11]. Daten [Six17a]. Datenschutz [PB17].

datenschutzrechtliche [BP17b]. Dating [CE12].

David [Lut17]. day [Fir18]. dbFT [CCA+20]. DDoS [JLG+14, RBL+17, RBS17].

De-Anonymizing [DS15]. Dead [BR16].

deadlock [NQ20]. DealBook [Ano18j].

dealing [K.13]. De-anonymisation [BKP14].

Deanonymizing [ABE20].

death [Cim19]. Debt [Bhe17c].

Debt-based [Bhe17c]. DecChain [BS20].

Decentralised [BCM16, Lau11a, Lei16, P’16].

Decentralization [CVM17, EHB16, BHMB21].

Decentralized [But21, BSCG+14, But13b, Cou13, CDE+16, DMH18f, DGP17, DGP20, Eva14, FR16, FBL+20, FY19, FDT17, FF17, GH05, GCK+14, GM17, HTCW17, HTCW18, KET+17, Kra16b, KMB15, LWY+19, MBC+17b, Mue18, Mul14b, NOT15, Not19, Pas15, RKS+14, SG+14, SXJ+20, SGF+17, Shi19, SV16, Sub18, Tam19, TS16, Voi11, YPFY21, Zoh17, ZJ17, AB20, BS20, Bre17, GPP18, HHBS18, HSY20, JGL+20, JZL17, LFX+20, QHW+20, RK19, RSJ19, Woo14, XJR+17, ZMH+17, ZMH+18].

Decentralizing [Hal17].

decidable [PLSS17]. Decision [Las17, Moh19].

Decisions [EGB18, KUE17, KUE18, KUE17].

decoded [CM14]. Deconstructing [Ros03].

DECOR [Ler14a]. Decoupling [DMO+19, IM16].

DecReg [aNOE17]. Deep [BNMH17, GR17, LPS+20, NMH16, GS20b, UJ16, XLZ20]. Default [NTKS17]. Defense [ZP17b].

Defenses [CPX20]. Defined [AK17, SD16a, YPD20].

Defining [Hir17].

definition [DMR19]. Definitions [Big20].

defrauded [Lew15]. Degradation [ABF+16]. Delay [FOA16, SOA17, FOA17].

Delays [RFM+18]. Delegatable [CDD17].

delation [AAC+19]. delegation [YCX18].

Deliver [GDTP17, BHMB21].

delivered [Pal18]. delivering [TF16]. Delivery [GRK15, ZLT+19]. demand
[DB16, Per20]. Demo [SZJ17, ZZJ17]. Democracy [QFLM17, Mea19].
democratic [KH16]. Demonstrating [FF17]. Demystifying [Ano20, CDM20, LTKS15]. Denial
[BAR21, SGDT19, VTM14, Bac02a, Bee16]. Denial-of-Service [VTM14]. Dense
[SYK17]. Democracy [QFLM17, Mea19]. Demonstrating [FF17]. Demystifying
[Ano20, CDM20, LTKS15]. Denial
[BAR21, SGDT19, VTM14, Bac02a, Bee16]. Denial-of-Service [VTM14]. Dense
[SYK17]. Dependability [BBGP19]. Depends [Smo18, RS21]. Deploy [Raz19].
Deploying [GBSAS17]. Deployment [ECHL16, FSW14]. Deposit [BZ17].
Deposits [ADM14a, Ano18l, Bee16, YSLH17, YTLD19].
derivation [Per09]. Derivative [BKT17]. Design [Ali19, BK14, BLSD17, CSL19a, EGB18, Fot17, KLZ+21, LLWH20, Lin15, MAQ99, SK17, Wör16, NG5+19].
Designated [WHJ17, WHJ20]. Designated-verifier [WHJ17, WHJ20]. Designed
[Li14a, Li14b]. Designing [LTMW19, NST+17, Uri17, VGJ15, XL+19]. Designs [BABB17], despite
[PB17]. Destruction [Cou14], d’État [MK15]. Detecting [AGGM16, WZS19]. Detection
[Bog17, CPL+21, DH17, LAC+17, MMT16b, RRM18, SGDT19, CEW15, LW16, LTMW19, LWA21, MLYL20, MNT16a, VD17]. detections [CZ16], detector
[NQ20, XGS+20]. Determining
[KRL17, Sct18]. Deterministic
[DKC17, GS15b, WLGL19]. Deterring
[KT15], developed [AR15]. Developer
[Ano17b, Nor17b]. developers [Lee13, Per20]. Developing
[Ano18g, BBH18, Lim18, FRSU17]. Development [AKP17, AKP18, Ant21, DSN17, HS16d, Lei15, Bra15a].
Developments [DMH18a]. Device
[LGGB+21, LHL20]. Devices
[HS16c, LMWL17, ÖY17, Ses18, FMR+19, HYLY19, HCW+18, LL16, LL17a].
dezentrale [Six17e]. Dhabi
[ACM17a, ACM17b, ACM17d]. diced
[Nic17]. Did [RS14]. Dies [McK19].
Dietcoin [FMR+19]. Difference [Nis16b]. Differences [Mul14c]. Different [Mer19].
Difficulty [GKL17, Kra15, Kra16a, MCJ17].
diffusion [YS20]. Digital
[AKP18, ACV17, BBM+18, Cha81, EL14, Gev16, GK14, Gri11, KT15, KKS14, LPSZ18, Mer88, MK15, Mor17h, Nav17, OZ16, Pav18, Pop15, Pop16b, RBB19, Rin18, Sc120, SK20, Smo18, Spr13, Swe16, TS16, Vel16, Wer18, Zet16, Bar18, BHS93, BGWP16, CJW17, CRdK16, DGP20, Gon17, Goo18, HS01, HS16a, Ker14, KH16, Lee15, LLCH21, Pan96, RBM17, RSJP19, SI19, TF16, Uri17, VC15a, VC15b, YL20a, AKP17].
digitalen [Ker14]. digitaler [RBM17]. Digitalization
[Sch19b]. Dilemma [Eya15]. Dilemmas
[KKS+17c]. dimension [CLS19b, CSL20]. Dimensions
[JB18b, BHBM21, Hal18]. Diplomacy [Ber17]. Directed [RJK+17].
Directions [DH76, HK18, KAKC20, PPMT17, Son16a, HRC19]. Diritto
[MS15]. Disambiguating
[Der17e]. Disaster
[Pan18]. disclosure [BEM+20]. Discontinuity
[TCT18]. Discourage
[MKK14, MKK15]. Discovering
[Der17f, EZ17, EZ18, TCT18]. Discovery
[ACW17, LWZ+21, MBT19]. Discuss
[FF17]. Discussion
[Ali15, HSB17c, HSB18g]. Disincentivize
[ES14a]. Disk
[GL00]. Dispute
[BT18a]. Disputes
[ABL18h]. Disruption
[BBB15, DTM20]. Disruptive
[DT18, FRSU17, GR17]. disruptiver
[FRSU17]. Dissecting
[BCC20]. Distributed
[ALPBT17, AKGN18, Ant21, AABM17, Brui17, Czj17+17, EGB18, Ecdo17, Eti19, EG17, HL16, HLC+17a, Her17, Hul17, JCHSR16, KLS20, KMOD17, KYV19, LDWS17, Lahn11h, LS17, LLW17, LSP+15, MZLW20, MGM+17, Mei18, MGGR13, NSt+17, Poe14, RSJ21, RBB19, RLT17, SD16b, SGDT19, Str18, TD17a, VRK21, Wat17, We18, Wu17, YLZ20, ZWQ+16, BS15, BANT20, CK16, CM19, CHL19,
FD20a, Her19, KF19, MKS+19, MCF20, PLSS17, SK20, ZWH18, dORM+20.


Does [HSB17c, HSB18g, SGF+17, Ste17, Ano17d, Fai17, RE18]. Domain [JB18a, RBS17, YS20]. Dominant [AC17].

Done [BSLM20]. Don’t [JBK+19, MHH+16, Pal18]. doors [LZDA16]. Doppelganger [KKS+17b].

Dormancy [Sm18]. DoS-resistant [Voi11].

Double [DNY17, KAC12, KAR+15, LZZ+17, àNOE17, PSDSNAHJ19, PR16, DB16, RWG21, YSLH17]. double-blockchain [RWG21].


DSA/ECDSA [GGN16, GGK+14]. dual [LYW+21]. dual-blockchain [LYW+21].

Dubai [Nor17a]. Dubious [Roo18]. Due [Ami16, McI13]. dumber [It018]. dummies [Ant16]. d’une [San14b]. Duplex [DW15].

Duplication [KKS+17b]. during [Os18a]. Dutch [PdWWS16]. dwelled [UJ16].

Dynamic [Lin21, AB20, Bar17, DB16, KUE17]. Dynamically [KJ17, KJ18]. Dynamics [EDS15, Bla18, GKH17, Gom17].

E-Cash [MGGR13, BB15, Nak08b].

e-Cheque [SV19]. E-Commerce [DCZ+21, SXZ+21, XLM+17, GWF+21].


E-health [BJ20]. E-Health-Care [BSLM20]. e-Healthcare [IFD+19].

E-Voting [HTCW17, HTCW18, KV18, KAK21, KAK20, ZWX20a]. Early [KD16, Mul14g]. earned [Tun18]. Earnings [Mat13, GS20a].

Easier [BSLM20]. East [Ber17]. Easy [But13a].

Ecashe [Pan96]. Ecash [Pane96]. ECBC [XZK+17]. ECDSA [DS17b, GGN16, GKH+14, Lin17, WY+20].

eclipse [XGS+20]. eclipsed [XGS+20].

eCommerce [MFR+21]. Economic [BHMB21, Bon16a, DdFP18, EKK+17, Eva14, Hal18, MLD19, Nav17, Pav18, CGR18, VC15a, VC15b, VCS03].

economically [KDS+20]. Economics [Bhe17b, BCC15, CG16, Fra14, HS16d, Hou14b, Ker18a, KLZ+21, KD20, Recl19, Ant20, Bar16, CG20, HS16a, KDF13].

Economies [MDAP16, MAP16, Son16b].

Economy [BDP17a, Bhe17c, XSC+17, Har17, LP18c, LP18d, Sir16b, Swa15b, TKW15].

Ecosphere [Six17a, Six17f]. Ecosystem [Cus14a, GHMO17, GDP+17, Kab17, Son18, VTM14, Cus14b, DMM18b, HVM+18, MBR13b, MBB13a, YY17]. Ecosystems [SW17, Sto17].

Edge [BS20, Du21, MMR+21, SD16a, TMTB19, HVM+18, JAK19, KAP20, ZZW+21].

edge-as-a-service [JAK19]. Edges [XWL+19]. Editor [WR16, Wil17, WR18].
Editorial [CCH21]. Education [Jas18, RRD17, SL17, CXLCl18].
Educational [HRE17, SD16b, ZXK+17].
Edward [Ano16c, SM-16]. Effective [Lin21, NC17a].
Efficiency [BHS93]. Efficient [BD19, DS17b, Dim20, FYK+17, JKKX16, Lau11b, MHWK16, PHH+20, RAH+15, RM19, TD17b, ZXK+17, XCG+17, XWL+19, BYR+20, CM19, ES16, FBL+20, GLW+20, HYLY19, KW20, Lau11a, LLZ+17, RCD+19, RSJP19, VD17, WDL+18, ZLL+19a, ZLL+19b, MRR+20].
Effing [MSC15]. Effort [Coe08]. Efforts [Nar19].
Egalitarian [Sut20]. eGose [ACM17c]. eHealth [DXR19, CF15, CAMS20, DCB+21, BBBB15].
Egalitarian [CC16, LST+17].
Eigentumsrechten [HP17, HP18].
Einordnung [SKG12].
Einsteiger [Ale18b]. EIP [Woo14].
Ekiden [ZHC+20]. Elapsed [Cor19]. Elastic [LML+19, Sch14b].
Election [MG17].
electric [KUE17, ZW15, ZW17]. electricity [Fai17].
Electronic [ACM17c, Ano17a, Cha81, Hut17, Ksh18a, MY11, Nar19, OO91, PPR+20, Shu19, CLC+19, Nak08a, Pan96, SCL+20, Sub18].
elliptic [WHJ17, WHJ20]. Elon [Sha17]. emails [Pal18].
Embedded [IK19, LWL17, LL16, LL17a]. embrace [Cae15]. Embracing [And18].
Emerging [ACW17, Bai19, But19, Du21, KID16, TODM19, Son16b].
Empirical [JL17, KAK21, MC13, VTM14, Vel16, WLX17, CF15, CAMS20, DCB+21, BBBB15].
Empower [DXR+17]. Empowered [HWCL17]. Enabled [AAA020, BD19, DCZ+21, Du21, KV18, Las17, LQYG19, LN17, MZLW20, Mal18, SS17b, XRS+19, BKM+17, CJA+19, DMIH18b, GLW+20, JAK19, MRG18, MFE+20, NML19, SRP20, YPDC20, ZWX20a, ZZW+21].
Enabler [CBWF17, SS17a, CDS+19]. Enabling [ABL18b, HGDD20, IK19, LLJ21, Nar19, Olh16, WZW+20, XSC+17].
Encrypted [AAG17, DCK17, FYK+17, GWF+21].
Encryption [DDX17, FYK+17, LL17, Mer88, CLC+19].
End [BMSS17, BMSS19, MBB+15, Roi13, Rot17].
End-to-End [BMSS19, BMSS17].
Endorsement [MBT19]. Energy [AAA020, BD19, EBD+20, LDWS17, OQ19, PW17a, Pop18a, CJA+19, Fai19, GLW+20, JAK19, Kug18, MNB+17, OM14, TKW15].
Energy-Efficient [BD19]. Enforcement [ME17, Tzi18, WBK+17].
Enforcing [Zei16]. engine [LPGBD+19, SSS19, WDL+18].
Engineering [Fra14, Nia19, Not19, PPM17, Sve17, TODM19, Bar16, CLS19b, CLS20].
Enhance [OA13].
Enhanced [CC16, LST+17, XJY17]. Enhancements [CCA+20].
Enhancing [BBGP19, CP17b, MO15, MLYL20, WA15, Hea13].
enigma [Nis16a]. enormous [Fai17]. Enough [ES14b, GLD+18, ES18].
Ensemble [LPS+20], ensuring [SHE+20].
Entangled [JB18b].
Enterprise [DTM20, Mor17a, dKW17]. entire [Nic17].
entities [YV17].
Enterprise [IM16]. entrepreneurship [NC17a].
entropy [PW17b].
Entwicklung [FRSU17].
Environment [LST+17, ABB+19, JAK19, KK17b, LL16, LL17a, Li14a, Li14b, ML20, WLL+13, YL20b].
Environments [Mer19, VFS+19, LTMW19].
EOSIO [HHW+20].
EPBC [XCG+17].
EPR [PLS17]. Equihash [BK17b].
equity [ZZ16].
Equiospeciation [RKS15, TD17b]. era [DS17a].
Erasing [FBHS19].
Erratum [Ano18g, ZFY17, ZDL17b].
erste [SKG12].
Escalation [FTS+20]. Escrow [WLY17].
ESORICS [GANAHJ17]. Essays [Kha19, Rec19]. estimated [Nic17].
Estimating [Bon14a]. estimation [Kat17, YV17]. ETH [Osb18a]. Ethereum [ABB18, ABC17, BCC20, BKT17, BCM16, Bon16b, BO17, But13b, CCMN17, CPNX20, CLZ+20, CPL+21, Dan17b, DMH18g, DMH18m, Fail19, FD20b, GJK+18, Hir17, JCHSR16, KLM17, KOJ+20, LGTS20, LPGBD+19, MB17, ML20, NPS+17, OHJ20, Pie20, Six17g, WZS19, Woo14, XGS+20, ZWW+17, ZTJ+21].

EtherQL [LZY+17]. Ethics [AM15, BKS19, UJ16]. EthIKS [Bon16b]. EthReview [ZTJ+21].
EU [But19]. Eurasia [ACM17c].

Evasion [Nar19]. Even [Ler14a, VM15]. Event [Hu17, Tac17]. Event-based [Hu17].
Events [TADS20]. eventual [Sir16a]. ever [Cim19, Fail17]. Every [Ken20, RDL+20].
Everyone [GH17]. Everything [Far18a, SNK20]. everywhere [Laz15].
Evidence [DVRM16, LLCH21]. Evil [Kru13]. Evolution [FPKH17, KBS17, Kün16, Sno18, Tay17, WL15, OC16].

EVOO [But19]. Examining [But19, KCD17, VCB+17, Un14].
Exchange [CC16, CLGR19, HG15, JMM14, Joh19, MSCL15, Mek19, MC13, MCS18, Nar19, RJK+17, Wu19, YSZ+19, Abe18, Cim19, SBL19, Son16b, WHJ17, WHJ20, Ano19a, Cim18a]. Exchanges [DBB+15, DGSW15, Hut17, Son14, WSZN18, K.13].

Exchanging [WvB14]. Exclusive [WREK18]. exclusively [CSG+18].


explaining [BWZ17]. exploited [Fir18].

Exploiting [MMH+16, DMR18]. Exploration [LCL17, SK17, Wey19, BB14].


Extremism [Lut17].

Fabric [BSV17, LLHW20, Lin21, MBT19, Suk19, Vuk16, Yew18, GRHS20, BH19].
Fabric-Based [Lin21]. Facebook [Si17a]. Facilitate [NH17]. Facilitative [KCD17]. Factor [ML15, ML17]. Factors [KCD17, ZDL17a, ZDL17b]. Facts [EDS15].

FaDe [CLGR19]. Failings [Wey19]. Fair [ADM14a, Ast16, BK14, BC16a, CLGR19, CGJ+17, HWCL17, HLC17c, JMM14, MBC+17b, PS17, Pia16, YSLH17, Bee16, DPSNMAHJ20, HCW+18, HLC19, LFX+20, LLZY20, YTLD19]. Fair-Exchange [JMM14]. Fairness [CGJ+17, GDTP17].

Fall [Son14]. falls [Lee13]. Fabmit [HRE17].

Far [KVL19, Goo18]. Farming [PTPR17, PTPR18]. Fast [DW15, KAC12, Lin17, LZC+17, SCA13, SJ17, SZ13, Uri17, YTLD19, VB08].

fast-payment [YTLD19]. faster [CEN14, Ler14a]. Fault [BSV17, Coe20b, XZY+21, TYY+19, VG20].

fault-tolerance [TYY+19]. Fault-tolerant [BSV17, VG20].

FAW [KKS+17c]. FBI [Gre13, RS21]. FC [BBMS14, BCJR15, CSN14, CMR+16, GP17b, JRB+17, Jue04, Ker12, Sad13].


Hosts [SD16a]. hot [Per20]. Hours [Cim18b]. House [PTPR17, PTPR18]. Hub [BKM+17]. huge [Hol18]. Human [PHD+17, Har17]. Hundred [Un14].

hybrid [HZLH19, LTC+19]. Hype [Per17]. Hypergraph [RJK+17]. Hyperledger [BSV17, DMH18j, LLH20, Lin21, M1B19, Suk19, Yew18, BHH19]. Hyperpubsub [ZJ17].


Identities [ACC+17, Smo18, Se120, SXJ+20]. Identity [AK17, AB17, AABM17, DP18, FR16, Hal17, Kue18, LN17, LLW17, NML19, Sar21, YL20a]. identity-authentication [NML19].
[Far17, Far18b, LP18c, LP18d, Pec17a]. II
[HSB18c, OF15]. III [HSB18d]. IIoT
[GLW*20, KXSS21, WLC*20]. IIoT-enabled [GLW+20]. illegal [MCF20].
Illinois [Nor17a]. Im [CXG+18, ABR17]. Image [CCC19]. Images [Via16, XJR+17].
Imaginaries [KL17]. imagination [Fnn17b]. Imaging [Shu17]. Immediately [Ro13].
Immigrants [Chi18]. Immune [LZC+17, Xu16]. Immutability [EN17].
Impact [ATD17, Bee18, Blo18, Lij15]. SLS20, SGF+17, Smo18, BCCS20, MLM15].
Impacts [Unv21]. imperfect [Ycmm20]. Implants [Mic16]. Implement [PL16].
Implementation [Ali19, FNP17, Shu17, Yew18, Bac97, NGS+19, Yue20].
Implementations [SG19]. Implementing [AKGN18, CC16, We18, Yns16, Vs02].
iplicated [Duc13]. implication [Sbl19]. Implications [Gsf+20, Mz19, Tsl+17].
dCdCM14, MGM+17]. imported [Xll+19]. Impossibility [GG17]. Impossible
[Poe14, Lau11a]. Improve [Foa16, Rix16, Foa17]. improved [Sce21, Zljw20]. Improvement
[But19, Almls16, Hc12]. Improvements [Kv16]. Improving [Bhs93, Cwl17, Hm20, Br17, Sal18].
In-Browser [Abr18]. Incentive [Dcz+21, Hlc+17a, Nwg20, Sbb17, Zgr17, Wlc+20]. Incentive-Driven
[Dcz+21]. Incentives [Jmk17, Klz+21, Ltk15, Sz17, Sxz+21, Zs18]. Incentivize
[KB14]. Incentivizing [Lk17, Wcz21]. Income [Ksh20]. Incontestable [Zgt16].
inconvenience [Gal18]. Increased [Gk17, Lp18c, Lp18d]. Increasing
[Smd14]. Independent [Lhz17]. Index
[Hll15, Son16b]. indexes [Unv21]. Indexing
[Td17a]. Indistinguishability [Hz20].
Individual [En19, Mz19]. Industrial [Lsfk17, Mbf+20, Sls20, Fbl+20].
Ker18b, Zwh+20]. industrialise [Bdp17b].
Industry [Atd17, Batb20, Ctm19, STG+20, Sch19b, And18, Gl6, Lhh+18, Six17d, Gsf+20].
Ineffable [Msc15]. inefficiency [Bar17].
Inevitable [Dtm20]. infeasibility [Wm19].
Infected [Cin18b]. infects [Goo18]. Infer
[Wrb15]. Inferring [Kcs+14, Nah16, Dmr17a]. Influence
[Bo17, Eslb20, Zdl17a, Zdl17b]. Info
[Gal18, Bar18]. Info-highway [Gal18].
Information [Ar15, Bart17, Bkm+17, Cra17, Dw13, Gk14, Hv20, Hut17, Jb17b, Jl17, Joh18, Nh17, Oa17, Yan21, Zam19, Lh120, SSL+19]. Information-Processing
[Hv20]. informational [Csg+18].
Infrastructure [Jb18a, Jb18b].
Infrastructure [En17, Jb17b, Mbc+17b, Oa17, Oj17, Oy17, Dgp20].
Infrastructureing [KL17]. Initiatives
[Ipl+18, Ism17].
Initiatives [Hre17, Oo19, Oa17]. Innovating
[Bhe17e]. Innovation [Doz18, Mor17f, Sch14a, Sch19b, And18, Lec15, Lmr17].
Innovationen [Frsu17]. Innovations
[Frsu17, Ar15, Zfy16, Zfy17].
Innovative [Gri11, Bt18b]. Inonymous
[Bk17c]. inquiry [Mbb13b, Mbb13a].
insecurity [Sat20]. Insertion
[Sly15, Svs18]. insider [Mly120].
Insights [Et17]. Insolar [KLz+21].
Inspired [Bbh+13, Cca+20, Kri19].
Instability [Ckwn16]. instant
[Zwx+19a]. instead [Blo18]. Institution
[Rrd17]. institutional [Bdp17a].
Institutions [Ddfp18, Bgpw16, Kbt20].
Instruments [Lee15]. Insurance
[Cil+21, Gl+18, Vmma17]. Integer
[DDX17]. Integrated [PK19, Mrr+20].
Integrating [Oy17, Shu19]. Integration
[DT18, Gsf+20, Hrc19, Zxy+21, Bt09].
inclusion/staging [Bt09]. Integrity
[Bbh+13, Drel17, Ebbhl16, Fug19, Hp19],
Mai18, XRS+19, RS21, WWZ+20].
Intellectual [Zei16]. Intelligence [Du21, SG19, SRP20, SMZ14, YWJ+16, YSZ+19, DNZ+19]. Intention [SRP20, VFS+19, CIA+19, LYW+21, SK18].
Intensive [SDT17]. Intent [EN19, KLL+15]. Intentions [GZH+14].
Inter [SYK17]. Inter-Service [SYK17].
Interaction [Fot17]. Interactions [Kra16b, OR17]. Interactive [Hir17, YSZ+19, ZGGT16].
Interchange [Nar19]. Interconnectivity [HQ15].
Interest [BH17]. Intermediation [KET+17]. International [ACM17c, ACM17d, CMR+16, GAMAHJ17, GP17b, JRB+17, Ker12, OF15, Sad13, TST19, BCJR15, IKY05, Yue04].
Internet [MFR+21, AA20, AAC+19, Álv18, Ban19, Big20, Böh13, CVM17, DGP17, GLW+20, HIL6, HYLY19, JBK+19, Ksh17a, Ksh17b, LL16, LL17a, LQYG19, LWZ+21, McM13, Mic14, PK19, PP16, QFLM17, RKT19, RWG21, RDDB19, Ses18, SM20, SNKG20, Son18, SCZ+21, SGD19, Sve17, XAZY17, XAZY18, ZW17, ZWH+20, ZLT+19].
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Investigating [JKS16, KAK20, RC16]. Investigation [Álv18, Snu18, VCLK17, WRB15, ZG15, CF15, KK17b, RSJP19]. Investment [Ano18m, Pop17a, Sup16, TOM17, DXW21, KH17, XLZ20]. investor [BT18b].
investors [Lew15]. Invitation [BK17c]. Invitation-Based [BK17c]. Invited [Gar17, Zoh17]. Involving [Nav17]. IoT [ACM17d, Ban19, MBF+20, ADA17, AVA21, AAD+21, BTP+21, BBGP19, BLNN17a, DK17, DKJ19, Du21, FSY+19, FBL+20, HHBS18, HRC19, KS18, LLH+20, LDWS17, LTMIW19, LHL20, LSM17, Liu18, LGGB+21, MAAN19, MFE+20, MMR+21, MBC+17b, MRR+20, OEO16, OEO17, ÖY17, RKP19, RSJP19, SGM20, SD16a, SHID17, SSL+19, SRP20, WWH+21, WDSL17, WSC+20, YL20b, ZW15, ZW17]. IoT-based [LDWS17]. Iota [SM20]. IoTPTS'17 [ACM17d]. IoTs [MKS+19]. IP [AGGM16, Gia15]. IPFS [ADA17].
Irrefutable [FDT17]. Irregularities [RDDL17]. IRS [Far18b, Int14]. Isabelle [ABB18, Kam17]. Isabelle/HOL [ABB18].
isn't [BP15, Ito18, SK14]. Isolation [Ses18]. Issue [Ano18j, AHWB20, Mat14, MFR+21, WSZN18, FD20a, YSD+20, ZFY16, ZFY17]. Issues [BGM20, Bon16a, Du21, bAHRK17, bAHRK18, VGJ15, BB15, CCH21, DSM+17, HRC19, Lyn14, MKS+19]. Italian [AF16, Cap15]. it'll [PW17a]. Ivy [Gei16].
January [BCJR15]. Japan [Sad13, Nis16b, Üv21, YWW+18, YWS+18].
Job [Cim18a]. jobs [Per20]. joint [WZQ+17]. Joseph [Ano16c, SM-16].
 Junk [DN93]. jurisdictions [Ano14b]. jury [Ano18a]. just [Kay17].
Kademlia [MCD15]. KARMA [VCS03]. Keep [WM18]. Kernel [WRB15]. Kernel-Level [WRB15]. Key [Alz19, Bon16b, Eti19, GS15b, Jue04, Kee16, MCH15, CSC16, DSPSHJNA18, EBSC15, MBB+15, Mer80, Per09]. Keyless [EN17].
Keynote [HM16]. keys [Sei20]. keyword [JGL+20]. Kimberley [Wey19].
Kindleberger [G.17]. kleptographically [WLGL19]. kleptographically-secure [WLGL19]. Know [JBK⁺19, KD16].
Knowledge [CGGN17, Dan17a, GCL16, MGDEK17, MGDEK18, YS20, YL20a]. Kodak [Ano18j, Bue18, Roo18]. KodakCoin [Bue18].
konnen [KFR18, KFR17]. Korea [Ano18k]. Kralendijk [Ker12]. Kryptookonomie [Six17e]. Kryptowahrungen [Ale18b].
Large [Chr13, ES14a, SIDV14, SZJ17, WLXC17, vDHK14, DKJ19, ZWX20a, ZWX⁺19a]. Large-scale [SIDV14, SZJ17, WLXC17, ZWX20a, ZWX⁺19a]. largest [Abe18]. Last [Bue18, ZGR17]. Last-Gasp [Bue18].
lattice [ES16]. lattice-based [ES16]. launch [Fir18, Osb18b, Sto20]. Launching [Wol18]. Laundering [Fir18, Osb18b, Sto20].
Lawful [WBK⁺17, LLW17]. Lawfulness [LLW17]. Laws [GP17a, McL13, Mic14]. Layer [Kla19, LZy⁺17, LFz⁺21]. Layers [Dre17v].
LD [Spo17]. lead [Hol18]. League [Gei16]. Leakage [GS15b]. Leaks [LL17b, LL17c]. Learn [HSB17b, HSB18f]. Learned [Son16a].
Learning [BNMH17, Bik16, Böb13, Cae15, GR17, LPS⁺20, NMH16, RFM⁺18, SYF18, WH⁺21, CLS19b, CLS20, GS20b, MFE⁺20, MMT16a, QHN12, XLZ20, YV17]. least [Lau11a]. leave [Ano13b]. LEChain [LLCH21]. Led [HSB18a, HSB18b]. Ledger [AK17, AKP17, AKP18, AKGN18, ANT21, BMTZ17, CZZ⁺17, EGB18, EZ17, EZ18, Eva14, GCL16, KLDS20, KYV19, Muf16, RSJ21, Str18, VRK21, Wel18, Wu17, CM19, MFM⁺17, Wat17, Woo4, ZWH18].
Ledgers [AABM17, BMSS19, CWL17, EG17, LDWS17, Le16, LS17, Me18, PP16, TD17a, KF19, MCF20, SK20, BRI17]. Legal [BP14, Kün16, MBC17a, Ole18, Cap15, Far18b]. legality [UJ16]. legally [Sha18]. lege [Kün16]. Legitimacy [IM16]. Lending [KM17]. LEO [LLW17]. Less [HJB14].
Life [KLZ⁺21, SW17, Aro12, CDS⁺19]. Lifecycles [NOT15]. Light [BD19, ZWX⁺19b]. Lightweight [GCK14, MRR⁺20, TMTB19, XCG⁺17, ASB⁺21, BTB⁺21, LYW⁺21, ZWX⁺20, DKJ19]. Like [HSB17c, HSB18g, Pop17a, VGJ15]. Likely [DL17]. Limit [Dim19, WM19].
Limitationen [Six17j, Six17i]. Limitations [Dre17r, GDTP17, Six17i, Six17j]. Limits [BLLN17a]. line [GH05]. Linkable [SAL17, ZLL⁺19a]. Linked [EG17, Spo17, TD17a]. List [Ano13a, dre14].
Litecoin [H15]. Literature [BTvdH20, SS17a, SJB20]. Live [BR16]. LLNs [SGM20]. Loaning [OEE⁺17]. loan [WGC19]. Loc [WGC19]. Local [MNT16b, DAK20, MNB⁺17, Son16b].
LocalCoin [CGFH16]. Locality [FOA17]. Location [DS15, ECD17, LHL20, NYZ⁺20, YZL⁺19]. lock [RSW96]. Locked [FYK⁺17, DSPSH18, YTL19].
Lockmix [BSK⁺20]. Log [ABL18b, Bon16b, HS19b, MBD⁺12]. Log-Based [ABL18b]. log-in [HS19b].

Message-Locked [FYK+17]. Messaging [Hal17, MCD15]. Meta [SV16].
Meta-products [SV16]. Metadata [BP17a, BBP19, GBSAS17]. Method
[ACW17, KKS14, Kh15, KW20, SI16, Unv21]. Methodology [AAD+21].
Methods [Di17]. Metrics [Pie20]. Metrology [MBC17a]. Micro
[VMMA17, YNS16]. Micro-insurance [VMMA17]. Microgrid [ML20].
Microgrids [BLSD17]. MicroMint [RS96a, RS96b, vS02]. Micropayment
[BDW17, DW15, RM19, RS96b, RS96a]. Micropayments [Pas15, KK20b, Riv04].
Microsoft [Cim18b, Tun18]. Microstructure [Wu19]. Middleman
[MC13]. Might [Hur16]. Miller [Ano16c, SM-16]. Million
[Cim18a, Gre13, McK19, Nak18, YWW+18, YWS+18, Cim19, Osl18b]. Millionaires
[Ras13, Pop15, Pop16b]. Millions [Ano19a, BBM+18, Seg18]. MILP [Coe20b].
Mind [Ano14a, MBC+17b]. Minds [GCL16]. Miner [Eya15, Ler14b, SGF+17, WL15, CSLD17, Tun18, YCMM20]. Miners
[BBM+18, GCD16, Kan18, FZC+20]. mines [CP17a]. minimal [MAQ99]. Mining
[Abr18, BS16, BH15, BD19, Ber18, CTM19, CGN14, De18, DMH18i, Dim17, ES14a, ES14b, HVM+18, Hon14a, Hou16, JLG+14, JJS+17, Ker18a, Ker18b, KKK16, KJ17, KJ18, Kwo14, KKS+17b, LJG15, LBS+15, LL17b, LL17c, LSP+15, Mat14, MKK15, MKKS15, Mult14, RJK+17, Ros11, SCYP17, SSZ17, SBR17, VTL17, ZWW+17, ZP17a, ZP17b, ZGR17, BHI+14, CEW15, Dev14, ES18, Goo18, HS19a, Holl18, KDF13, OM14, Ole18, Sat20, Tvo15a, VDK16, YCMM20, Nic17]. Minority [Ort16]. Mirror
[BBGP19]. Mis [HWW+20]. Misbehavior
[KAR+15]. misfits [Pop15, Pop16b]. Missions [Raz19]. mistrusting
[dORM+20]. Mitigating
[ZTJ+21, QHW+20]. Mitigation
[BRS17, Gou19, RBS17, RBL+17, BRC17]. MitM
[QHW+20]. mix [BSK+20]. Mixcoin
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[Con13]. Mixes [BNM+14, VR15]. Mixing
[BOLL14, RMSK14, RMS17, ZGJ+15, ZMH+17, ZMH+18]. MNC [IM16]. Mobile
[Abr18, Gev16, MCI+21, SVL17, FY19, FMR+19, Gim16, HS19b, PF18]. mobility
[LM20]. MOBT [WLGL19]. Model
[BBBP19, CTM19, Coo20b, ESLB20, FOA16, FYK+17, HG15, Hut17, HP19, LS17, LT17, MZWX21, ML14, OEO16, OEO17, Tam19, YLZ20, AC19, KKM19, MRR+20, NAH15, WCX16, YKJK21, ZW15, ZW17, ZDL17a, ZDL17b]. Model-based
[LT17]. Modeling [ADM14b, Bys19, JL17, LHI+20, CFvDPS15, Suk19, LGTS20]. Modelling
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[LP+20, vM18, Kat17, LIW16, Liu18, PCCP20, PRI6, BBM17]. Moderately
[BWZ17, Bel18, Ber13, Bhe17c, Dre17s, Gia15, Har17, Nak18, Nis16b, Pan96, Roi13, Wvb14, CSG+18, Fri14, G.17, GC08, Moli3, MBB13b, MBB13a, Nis16a, OC16, Pal18, Pop15, Pop16b, Rot17, Sch14, S2I3, TT16, TTC16, VCU15a, VCU15b, PP16]. Money-over-IP [Gia15]. Monitoring
[Nar19, Shu17, WXR+16, MFE+20]. monnaie [San14b, TFG17]. Month [De18]. Moonwalk [KZVT17]. Moratorium
[De18]. Most [KPW19]. Motivates
[BBS16]. Motivating [JMK17]. Motivations [KSCD16]. Move
[WREK18, Nor17c]. Mt.Gox [BR16].
MtGox [DW14]. much [Kug18].
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Multi [ABL18b, KK20a, LFZ+21, RBS17, WLL+13, ZGH+15, CLT+20, FZC+20, HVM+18, LB18, MPSW19, Sko19, YKJK21].
multi-cryptocurrency [LB18].
Multi-domain [RBS17]. multi-fractality [LB18].
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Multi-processor [WLL+13]. multi-resource [YKJK21].
multi-signatures [MPSW19].
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multi-signatures [MKK14, MKK15].
Multi-Layer [FLZ+21].
Multi-cryptocurrency [LB18]. Multi-domain [RBS17].
Multi-resource [YKJK21].

naar [PdWWS16]. Nakamoto [Cha14, RZJ20, Sha17]. Namecoin [HQ15].
named [JZLL17]. Names [MPJ+13, HS97, MPJ+16]. Narayanan [Ano16c, SM-16]. Narrative [CR16, RC16].
National [Pan18, Sto20]. Nature [DVRM16, Dre17w]. navigating [Hol15].
NDN [Yan21]. Near [Alz19, Ber17].
Necessity [ZP17a]. need [Pec17a]. needed [Fai17]. needs [Pec15]. negotiation [FZC+20]. neighbor [PW17a]. NEM [Ano18]. Neo [CCA+20]. Neoadjuvant [Shu17]. nervous [Ano13b]. Net [Kuz19a, Kuz19b]. Network [AK17, Alii19, BKP14, CPL+21, DW15, DPHJ14, EBHBL16, FOA16, FSW14, HWCL17, KLM17, KAZ+21, Kla19, KKM14, LLW17, LF16, MCD15, MZWX21, NAH16, NH17, RRM18, SOA17, SCAA13, SMZ14, Suk19, VFV17a, VFV17b, WL15, RB15, YK15, Zan19, BS15, Cas12, CK16, DW13, DAK20, ECA+20, FOA17, GS20b, HVM+18, IKY05, KCS+14, Lee13, NC17a, NAH15, RPK19, RWG21, Sal18, Six17h, WCZ21, XLZ20, YCM20]. Networking [YPFY21, JZLL17, YPDC20]. Networks [BDW17, EKK+17, FDT17, JL17, JWNS19, Kat16, KG17, LHM16, MMSK+17, MSSH16, MMR+21, PSS17, RLT17, SCA+20, SYK17, SJZ17, TWFO20, WZK19, A+13, BLMQ19, Che18, DKJ19, FZC+20, FD20b, HLC+17b, KDS+20, LP18c, LP18d, MLYL20, TKW15, UD17]. Netzwerks [Six17h].

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Nonparametric [DH17]. Normative [RC16]. North [Ano18]. Norway [GANAHHJ17]. Notarization [MGDEK17, MGDEK18]. Note
[BS16, Nis16b, WR16, Wil17, WR18, Hea13].

Nothing [Pop18a]. Notice [ALP15]. Novel [MCS+21, OEO16, OEO17, YWJ+16, BAR21, SGM20]. NRE [KZVT17], Nudge [WMD+20]. nuevas [HA15]. number

[Duc13, Kin13]. nutzen [KFR17, KFR18].

Nxt [Pop16a], NY [IKY05].

O [Dry14]. Obama [WM19]. Object [OR17]. Object-Oriented [OR17]. Objects [AKGN18, Wel18]. oblivion [RS21].

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once [Sha17]. Oncology [DXR+17]. One [GCL16, Pav18, Uni14, Nor17a, Tun18].

Onion [GDP+17]. Online [Chr13, JKKX16, LD17, RRCL17, CZ16, SCE21, YYN+20]. Only

[McK19, LP18c, LP18d]. Onto [SD16a].

Ontology [RC16, dKW17]. op [PdWWS16].

OP_RETURN [BP17a]. Open

[ACM17c, BGM20, BLBS17, Dn21, HRE17, Lim18, LNZ+16, TNM17, XWL+19, dCdCM14, Cap12, Hol15, KS18, LFX+20, MKS+19, Sko19, WMD+20, Cap12].

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[MSC15]. Opera [Abr18]. Operability [SYK17]. operate [SAL20].

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opportunités [San14b]. Opportunities [BGM20, EBD+20, HSB17a, HSB18c, JB17a, MWV+18, SK17, Van14b, ACA+19, AF16, DCB+21, Ker14, MCLH19, San14b, San14a, ZFY16, ZFY17].

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[ACM15, Ali15, BKP14, Cas12, DPSHJ14, FSW14, HLC+17a, KKM14, Nak08b].
Paper [AM15, BDLF16, GvRS17, MCJ17, Sch14b, XJY17, Ano17a, Nak08b, Sad13].
Papers [BBMS14, CSN14, JRB17, Ker12, BCJR15, CMR+16, GP17b, Jue04].
Paradigm [Mor17c]. Parallel [HM20, LSH13, CSLD17]. Parking [KK20a].
parliament [Lam89]. parser [YPDC20]. part-time [Lam89]. Partial [YLZ20].
partially [WZQ+17]. Participants [ACV17]. participation [LP18c, LP18d].
Partnering [Sch14b]. Party [ADM14a, FYK+17, HLC17c, ZGH+15, ABL18b, CLT+20, HLC19, Lin17].
Password [IK17, JKKX16, McK19, HZ20]. password-based [HZ20].
Password-Protected [JJKX16]. patch [KW20]. Path [LCL17, Mei18, YS20]. paths [YS20]. Pattern [RJK+17, TOM17, HLC+17b]. Patterns [EZ17, EZ18, MYSS19, NML19].
PAXOS [DLL00, DLL97, GL00, HMS17, Lam01, MBG+12, MOPS17, PLSS17, RST11, Ros03, SS12, SS13, Sut20, VA15, VB08].
PaxosStore [ZLX+17]. Pay [Edel14, HSB17d, HSB18h, ZGR17, BDE+13].
payer [ZLL+19a]. Paying [Dre17].
Payload [Kan18]. Payment [AH12, CGF16, DW15, EKK+17, GM17, KG17, Lei16, LZC+17, MMSK+17, MMSSH16, MSH17, RTL17, Sch98, Sou13, TWFO20, CJW17, ECA+20, Kha15, WZS19, YTL19, ZWX+19a, ZWX+19b].
Payment-Channel [MMSK+17]. Payments [AM15, BSCG14, Bon16a, CGGN17, Cha83, DNY17, DNY16, Gom16, KAC12, MPJ+13, SCG+14, Bar18, Gin16, HCW+18, MPJ+16].

[PayWord [AH12, RS96a, RS96b]. PBFT [CCA+20, LFZ+21]. PBFT-Inspired [CCA+20]. PCS [KLR+17b]. Pedigree [NC17b]. Peer [AAA020, Ano17a, CVM17, CS15, GH05, KN12, NAH16, Rin18, SOA17, SZJ17, FOA17, Nak08a, NAH15, TF16, VCS03].


Performance [ABF+16, Cor19, DMH18a, Gao17, GKW+16, Mah18, MMR+21, RZJ20, SCA13, Suk19, XZK+17, BANT20, DCB+21, Dev14, DHES16, KAK20, Li14a, Li14b, Sal18].


Permacoin [MJS+14]. Permeability [JB18b]. permission [AAC+19].

Permissioned [BANT20, BMSS19, EN17, HS16c, HP19, Moli19, Suk19, Vuk17, ZZJ17, ASB+21, AAE19, BHMB21, DCB+21, HSGY20, SJX+20, TYY+19].

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personnel [CLS19a]. perspectivas [HA15].

Perspective [FSW14, Kan20, Kin16, LD17, Mor17f, Mor17g, Sir16b, Sve17, Tzi18, CZ16, CGR18, FD20b, Her19, KFR17, Liv20].

Perspectives [BMC+15, Dus14, HA15].


PGP [WA15]. Pharmaceutical [STG+20]. PharmaCrypt [STG+20].

phase [EAvM20]. phenomenal [GC08]. Phishing [CPL+21, Ano18k, Pal18].
LGGB+21, MMSK+17, MO15, NTKS17, OEO16, OEO17, PS16, QHNL21, RMS17, SHT17, SVN17, SS17b, TWFO20, WBK+17, WHI+21, XSC+17, YWJ+16, ZXLS19, A+13, BYR+20, BSK+20, CCH21, FHZ+19, Hea13, HZX+20, LL17b, LL17c, LYW+21, MZA+20, MRR+20, PHH+20, Pec16, SJX+20, SHL+20, WQHX17, WMD+20, WQHX20, WLL+13, YZL+19, YSD+20, ZLT+19, PB17.

Privacy-Enhancing [MO15, Hea13].

Privacy-friendly [ABB+19].

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Privacy-Utility [TWFO20]. Private

[DWCT+17, ISM17, LSFK17, SFYB21, Yue20, BHH19, DSPSHJNA18, JGL+20, Ler14b]. Privately [ZC16], privilege [FTS+20].

PrivySharing [MZA+20]. Probabilistic [Pop16a]. probably [Lau11a]. Problem

[BK17b, Dre17f, KJ17, KJ18, LSP82, Bra17, Lee13, Pec17a]. Problems [vS02].

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[ACM17c, CRS83, OF15, ACM17a, ACM17b, ACM17d, GANAHJJ17, IKY05]. Process

[CWL17, Doz18, MWV+18, VCLK17, WX+16, FM+19, KFR17, KK17b, LPGBD+19, SSSJ19, Wey19]. Processes

[GBPDDW17, KL17, PSHW20]. Processing

[DN93, HV20, Hua17, PP16, SZ15, QNM+19, SZ13]. Processor

[BH15, Sou13, BHI+14, WLL+13]. procurement [LL21]. producer [CHL19].

Product [Kri19, LD17, LX17, ZTJ+21, AB20, KFR17, XLT+19]. production [Gon17]. products [GS20a, SV16].

Produkt [KFR17, KFR18]. Produkt-Sicht [KFR17, KFR18]. Professional [BT18a]. Professionals [Hut17]. Profit

[SCYP17, PW17a]. profitability [GPM18]. Profitable [SVL17]. Profits [VM15].

Programmed [Cou14]. Programming

[Cob17, COE+20a]. Programs [TOM17]. progress [OY17]. Project [DMH18].

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[BL17, KN12, LABK17, KRD017].

Proof-of-Work

[Baco93, BBH+13, BK17b, Coo08, Lar13, SL15, Trola15a, Vuk16, Kin13, Shi16, Trol4a, Tro14b, Tro15b, LC04].

Proofs [DBB+15, SBR16, SAL20].

Propagation

[FOA16, OAB+17, SOA17, DW13, FOA17].

Properties [Gar17, YK15, DMR18].

Property [Int14, Zep16]. proportion [YV17]. Proposal [GP17a, SI16, HC12].

Proposals [Bla13, EBHBL16, ALMLS16].

Prospect [SCYP17]. Prospects

[Hil14, HRC19]. Protect

[ABL+18a, JKXX16, RS14]. Protected

[JKXX16]. Protecting

[Dre17k, Dre17n, WLL+13]. protection [BP17b, FHZ+19, HWDD17, WWZ+20].

Protocol [BLP17, Böh13, Coo08, GKL17, HLC17c, KKS14, LN17, Ler14b, LL17, LNZ+16, ML15, MSH17, MHWK16, Mue18, OAB+17, PSL17, SYB14, SLY15, WCL17, ZP17a, ASB+21, AB20, BB15, BP20, DSPSNAHJ20, GKL15, Hea13, HLC19, KRD017, Ler14a, LLZY20, CFvdPS15, CFvdPS15],
ML17, NML19, PHH+20, TYY+19, VG17, WSC+20, XHST20, YYN+20, ZW15.

Protocols
[BLK14, LABK17, Lui17, Mer80, MXC+16, KKS+17a, PLSS17, P+16, ZWH18].

Provable [SDT17]. Provably
[Fia16, KRDO17]. ProvChain [LST+17].

Provenance
[AS18, LST+17, NSNF17, PK19, RCD+19].

Provers
[Hir17, proves [LC04]. provider
[Gir18]. Providing [LDWS17].

Provisioning
[DBB+15, GCKG14]. Proximity [SOA17].

Prozess
[KFR17, KFR18]. Process-
[KFR17, KFR18]. Pseudo- [MY11].

Pseudo-anonymous [MY11]. Pseudonym
[FWB15]. Pseudonymization
[FWB15, KMMW17]. Pseudonymous
[FF17]. Pseudonyms [Cha81]. PTAS

Public
[Alz19, CCH+20, CGJ+17, Eva14, GP17a, HRF17, JWNS19, Liu19, Lui17,
Mai18, Mu16, XCG+17, XSC+17, vdHKZ14, AR15, HZY+19, Mer80, PB17].

Public-Ledger
[Eva14]. Publication
[ALP15]. Publicly
[Bac02b, YYN+20, YCX18]. Publish
[ZP17b, ZJZ17]. Publish/Subscribe
[ZJZ17]. Puerto [BCJR15, Nar19]. PUF
[IK19]. PUFs [PHH+20]. pugno [AF16].

Punishes
[YWW+18]. Purposes
[Int14].

Push
[SD16a]. Putting
[CIL+21]. Puzzles
[BC16a, ML14, MKK14, MKK15,
RRCL17, RSW96]. PVORM
[CZJ+17].

Qatar
[An18m]. QHSE
[BYR+20]. QoS
[RDB19]. QoS-aware [RDB19]. quality
[BR17, LLJ21]. quantification [Dev14].

Quantitative
[Hut17, RS13]. Quantum
[ABL+18a, Bee18, BD19, Sat20, SK20].

Quantum-Enabled
[BD19]. Query
[LYZ+17, XZK+17, QNM+19]. Quest
[Vuk16]. Questions
[Pav18, BP17b]. Queue
[ZWW+17]. Queue-Based
[ZWW+17]. Queueing
[KK17a, MZWX21, RFM+18].

Quick
[LSO+15]. Quorum
[Mer19].

R
[Li14a, Li14b]. R-Hadoop
[Li14a, Li14b].

Race
[Mat14, Pec13]. Radar
[Laz15].

Radiation
[DXR+17]. Radio
[SKA+20].

Raisers
[Pav18, Osb18b]. RAM
[CLT+20, KPK17]. Rampenlicht
[ABR17]. random
[DC13, FZC+20]. random-honest
[FZC+20]. randomness
[LB18, WYZ+20].

Randpay
[KK20b]. Ransom
[BBM+18]. ransoms
[LZDA16]. ransomware
[CGR18, DMSCA20, UJ16]. Raps
[YWS+18]. Rare
[TADS20]. Rate
[Joh19, SZ15, Wu19, Son16b]. Rates
[BHM20, HG15, SBL19]. Rating
[Van14b, ZJ+19]. Real
[Nak08b]. Realist Reader
[BGPW16]. Real
[Bys19, Drelj17, ECHL16, GSF+20, KLZ+21,
Lei16, Nia19, NCS17, OO19, LRC17,
WM18, WR16, XLM+17, HGDD20].

Real-Time
[GSF+20, Lei16, WR16, XLM+17, Bys19, HGDD20]. Real-World
[ECHL16, NCS17, OO19]. Realities
[Eya17].

Reality
[Ksh20, Mic14]. Realization
[DNP17]. really
[BWZ17]. reappearance
[Os18a]. reasoning
[PLS17].

Rebalancing
[KG17]. Recht
[An16b]. recipient
[KK20b]. recognition
[IFD+19].

Recognizing
[Drelj17]. Recommendations
[Kon20]. Reconciliation
[OAB+17].

reconfiguration
[VG20]. Record
[Liu16, SD16b, CLC+19, SHL+20]. Records
[Al18a, Ksh18a, Shui19, P120]. recoverable
[XHST20]. Recovery
[Mis17, CSC16].

Recruiting
[ACV17]. Red
[BDOZ11, BDOZ12]. Redactable
[AMVA17]. Redemption
[Me19]. reden
[GH17]. Redesigning
[VFV17a, VFV17b]. redirection
[CW15]. reduced
[EC20].

Reference
[AS14, VDG19]. Refinable
[DHES16]. Refining
[We19]. Reflections
[Gev16]. Refund
[MSH17]. regarding
[An18]. Register
[ALPBT17].
Registration [AABM17]. regression [SZ14]. Regression [ANO14b, Lew15].


Reinventing [Dre17p]. Related [KCD17, WB17]. relationship [Son16b].


Relinquish [Sch13]. reliable [BHS93]. Reliability [AAG17, NGS+21].

Reliability [Bai19, Nav17, Lyn14]. reliable [BHS93]. Reliable [Bai19, Nav17, Lyn14].

Reliable [AS18, FBL+20]. remains [Goo18].

Remote [Shu17, FBL+20]. removing [CLS+19c]. Repay [McK19, Nak18].

Replicability [Vu16]. Replications [MGDEK17, MGDEK18]. Repository [Pie20].

Replication [Vu16]. Repositories [MGDEK17, MGDEK18]. Repository [Pie20].

Representatives [Uni4]. Reputation [ME17, MCS+21, SD16b, SXZ+21, Tam19, YKDEV19, WLC+20, dORM+18].

reputation-based [dORM+18]. reputations [Kom+20]. require [KK20b]. Requirements [LN17, Lei16, SL18, MAQ99, MKS+19].

Research [BNMH17, BART17, BMC+15, GK14, HJ15, LH20, MCL+19, NHM+16, OZ16, RS17, SDT17, SK15, Vel16, Ant20, BR17, HRC19, LMC+18, ZFY16, ZFY17, HSM+17].

Reshoring [ME17]. resilient [GRHS20, dORM+20]. ResilientDB [GRH20].

Resistant [OLL14, FBW15, HL16, FF17, OdVP20, Voi11, XHST20]. Resolution [ABL18b, BT18a, NOT15].

Resource [HWCL17, HM19, JWNS+19, MMR+21, XWW17, XWL+19, ZZW+21, vdHEM+17, SSJ19, VCS+20, WZW+20, YKJK21].


Respecting [XSC+17]. Response [EN19, LSO+15].

Responses [Shu17]. Responsible [BM+20]. Resuming [EBBL16]. Results [GG17]. Retail [AM19].

Rethinking [KYV19, Vuk17]. Retraining [SBRS16]. Retrieval [MGDEK17, MGDEK18].

Retrieved [Cha81, YK15, BOS15]. returns [Osb18a, VX17]. Revealing [Kan20, RDL+20, GZH+14]. Reveals [Ker18a].

Reverse [HSB18c, HSB18i]. Reversing [HSM+17].

Reverse [HSM+17]. Rewriting [AMVA17]. Rewriting [AMVA17].

Rewriting [AMVA17]. Rewriting [AMVA17]. Rhetoric [Bel18]. richtigen [FRSU17].

Rico [BCJR15, Nar19]. Ride [Shi19].

Ride-Hailing [Shi19]. Right [FRSU17, Lut17, SK14]. Right-Wing [Lut17]. Rights [KPP+20, KKS14, Rin18].

Ring [JKS16, MPSP17, NM+16, Saly17]. RingCT [Saly17]. Ringing [BW17].

Ripple [SYB14, Ale18b]. rischi [AF16].

Rise [Bec18, Son14, FRF+19, Gei16]. Rises [Vig15].

Risken [Ker14, San14a]. Rising [Sid14, Pro13, Pro14]. Risk [Bys19, Kab17, MC13, MB14, SIDV14, YWJ+16, Gof19, KBS17, NML19, San14b, Unv21].
Risks [AAG17, Mai18, MHM+16, MCS18, Peo13, AF16, Ker14, San14a, Uni14, Wea18],
risques [San14b], RMB [Wu19], Road [BABD17, FRSU17, PdWWS16, Chr13, Gre13, Zet13], Roads [CIL+21], Roaring [Wol18], robbery [Gal18], Roberts [RS14], Robotics [Raz19], Robust
[RGZ20, MMT16a], robustness [ZXW20a], Roger
[MCHM17, MHH17], Role [SLS20, Blo18, Bra15a, DAGK20], Rolle [Blo18], rooftop [PW17a], root
[HSGY20, HSGY20], Ross [Gre13], Route [RLT17], Router [ECS18, WCL17], Routing
[AZV17, EKK+17, TWFO20, AC19, SGM20], RTChain [SXZ+21], rubbush [Sha17], Rule [Cou14, DW18, Nor17a, VB08], Rules [Int14, Ber13], Run [LJG15], Running
[BCM16], Runtime [PSHW20], Rush
[BBM+18, DMMH18i], Russia [ACM17c], Rust [NQ20],

s [RS21, Rou18, Sup16, Che18], Safe
[FDT17], Safeguarding [NML19], Safer
[Cob17, COE+20a], Safety
[ALMLS16, LDWS17], Said [BSLM20], Sale
[ECHL16, HA15], Sales
[Nar19, Sid14, YW18], sample
[CLS19b, CLS20], sampled [RWG21],

SAMR [Ale18a], San [BCJR15], Sanctions
[Ano18d], Santa [CRS83], Sarkar [BB15],
Satoshi [Ant20, Cha14, Sha17], Satterthwaite [Ano18h], saved [Bar18],
saving [KW20], Savings [CPM17],
Sawtooth [Cor19], say [Far18a, G.17], Says
[Ano17e, Gre13, McK19, Far18b, Nic17, Sha17], Scalability
[Gen17, GSWV20, Goe17, HM20, HJPIS16, Kar16, PS16, vdHEM+17], Scalable
[BABD17, BDW17, DW15, DKJG19, LSFK17, LFZ+21, Vuk16, YLZ20, ZLL+19b, OdVP20, RST11, dORM+20], Scale
[Luu17, Riz16, DKJ19, Far18a, GRHS20, SIDV14, SZJ17, TVK+20, WLXC17, ZWX20a, ZWX+19a], Scaling
[CDE+16, Kuz19b, Zha19, Kuz19a], scam
[Goo18], Scams [CPL+21, VMD15, dre14], Scan [AGGM16], scenario [HZLH19], Scenarios [BBH+13], scheduling
[HZLH19], Scheme
[CGFFH16, CGLr19, CCC19, CLJ+21, JLM+19, KLR+17a, KLR+17b, KFM+17, Wey19, BYR+20, ES16, FSY+19, FBL+20, FTS+20, GGG+14, HZx+20, LCB+20, LLCH+21, LYY+21, SK20, WLC+20, YCX18, YL20a, ZLL+19b, ZLJW20], Schemes
[Ano12, DP18, GCD16, KT15, RS96b, BCCS20, Lew15, RS96a], Schnorr
[MPSW19], School [BKM+17], Science
[BLBS17, DMH18d, LHZ17, LMC18, Wat17], sciences [CDS+19], Score [KV1L9], Scoring
[MBB14], SCPKI [AB17], scrambled [Lee13], Scrapes [Pop17a], Scratch
[MKKS14, MKKS15], Scratch-Off
[MKKS15, MKKS14], Scrypt [But13a],

SDN [CJA+19, JAK19], SDN-enabled
[CJA+19, JAK19], SDS [SK20], sealed
[LL21], Search
[GWF+21, KLL+15, MLM16, JGL+20, MLM15], Searchable
[AAG17, CLC+19], Searchain
[JGL+20], Seasonality [HQ15], Second
[TODM19, Uni14], Secret
[GP17a, JKKX16], SecTEP [LL21], Sector
[HRF17], Secure
[ASM19, Alz19, ADMM14, ADMM16, BDWW14, BKT17, DNY17, EL14, FTS+20, FMR+16, FHS+17, FYK+17, GWF+21, HS97, Hal17, HZ16d, HZy+19, KFM+17, KXSS21, KMOD17, KB16, KV16, LWZ+21, LNZ+16, Luu17, PTPR17, PTPR18, RSJ21, SFYB21, Shi19, SL18, SZ15, SDK+17, Tac17, WLY17, WZQ+17, ZGH+15, ZMH+17, ZMH+18, BSK+20, BHH19, CJA+19, CM19, GLW+20, HZx+20, JAK19, KAK20, KRDO17, LL16, LL17a, LFZ+20, LLJ21, LHH+18, Lin17, MZA+20, MAq99, NYZ+20, RDDB19, RCD+19, SGM20, SEC21, Uri17,
Secured [LN17, Gir18]. Securing
[Boi18, GGK+14, Joh18, LABK17, MKS+19, PL20, SKA+20, DS17b]. Securitisat
[HSB18c, HSB18i]. **Security**
[ACM17a, ACM17d, A+13, BB15, Bee18, Bra15b, CC16, Cha85, CPNX20, CSN14, ESLB20, GGN16, Ger16, GKW+16, GCR16, GCR18, bAHRAK17, bAHRAK18, Hut17, JRB+17, Kar16, KC18, Kat16, Ker12, Kri19, KJGW17, LDWS17, LKL+14, LDH17, Mor17i, Pan18, Sad13, SDT17, Sch98, Ses18, SIDV14, Son16a, Sve17, TSL+17, WHI+21, XWW17, ZXL19, dCdCM14, van19, BQ19, BBMS14, BS20, BCJR15, CMR+16, DSM+17, DKJG19, FB17a, GP17b, IKY05, JO13, KA16, KBS17, KS18, LJC+20, MRR+20, MCF20, NML19, RKP19, RWG21, SBL19, Sal18, SHL+20, SSL+19, Sir16b, Tun18, YSD+20]. **Security-critical**
dCdCM14]. **Seeing**
[Bog17, Dre17q, Dre17r]. **Seeks** [Far18b]. **Seized** [Gre13]. seizures
[Ano13b]. **Selected**
[BBMS14, CSN14, JRB+17, Ker12, Sad13, Ano14b, BCJR15, CMR+16, GP17b].
**Selection** [RLT17, FZC+20, LLZY20]. **Self**
[Cou14, LMH16, MDAP16, MAP16, Nis16b, Pia16, RZJ20, Sei20]. **Self-adaptive**
[RZJ20]. **Self-Contained** [Pia16]. **Self-Destruction** [Cou14].
**Self-Fulfillment** [Nis16b]. **Self-managed**
[LMH16]. **Self-Organized**
[MDAP16, MAP16]. self-sovereignty
[Sei20]. **Selfish**
[KKS+17c, SSZ17, ZP17b, YCMM20]. sell
[Lee13, PW17a], sell-off [Lee13]. **Semantic**
[FR16]. **Semi** [KMMW17, DSMCA20].
semi-autonomous [DMSCA20]. **Semi-structured** [KMMW17]. send
[Far18b]. sending [Pal18]. SenseChain
[KOM+20]. **Sensing** [SVL17]. Sensor
[ME17, WvB14]. Sensor-Based [ME17].
Sensornetzwerke [TNM17]. Sentiment
[Mue18, Smu18]. **September**
[GANAHJ17], sequential [Per09]. Series
[LP5+20]. server [Ano18i]. Service
[BSV17, ESLB20, GvRS17, KET+17, LWZ+21, SS17a, SYK17, SGD19, VTM14, Yew18, ZZA17, AABE20, Bao02a, BSK+20, Gir18, JAK19, LXL+19, MBT19, MAQ99, Bee16].
**Service-Oriented** [GvRS17]. **Services**
[AVA21, CGGN17, HRF17, JB17a, Mull4d, Sch19b, dBHC17, Bar16, IFD+19, SAL20, SYZ16]. **SeShare** [HZY+19]. session
[Un114]. Set [OAB+17]. Sets [AC17].
**Setting** [NTKS17]. **Settings** [NTKS17].
**Seven** [Cou16]. SHA1 [Ste17]. SHA256
[CGN14]. **Sharding**
[GvRS17, LNZ+16, HST20]. **Share**
[KKS+17b]. Shared [ALPBT17, CWL17, Liu19, EHB+19, MBD+12]. Shares
[ZGR17]. **Sharing** [BCM16, CGLR19, FHS+17, HWCL17, JKKX16, LSM17, RSI21, SBHD17, Shu19, XSC+17, Zam19, CLC+19, HZY+19, HZX+20, LYW+21, MZA+20, SSL+19, SYZ16, VCS03]. **Sharks**
[ZWW+17]. **Shipping** [JB18a, JB18b].
**Shopping** [LD17]. **Short**
[BDLF+16, GvRS17, MCI17, XJJ17, PLA13].
**Should** [Chu15, McM13]. **Shows** [McM13].
**Shuts** [Son14]. **Sicht** [KFR17, KFR18].
**Side** [ABF+16, AGMM16, BBM+18, KJGW17, Aon16a]. **Sidestep** [Aon18d].
**Signals** [RRM18, GS15a]. **Signature**
[EN17, KFN+17, Mer88, SALLY17, ZGGT16, GGK+14, LTMM19, SK20, ZLL+19a].
signature-based [LTMW19]. **Signatures**
[Cha83, DMO+19, GGNN16, SK20, DGP20, MPSW19, WZQ+17]. **Signed** [HBG16].
significance [CGR18]. **Signin**
[THF17, HLC19, Lin17]. **Silicon** [Tay13].
**Silk** [Chr13, Gre13, Zet13]. **Silver** [McG18].
**Simple** [CG16, MPSW19, RAH+15, RS96b, CG20, Lam01, RS96a]. **Simplicity** [OC17].
**Simulating** [CCMN17]. Simulation
[AvM18, Gos17, MLD19, ZWH18, CSLD17, LW16, NAH15]. Simulations [SZJ17].

sincerely [Gal18]. Singing [HLC17].

Single [IK17], Sins [Cou16], Sites [GDP+17]. Size [Dim19, Ano18c, GK17].

Sketching [Vel16], Sliema [JRB+17].

SmaCC [RDDL17], Smart [ACW17, AB17, ABBS18, ABC17, BNMH17, BDLF+16, Blo18, BS17b, BS18, BCM16, BATB20, But13b, CIL+21, CXG+18, DGHK17, Gao17, GLD+18, IPS17, IGRS16, JK16, KPP+20, Kee16, KK20a, KUE17, KUEE18, Kün16, LCO+16, Mis17, Mor17], NMH16, Ōhn16, PTPr17, PTPr18, PP16, Pia16, Pic20, RBL+17, SW17, SNKG20, Swa16, Tam19, VTL17, XJY17, YW18, ZCC+16, ZHC+20, ACA+19, ALP15, FBL+20, Gia15, GKJ+18, GKJ+20, Kap20, KGS+19, KOJ+20, Lev17, LYW+21, LML+19, Liv20, MZA+20, MNB+17, ML20, OH20, PHH+20, RLQ+21, SPZ+20, SYZ16, WZ19, WM19, WGC19, XGS+20, YJK21, ZWH+20, SK20].


Socio-technical [EBHBL16]. sofa [Sha17].

Sofia [OF15]. Software [AK17, FS16, HS16d, Lut17, PPMT17, SD16a, SDE+17, TOD19, dCdCM14, Aro12, NQ20, YPDC20, ZLT+19].

Software-Defined [SD16a]. SoK [ABC17, BMC+15]. solar [PW17a].

Solidity [RDDL17, Dan17b]. Solidus [CZJ+17]. Solution [ABL18b, Cee08, HRE17, Kuz19b, PL16, VDG19, Wey19, XWW17, Kuz19a, MDN+18, RWG21].

Solution-Verification [Coe08]. Solutions [Ano19c, But19, bAHRAK17, bAHRAK18, HJPS16, PS16, KS18]. solve [Pec17a].

Solvency [DBB+15]. Solving [KJ17, KJ18, Sil17]. Some [Ber13, CG16, CG20, Sha17]. someone [Ito18]. Source [Cap12, Pie20, TNM17, Hoi15, dCdCM14].

sovereign [LCL17]. Sovereignty [Roi18, Sc20]. Spanish [HAI15]. sparks [Lcl13]. spatio [QNM+19].

spatio-temporal [QNM+19]. Special [AHWB20, MFR+21, YSD+20, FD20a, ZFY16, ZFY17]. Specializing [MKGT16a, MKGT16b, TVK+20].

Specificability [Sw16]. Specific [Son18].

Specifically [Hut17]. Specification [Wil13].


Spender [DNY17]. Spending [Dre17, KAR+15, LZC+17, KAC12, PDSNJA19, YSLH17]. splines [MYSZ19].


St [ACM17c]. Stability [GWSV20]. Stable [Men19, SI19].

stablecoins [CDM20, Ano20]. Stage [KD16]. staging [Bit09].

Stake [BLP17, BLR14, KN12, LABK17, Poe14, KRD017]. stamp [HS91].

stamping [BHS93]. Standards [HV20, Kö20, Lim18]. startup [Far18b].

stash [Hol18]. State [Nav19, Sup16, WRB15, SAL20, Sir16b, Sto20].

state-sponsored [Sto20]. Stateless [RRCL17]. static [LGTS20]. statt [Bl18].


Steven [Ano16c, SM-16]. Stick [KLM17].

still [Ano18a]. stochastic [PCP20]. stock...
[Son16b, Ünv21]. Stolen [Cim18a, Ro13, Sou13, WREK18, HDM+14, Osb18a]. stop [LP18c, LP18d]. Stops [Cim18b]. Storage [RBB19, SBHD17, SJ20, SV16, XAZY17, XAZY18, YW18, YLZ20, JGL+20, LHL20, RLQ+21, WDL+18, YCX18, ZLX+17].

Store [Dre17g, Dre17n, Dre17y, MMH+16, McM13]. Stores [MCS+21]. Storing [Dre17t]. Story [Kan20, Mez19, RDL+20, Pop15, Pop16b, Rot17]. Strategic [EGB18]. Strategies [DFKU20, SSZ17, GPM18]. strategy [Cus14b, LLZ].

Subchains [BLP17, Riz16]. Subscribe [ZJZH17]. Success [KVL19, MCM17, McM17, Sei20]. Succinct [DFKP13]. Sukuk [AIM19].

Summarizing [Dre17u]. Summary [TODM19]. Summer [HMS17]. Super [LCL17]. Super-sovereign [LCL17].

Supervised [CLJ+21, YY17]. Supervision [Nar19, CJW17]. Supply [HSB17b, HSB17a, HSB17c, HSB17d, HSB18a, HSB18b, HSB18f, HSB18e, HSB18g, HSB18h, HSB18i, Kri19, KD20, Nia19, RKT19, SCZ+21, Wu17, XRS+19, XZY+21, Álv18, DB16, NNGV19].


SURVIVOR [JAK19]. Suspected [Cim18a, Ano18a]. sustain [Fai17, KH16]. Sustainability [Vra17, LMC18].

Sustainable [AKP17, AKP18, KDS+20, MNB+17]. Swarm [Raz19, GS20a]. Swimming [ZWW+17]. Swindle [Ito18]. SWOT [MM17]. SXSW [Vig15]. Sybil [BOLL14, FWB15, FF17, OdVP20].

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