Acronyms and Abbreviations

1D	1-Dimensional
1Q	1-Qubit quantum gate
1WQC	One-Way Quantum Computing
2D	2-Dimensional
2Q	2-Qubit quantum gate
3D	3-Dimensional
5G	5th Generation

#AQ	number of Algorithmic Qubits
µs	Microsecond
µW	microWatt

ABNF	Augmented Backus-Naur Form
ABQC	Asynchronous Ballistic Quantum Computing
ACM	Association for Computing Machinery
ADC	Analogue-to-Digital Converter
ADR	Adiabatic Demagnetization Refrigeration
AES	Advanced Encryption Standard
AI	Artificial Intelligence
AIMS	Agile Interference Mitigation System
AIS	Anwendungshinweise und Interpretationen im Schema
AIVD	Algemene Inlichtingen- en Veiligheids*di*enst
aka	also known as
AMOLF	← *Atoom- en Molecuulfysica*
ANN	Artificial Neural Network
ANSI	American National Standards Institute
ANSSI	Agence Nationale de Sécurité des Systèmes d'Information
AOD	Acoustic-Optical Deflector
APD	Avalanche Photo*d*iode
API	Application Programming Interface
APNT	Assured Positioning, Navigation and Timing
app	Application
APS	American Physical Society
AQ	Algorithmic Qubits
aQa	*A*pplied Quantum *A*lgorithms
AQC	Adiabatic Quantum Computer
	Adiabatic Quantum Computing
aQEC	Autonomous QEC
AQKD	Amplified QKD
AQT	Alpine Quantum Technologies
Aqua	Algorithms for quantum applications
ASIC	Application-Specific Integrated Circuit
ASC	Accredited Standards Committee
ASML	← *Advanced Semiconductor Materials Lithography*
ASQ	Andreev Spin Qubit
AUAS	Amsterdam University of Applied Sciences

AVaQus	Annealing-based Variational Quantum processors
AWG	Arbitrary Wave Generator
AWS	Amazon Web Services

B92	Bennett 1992
BAS	Bars *a*nd Stripes
BB84	Bennett and Brassard 1984
BBM92	Bennett, Brassard and Mermin 1992
BBN	*Bolt, Beranek and Newman*
BCS	Bardeen–Cooper–Schrieffer
BDD	Bounded-Distance-Decoding
BEC	Bose–Einstein Condensate
BHL	Beyond Heisenberg Limit
BIKE	B*i*t *F*lipping Key Encapsulation
bit	binary digit
BKZ	Block-Korkine-Zolotarev
BLISS	Bimodal Lattice Signature Scheme
BNF	Backus-Naur Form
BQC	Blind Quantum Computation
BQM	Binary Quadratic Model
BQP	Binary Quadratic Problem
BR	Branch
BSI	Bundesamt für Sicherheit in der Informationstechnik

c	celeritas
C	Capacitance
	C gate
C2NOT	Controlled CNOT gate *(aka CCNOT gate or Toffoli gate)*
C2QG	Classical Code to Quantum Gates
C#	C *sharp*
CA	C*a*lifornia
cADR	continuous Adiabatic Demagnetization Refrigeration
CAI	Cold Atom Interferometer
Caltech	California *I*nstitute of *T*echnology
CB	Cycle Benchmarking
CBC	Cipher Block Chaining
CCA	Chosen Ciphertext Attack
	Coupled Cavity Array
CCD	Charge-Coupled Device
CCJJ	Compound-Compound Josephson Junction
CCNOT	Controlled CNOT gate *(aka C2NOT gate or Toffoli gate)*
CDN	Content Delivery Network
CE	Computer Engineering
CEN	Comité Européen de Normalisation
CENELEC	Comité Européen de Normalisation E*lec*trotechnique
CERN	Conseil Européen pour la Recherche Nucléaire
CHSH	Clauser-Horne-Shimony-Holt
CIM	Coherent Ising Machine
CIRCL	Cloudflare Interoperable, Reusable Cryptographic Library
Cirq	Cirquit
CLI	Command Line Interface
CLOPS	Circuit Layer Operations Per Second
CLSM	Cofocal Laser Scanning Microscope
cm	centimetre
CMOS	Complimentary-Metal-Oxide Semiconductor

CMP	CoMPare
CNOT	Controlled-NOT gate *(aka CX gate)*
CNRS	Centre *n*ational de la *r*echerche *s*cientifique
coax	co-axial
COW	Coherent One-Way
CPB	Cooper Pair Box
CPTP	Completely Positive and Trace Preserving
CPU	Central Processing Unit
cQASM	common Quantum A*s*se*m*bly language
CQC	Cambridge Quantum Computing
CQM	Constrained Quadratic Model
CQS	Quantum Cloud Services
CR	Cross-Resonance
CROSS	Codes and Restricted Objects Signature Scheme
CRQC	Cryptographically Relevant Quantum Computer
Cryo-CMOS	Cryogenic Complimentary-Metal-Oxide Semiconductor
cryostat	*from* cryo *meaning cold and* stat *meaning stable*
CRYSTALS	C*ry*ptographic Sui*t*e for Algebraic Lattice*s*
CS	Controlled S gate
CSA	Cloud Security Alliance
CSAC	Chip Scale Atomic Clock
CSAIL	Computer Science and Artificial Intelligence Laboratory
CSCO	Complete Set of Commutable Observables
CSIDH	Commutative Supersingular-Isogeny Diffie-Hellman
CSPRNG	Cryptographically Secure Pseudo-Random Number Generator
CTT	Church-Turing Thesis
CUDA	Compute Unified Device Architecture
CUP	Cambridge University Press
curl	*C*lient *URL*
CV	Continuous Variable
CV-QKD	Continuous Variable Quantum Key Distribution
CVP	Closest Vector Problem
CWI	Centrum Wiskunde & Informatica
CX	Controlled X gate *(aka CNOT gate)*
CW	Coherent Wave

Cython	C-extensions for *P*ython
CZ	Controlled Z gate

D	Deutsch gate
DA	Digital Annealer
DAC	Digital-to-Analogue Converter
DAQC	Digital-Analogue Quantum Computing
DARPA	Defense Advanced Research Projects Agency
DAU	Digital Annealing Unit
dB	deciBel
dc	direct current
DC	Direct Current
DC-SQUID	Direct Current SQUID
DD	Dynamical Decoupling
DDQCL	Data-Driven Quantum Circuit Learning
DES	Data Encryption Standard
DFT	Density Functional Theory
DH	Diffie-Hellman
DHE	Diffie-Hellman Ephemeral
dHSP	dehedral Hidden Subgroup Problem
DI-QKD	Device-Independent Quantum Key Distribution
DI-QRNG	Device-Independent Quantum Random Number Generator
DIMACS	*C*enter for D*i*screte M*a*thematics and *T*heoretical Computer Science
DKE	Data *S*cience and Knowledge Engineering
DLCZ	Duan, Lukin, Cirac, and Zoller
DLP	Discrete Logarithm Problem
DLR	Deutsches *Z*entrum für Luft- und Raumfahrt
DLT	Distributed Ledger Technology
DM	Density Matrix
DM1	Density Matrix 1
DMRG	Density Matrix Renormalization Group
DoD	Department of Defense
DoE	Department of Energy
DoS	Denial-of-Service
DP	Dynamic Programming
DPR	Distributed Phase Reference
DPR-QKD	Distributed Phase Reference Quantum Key Distribution

DQEC	Discrete QEC
DQM	Discrete Quadratic Model
DQML	Distributed QML
DQS	Direct Quantum Simulator
DRAG	Derivative Removal by Adiabatic Gate
DSA	Digital Signature Algorithm
DSKE	Distribution of Symmetric Key Exchange
DSL	Domain Specific Language
DSP	Dominating Set Problem
DV	Discrete Variable
DV-QKD	Discrete Variable Quantum Key Distribution
DYSL-QT	DRDO Young Scientists Laboratory for Quantum Technologies

E	Edge
	Energy
e.g.	exempli gratia
E91	Ekert 1991
EBNF	Extended Backus-Naur Form
ECC	Elliptic Curve Cryptography
ECDH	Elliptic Curve Diffie-Hellman
ECDLP	Elliptic Curve Discrete Logarithm Problem
ECDSA	Elliptic Curve Digital Signature Algorithm
ECTT	Extended Church-Turing Thesis
EDA	Electronic Design Automation
EDCP	Extrapolated Dihedral Coset Problem
EDH	Ephemeral Diffie-Hellman
EDP	Electronic Data Processing
eDSL	embedded Domain Specific Language
EEMCS	Electrical Engineering, Mathematics and Computer Science
EF	Error Filtration
EFTQC	Early FTQC
EHCI	Eindhoven Hendrik Casimir Institute
EITCI	European Information Technologies Certification Institute
EMC	ElectroMagnetic Compatibility
EMI	ElectroMagnetic Interference
ENISA	*European Union Agency for Cybersecurity*
	(former European Network and Information Security Agency)
EPFL	École Polytechnique Fédérale de Lausanne
EPLG	Error-Per-Layered Gate
EPR	Einstein-Podolsky-Rosen
eQASM	executable Quantum A*ss*e*m*bly language
EQC	Entropy Quantum Computer
EQRNG	Entanglement-based Quantum Random Number Generator
ET	Einstein Telescope
et al.	et alia
etc.	et cetera
ETH	Eidgenössische Technische Hochschule

ETSI	European Telecommunications Standards Institute
EU	European Union
EUV	Extreme Ultra-Violet

F#	F *sharp*
FALCON	Fast-*F*ourier Lattice-based Compact *Si*gnatures *o*ver NTRU
FASTR	Frequency And Sensitivity Tunable Resonator
FBQC	Fusion-Based Quantum Computing
FD	Fermionic Depth
FDSOI	Fully Depleted Silicon-On-Insulator
FEM	Finite Element Method
FeMo	Ferro*m*olybdenum
FeMoCo	FeMo Cofactor
FI	Fisher Information
FIDO2	Fast I*d*entity Online 2
FinFET	Fin Field-Effect Transistor
FIPS	Federal Information Processing Standards
FMR	Fetch Measurement Result
FORTRAN	FORmula TRANslation
FPGA	Field-Programmable Gate Array
FPT	Fixed-Parameter Tractable
FPQAT	Fixed-Parameter Quantum Tractable
FPTAS	Fully Polynomial-Time Approximation Scheme
FS	Fiat-Shamir
FSO	Free-Space Optical
FT	Fault-Tolerant
FTQC	Fault-Tolerant Distributed Quantum Computing
FTQC	Fault-Tolerant Quantum Computer
FTS	Few-Time Signatures

GaAs	Gallium-Arsenide
GAN	Generative Adversarial Network
GB	GigaByte
Gbits/s	Gigabits per second
GBS	Gaussian Boson Sampler
	Gaussian Boson Sampling
GeMSS	Great Multivariate Short Signature
GEO	Generator-Enhanced Optimization
GHz	GigaHerz
GHZ	Greenberger–Horne–Zeilinger
GG02	Grosshans and Grangier 2002
GGH	Goldreich–Goldwasser–Halevi
GKP	Gottesman-Kitaev-Preskill
GNFS	General Number Field Sieve
GPGU	General-Purpose Graphics Processing Unit
GPS	Global Positioning System
GPU	Graphics Processing Unit
GQI	Global Quantum Intelligence
GQML	Geometric QML
GSM	Global System for Mobile communications (Groupe Spéciale Mobile)
GSMA	GSM Association
GSQ	Giga-Scale Quantum
GST	Gate Set Tomography
GUI	Graphical User Interface
GWFP	Gravitational Waves & Fundamental Physics

h	Planck constant
$\hbar$	Dirac constant
$\mathcal{H}$	Hamiltonian
H	Hadamard gate *(Hadamard-Walsh gate)*
	Horizontal
H-RACBM	Hermitian RACBEM
HAWK	a pun on “FALCON”
HEMT	High Electron Mobility Transistor
HFEv-	Hidden Field Equations vinegar minus
HHL	Harrow, Hassidim and Lloyd
HL	Heisenberg Limit
HL-LHC	High-Luminosity Large Hadron Collider
HMAC	Hash-based Message Authentication Code
HOG	Heavy Output Generation
HOM	Hong Ou & Mandel
HPC	High-Performance Computing
HPQC	High-Performance Quantum Computing
HQAN	Hybrid Quantum Architectures and Networks
HQC	Hamming Quasi-Cyclic
	High-performance Quantum Computing
HQS	Honeywell Quantum Systems
HRL	*Hughes Research Laboratories*
HRNG	Hardware Random Number Generator
HRSS	Hülsing - Rijneveld - Schanck - Schwabe
HSM	Hardware Security Module
HSS	Hierarchical Signature System
	Hybrid Solver Service
HTS	High-Temperature Superconductor
HTTP	HyperText Transfer Protocol
HTTPS	HTTP Secure
HUBO	High-order Unconstrained Binary Optimization
HW	Hard*w*are

I	current
	Identity gate
	In-phase
i.e.	id est
I/Q	In-phase and Quadrature
IARPA	Intelligence Advanced Research Projects Activity
IBM	International Business Machines
IC	Integrated Circuit
	Ising Chain
ICM	Index-Calculate Method
ICT	Information and Communication Technology
ID	I*d*entity gate
IDE	Integrated Development Environment
IDF	Israel Defense Forces
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IF	Intermediate Frequency
IFAE	Institut de Física d'Altes Energies
iff	if and only if
IFP	Integer Factorisation Problem
IKEv2	Internet Key Exchange version 2
IMEC	Interuniversity Micro*e*lectronics Centre
Inc.	Incorporated
init	initialisation
INRIA	Institut *n*ational de *r*echerche en sciences et technologies du numérique
ion	ionised atom
IoT	Internet of Things
IP	Internet Protocol
IPHT	*L*eibniz Institute of P*h*otonic Technology
IPsec	IP security
IQ#	Interactive Q#
IQP	Integrated Quantum Photonics

IQS	Intel Quantum Simulator
IR	Intermediate Representation
ISO	International Organization for Standardization
ITU	International Telecommunication Union
ITU-T	International Telecommunication Union Telecommunication Standardization *S*ector
IV	Initialisation Vector

JJ	Josephson Junction
JPA	Josephson Parametric Amplifier
JPL	Jet Propulsion Laboratory
JPM	Josephson Photon Multiplier
JRC	Joint Research Centre
JSON	JavaScript Object Notation
JSS	Job Shop Scheduling

K	Kelvin
KBW	Ket Bit*w*ise *S*imulator
KDF	Key Derivation Function
KEM	Key Encapsulation Mechanism
KIT	Karlsruhe Institut für Technologie
km	kilometre
KLM	Knill, Laflamme and Kilburn
KU	Katholieke Universiteit
kW	kiloWatt

L	inductance
Lab	Laboratory
LAN	Local Area Network
laser	light amplification by stimulated emission of radiation
LC	*I*nductance-Capacitance
LCU	Linear Combination of Unitaries
LDPC	Low-Density Parity-Check
LED	Light-Emitting Diode
LEO	Low-Earth Orbit
LESS	Linear Equivalence Signature Scheme
LHCb	Large Hadron Collider beauty
LHZ	Lechner, Hauke and Zoller
Li-Fi	Light Fidelity
LIQUi|⟩	Language-Integrated Q*u*antum *O*perations
LLL	Lenstra–Lenstra–Lovász
LMS	Leighton-Micali Scheme
LO	Local Oscillator
log	logarithm
	logarithmic
LOQC	Linear Optics Quantum Computing
LP	Linear Program
LS	Locking Signal
LSNMR	Liquid-State NMR
LSQ	Large-Scale Quantum
LSQC	Large-Scale Quantum Computing
LWE	Learning With Errors
LWR	Learning With Rounding

m	mass
M	Million
MAC	Message Authentication Code
macOS	*M*ac Operating System
maglev	magnetic levitation
MaxCut	Maximum Cut
MAYO	a pun on “Oil and Vinegar”
MBE	Measurement-Based Estimator
MBQC	Measurement-Based Quantum Computing
MCI	Monte Carlo Integration
MCMC	Markov Chain Monte Carlo
MCMR	Mid-Circuit Measurement and qubit Reuse
MCP	Maximum Cut Problem
MD5	Message Digest 5
MDI-QKD	Measurement Device-Independent Quantum Key Distribution
MDPC	Moderate Density Parity-Check
MEM	Majorana Edge Mode
memristor	memory resistor
MEMS	Micro-Electro*m*echanical Systems
MERA	Multiscale Entanglement Renormalization Ansatz
MESA	MicroElectronics, Sensors and Actuators
MILP	Mixed Integer Linear Program
MIP	Mixed Integer Program
MIQP	Mixed Integer Quadratic Program
MIRA	MInRAnk
MiRithH	MinRank in the Head
MIS	Maximal Independent Set
MIT	Massachusetts Institute of Technology
mK	milliKelvin
ML	Machine Learning
ML-DSA	Module-Lattice-*B*ased Digital Signature Algorithm
ML-KEM	Module-Lattice-*B*ased Key Encapsulation Mechanism
MLW	Multi-Level Wiring
mm	millimetre
MOO	Multi-Objective Optimization
MOS	Metal-Oxide Semiconductor

MOT	Magneto-Optical Trap
MPC	Multi-Party Computation
MPM	Majorana Pi Mode
MPPK	Multivariate Polynomial Public Key
MPS	Matrix Product State
MQ	Multivariate Quadratic
MQOM	MQ-*o*n-my-Mind
ms	millisecond
MSQ	Million-Scale Quantum
MSS	Merkle Signature Scheme
mV	milliVolt
MW	Middle*w*are
MZI	Mach-Zehnder Interferometer
MZM	Majorana Zero Mode

N	photon *n*umber
NAS	Network Architectures and Services
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organization
NBV	Nationaal Bureau voor Verbindingsbeveiliging
NCCoE	National Cybersecurity Center of Excellence
NCSC	Nationaal Cyber Security Centrum
	National Cyber Security Centre
NEC	*Nippon Electric Company*
NEMS	Nano-Electro*m*echanical Systems
NEQRNG	Non Entanglement-based Quantum Random Number Generator
next-gen	next generation
NFS	Number Field Sieve
Nikhef	*Nationaal Instituut voor Kernfysica en Hoge-Energiefysica* (← Nationaal *I*nstituut voor *K*ernfysica en *H*oge-*E*nergiefysica)
NISQ	Noisy Intermediate-Scale Quantum
NIST	National Institute of Standards and Technology
NL	Nether*l*ands
NLNCSA	Nether*l*ands National Communications Security Agency
nm	nanometre
NMR	Nuclear Magnetic Resonance
NOREA	Nederlandse Orde van Register EDP-auditors
NOVA	Noncommutative Oil and Vinegar with Alignment
NP	Nondeterministic-Polynomial
npj	*N*ature *P*artner *J*ournals
NPU	Neural Processing Unit
ns	nanosecond
NSA	National Security Agency
NTRU	N-th *D*egree Truncated *P*olynomial Ring Units
NTT	Nippon Telegraph and Telephone
NumPy	Numerical Python library
NV	Nitrogen-Vacancy
NWO	Nederlandse *O*rganisatie voor Wetenschappelijk Onderzoek

OAM	Orbital Angular Moment
ODMR	Optically Detected Magnetic Resonance
OEM	Original Equipment Manufacturer
OEMM	Opto-Electro-Mechanical Modulator
OFC	Optical Frequency Comb
On Prem	On Premises
OPA	Optical Parametric Amplifier
OpenQASM	Open Quantum A*ss*e*m*bly language
OpenQLO	Open Quantum Library
OPO	Optical Parametric Oscillator
Ops	Operations
OQC	Oxford Quantum Circuits
OQE	Orquestra Quantum Engine
OQIA	Origin Quantum *C*omputing Industry Alliance
OQS	Open Quantum Safe
OriginQ	Origin Quantum
ORNL	Oak Ridge National Laboratory
OS	Operating System
OSX	Operating System *10*
OTP	One-Time Pad
OTS	One-Time Signature

P	Phase gate
	Polynomial
P	Power
P2P	Point-to-Point
P&M	Prepare & Measure
paramp	parametric amplifier
PAT-PD	Photon-Assisted Tunnelling Photon Detector
PC	Personal Computer
	Program Counter
PBS	Polarizing Beam Splitter
PCIe	Peripheral Component Interconnect *E*xpress
PDE	Partial Differential Equation
PEC	Probabilistic Error Cancellation
PEPS	Projected Entangled Pair States
PERKJ	PERmuted Kernel
pGCL	probabilistic Guarded Command Language
PHP	PHP: Hypertext Preprocessor
PIC	Photonic Integrated Circuit
PISQ	Perfect Intermediate-Scale Quantum
PKI	Public Key Infrastructure
PLOB	Pirandola-Laurenza-Ottaviani-Banchi
PNNL	Pacific Northwest National Laboratory
PNS	Photon Number Splitting
PNT	Positioning, Navigation and Timing
PO	Parametric Oscillator
polylog	polylogarithmic
poset	partially ordered set
postdoc	postdoctoral
PPLO	Parametric Phase-Locked Oscillator
PPS	Pseudo-Pure State
PQC	Parameterized Quantum Circuit
	Post-Quantum Cryptography

PQCA	Post-Quantum Cryptography Alliance
PQF	Photonic Quality Factor
PQM	Probabilistic Quantum Memory
PRA	Physical Review A
PRF	Pseudo-Random Function
PRL	Physical Review Letters
PRNG	Pseudo-Random Number Generator
ps	picosecond
PS	Phase Shifter
PSK	Pre-Shared Key
PTAS	Polynomial-Time Approximation Scheme
PTM	Probabilistic Turing Machine
PUF	Physically Unclonable Function
PVM	Projection-Valued Measure
pyQuil	*P*ython *L*ibrary for Quil
PyQuil	Python *L*ibrary for Quil
PyQVM	Python Quantum Virtual Machine
PyTKET	Python TKET package
PyZX	Python ZX-calculus library

Q	Quadrature
	Quality
	Quantum
Q2B	Quantum-to-Business
Q#	Quantum *sharp*
Q-EaaS	Quantum Entropy-as-a-Service
Q-PUF	Quantum Physically Unclonable Function
Q.js	Quantum *J*ava*S*cript
QA	Quality Assurance
	Quantum Annealer
	Quantum Annealing
QAA	Quantum Adiabatic Annealing
QAB	Quantum Algorithm Benchmarking
	Quantum Anonymous Broadcasting
QAE	Quantum Amplitude Estimation
QAFS	Quantum Annealing Feasibility Study
QAL	Quantum Application Lab
QAM	Quantum Abstract Machine
QAOA	Quantum Alternating Operator Ansätze
	Quantum Approximate Optimization Algorithm
QAP	Quadratic Assignment Problem
QASM	Quantum A*ss*e*m*bly language
QASMBench	Quantum A*ss*e*m*bly Benchmark
qBAS	quantum Bars *a*nd Stripes
QBER	Quantum Bit Error Rate
QBI	Quantum Benchmarking Integration
Qbsolv	Q*UBO* solver
QC2	Quantum Compute Cloud
QC-MDPC	Quasi-Cyclic Moderate Density Parity-Check
QCaaS	Quantum Computing-as-a-Service
QCAT	Quantum Circuits, Architectures and Technology
QCBM	Quantum Circuit Born Machine

QCE	Quantum and Computer Engineering
	Quantum Computer Emulation
	Quantum Computer Emulator
QCi	Quantum Computing Inc.
QCI	Quantum Circuits Inc.
QCKA	Quantum Conference Key Agreement
QCL	Quantum Circuit Learning
	Quantum Computation Language
QCoDeS	Quantum Copenhagen Delft Sydney
QCP	Quantum-Classical Processing
QCS	Quantum Cloud Services
	Quantum Computing Service
QCVV	Quantum Characterization, Verification, and Validation
QDAP	Quantum-chip Design Automation Platform
QDK	Quantum Development Kit
QDMTM	Quantum-enhanced Diamond Molecular Tension Tomography
QDS	Quantum Device Simulator
	Quantum Digital Signature
QEA	Quantum Entity Authentication
QEaaS	Quantum Entropy-as-a-Service
QEC	Quantum Error Correction
QECTT	Quantum Extended Church-Turing Thesis
QED	Quantum Electrodynamics
	Quantum Error Detection
QED-C	Quantum Economic Development Consortium
QEI	Quantum Energy Initiative
QEM	Quantum Error Mitigation
QEO	Quantum-Enhanced Optimization
QEQ	Quasi-Exact fault-tolerant Quantum
QFC	Quantum Flow Charts
QFHE	Quantum Fully Homomorphic Encryption

QFI	Quantum Fisher Information
QFP	Quantum Flux Parametron
QFFT	Quantum Fast Fourier Transform
QHO	Quantum Harmonic Oscillator
QFT	Quantum Fourier Transform
qGCL	quantum Guarded Command Language
QHF	Quantum Hash Function
QHSM	Quantum Hardware Security Module
qHiPSTER	Quantum High-Performance Software Testing Environment
QHO	Quantum Harmonic Oscillator
QI	Quantum Inspire
QIA	Quantum-Inspired Algorithm
QICK	Quantum Instrumentation Control Kit
QIP	Quantum Interactive Proof
QIR	Quantum Intermediate Representation
QIRO	Quantum Intermediate Representation for Optimization
Qiskit	Quantum *I*nformation *S*oftware *K*it
QITE	Quantum Imaginary Time Evolution
QKD	Quantum Key Distribution
QKDN	Quantum Key Distribution Network
QLM	Quantum Learning Machine
QLSP	Quantum Linear System Problem
QM	Quantum Module
QMA	Quantum Merlin-Arthur
QMAC	Quantum Message Authentication Code
QMAN	Quantum Metropolitan Area Network
QMASM	Quantum Macro A*ss*se*m*bler
QMC	Quantum Monte Carlo
QMI	Quantum Machine Image
	Quantum Machines Inc.
QML	Qt Modeling Language
	Quantum Machine Language

QND	Quantum Non-Demolition
QNode	Quantum Node
QNS	Quantum Network System
qPCA	quantum-inspired Principal Component Analysis
QPE	Quantum Phase Estimation
QPL	Quantum Programming Language
QPS	Quantum Photonic System
	Quantum Programming Studio
QPT	Quantum Process Tomography
QPU	Quantum Processor Unit
QR	Quantum-Resistant
QR-PUF	Quantum Readout PUF
QR-UOV	Quotient Ring UOV
QRAC	Quantum Random Access Code
qRAM	quantum Random-Access Memory
QRAM	Quantum Random-Access Memory
QRC	Quantum-Resistant Cryptography
QRE	Quantum Resource Estimator
QREM	Quantum Readout Error Mitigation
QRM	Qubit Readout Module
QRMCM	Qubit Readout Multichip Module
QRNG	Quantum Random Number Generator
QROM	Quantum Random Oracle Model
QS	Quantum Systems
QSA	Quantum-Secure Authentication
QSC	Quantum-Safe Cryptography
QSDC	Quantum Service Direct Connection
QSDK	Quantum Software Development Kit
QSG	Quantum Standards Group
qsim	quantum simulator
Qsim	Quantum simulator
QSP	Quantum Signal Processing
QSS	Quantum Secret Sharing

QST	Quantum State Tomography
	Quantum State Transfer
QSTT	Quantum Secure Time Transfer
QSVM	Quantum-enhanced SVM
QSVT	Quantum Singular Value Transformation
QTM	Quantum Turing Machine
QuAIL	Quantum Artificial Intelligence Lab
QuArC	Quantum Architectures and Computation Group
qubit	quantum bit
QUBO	Quadratic Unconstrained Binary Optimization
qudit	quantum digit
QuEST	Quantum Exact Simulation Toolkit
QuIDD	Quantum Information Decision Diagram
Quil	Quantum instruction language
quilc	*Q*uil compiler
QuRE	Quantum Resource Estimator
QuTiP	Quantum Toolbox in Python
qutrit	quantum trit
QV	Quantum Volume
QV-*n*	Quantum Volumetric class *n*
QVM	Quantum Virtual Machine
QVSD	Quantum Singular Value Decomposition
QWAN	Quantum Wide Area Network
QW	QuantWare
QWA	Quantum World Association

R	Rotational gate
R-QAOA	Recursive QAOA
R/O	Read*o*ut
R&D	Research & Development
RA	Risk Assessment
RACBEM	RAndom Circuit Block-Encoded Matrix
RAM	Random-Access Memory
RB	Randomized Benchmarking
RCS	Random Circuit Sampling
RDMC	Reduced Density Matrix Constraints
ReCirq	Research using Cirq
rf-SQUID	radio-frequency Superconducting Quantum Interference Device
RFC	Request *f*or Comments
RFP	Request For Proposal
RFSQ	Rapid Single Flux Quantum
RGS	Repeater Graph States
RH	Random Hamiltonian
RMQA	Reconfigurable Multicore Quantum Architecture
RNG	Random Number Generator
ROM	Random Oracle Model
RPA	Resource and Performance Assessment
RPC	Remote Procedure Call
rpcq	*RPC* for *Q*uantum
RPE	Robust Phase Estimation
RSA	Rivest-Shamir-Adleman
RT	Real-Time

S	phase change gate
SA	Simulated Annealing
SaaS	Software-as-a-Service
SAM	Spin Angular Momentum
SAPI	Solver API
SARG04	Scarani, Acin, Ribordy and Gisin 2004
SAT	S*at*isfyability
SBM	Simulated Bifurcation Machine
SCA	Side-Channel Attack
SciPy	Scientific and technical computing Python library
sDA	*S*tepwise Digital-Analogue
SDF	Semi*d*efinite Programming
SCTT	Strong Church-Turing Thesis
SDI-QRNG	Semi-Device-Independent QRNG
SDitH	Syndrome Decoding-in-the-Head
SDK	Software Development Kit
SE	Schrödinger Equation
SFQ	Single Flux Quantum
SFWM	Spontaneous Four-Wave Mixing
SHA	Secure Hash Algorithm
SHA-0	Secure Hash Algorithm 0
SHA-1	Secure Hash Algorithm 1
SHA-2	Secure Hash Algorithm 2
SHA-3	Secure Hash Algorithm 3
SHB-DSA	Stateless Hash-Based Digital Signature Algorithm
Si	Silicon
Si-MOS	Silicon Metal-Oxide Semiconductor
SiC	Silicon Carbide
SIDH	Supersingular Isogeny Diffie-Hellman
SiGe	Silicon-Germanium
SIKE	Supersingular Isogeny Key Encapsulation
SIO	Silicon-On-Insulator

SIS	Short Integer Solution
SK	South Korea
SKT	South Korea Telecom
SL	Sociedad Limitada
SLD	Super*l*uminiscent Diode
SLM	Spatial Light Modulator
SLOS	Strong Linear Optical Simulation
SMAC	Solid-state Miniature Atomic Clock
SMM	Single-Molecule Magnet
snd	send
SNL	Sandia National Laboratories
	Shot-Noise Limit
SNOVA	Simple NOVA
SNS	Sending-Not-Sending
SP	Special Publication
SPAC	Special-Purpose Acquisition Company
SPAD	Single-Photon Avalanche Device
SPAM	State Preparation And Measurement
SPDC	Spontaneous Parametric Down-Conversion
SPHINCS+	Stateless Practical Hash-based Incredibly Nice Cryptographic Signatures plus
SPS	Single-Photon Source
sq	*SQUID*
SQ	Sample and Query
SQA	Simulated Quantum Annealing
SQC	Silicon Quantum Computing
SQIR	Small QIR
SQIsign	Short Quaternion and Isogeny signature
SQL	Standard Quantum Limit
SQUID	Superconducting Quantum Interference Device
Sr	Strontium
SRAM	Static Random-Access Memory
SSH	Secure SHell
SSP99	Six-State Protocol 1999
SSNMR	Solid-State NMR

SU	Special Unitary
SU(2)	Special Unitary transformations applicable to 1 qubit
SU(4)	Special Unitary transformations applicable to 2 qubits
SU(n^2)	Special Unitary transformations applicable to n qubits
SURF	Samenwerkende Universitaire Reken*f*aciliteiten
SURFsara	SURF - *S*tichting *A*cademisch *R*ekencentrum *A*msterdam
SVP	Shortest Vector Problem
SV	State Vector
SV1	State Vector 1
SVD	Single Value Decomposition
SVM	Support-Vector Machine
SWAP	Size, Weight, Application and Power
SWG	Sub-Wavelength Grating

t	time
T	half phase change gate
TBSD	Tuneable Beam Splitter
TCO	Total Cost of Ownership
TDA	Topological Data Analysis
TDES	Triple DES
TDSE	Time-Dependent Schrödinger Equation
telecom	telecommunications
TF	TensorFlow
TF-QKD	Twin-Field Quantum Key Distribution
TFIR	Tata Institute of Fundamental Research
TFQ	TensorFlow Quantum
TL;DR	Too Long; Don't Read
TLS	Transport Layer Security
	Two-Level System
TM	Turing Machine
TN	Tensor Network
TN1	Tensor Network 1
TNO	*N*ederlandse *O*rganisatie voor Toegepast Natuurwetenschappelijk Onderzoek
TPM	Tree Party Machine
	Trusted Platform Module
TPS	Tensor Product State
	Twin Photon Source
TPU	Tensor Processing Unit
transmon	transmission line shortened plasma oscillation
TR	Technical Report
trit	ternary digit
TRL	Technology Readiness Level
TRNG	True Random Number Generator
TrueQ	True Quantum
TSP	Traveling Salesman Problem
	Traveling Salesperson Problem
	Trust Service Provider
TSQ	Tera-Scale Quantum
TSV	Through-Silicon Via

TU	Technische Universiteit
TU/e	Technische Universiteit *E*indhoven
TUD	Technische Universiteit Delft
TV	Tele*v*ision
TWPA	Traveling-Wave Parametric Amplifier

U	U gate
UBC	University of British Columbia
UC	University of California
UCL	University College London
UCSB	University of California at Santa Barbara
UCSD	University of California at San Diego
UFPA	Universidade Federal do Pará
UHF	Universal Hash Function
UI	User Interface
UK	United Kingdom
ULT	Ultra-Low Temperature
UM	Universiteit van Maastricht
UMass	University of Massachusetts
UMI	Universal Multiport Interferometer
UOV	Unbalanced Oil and Vinegar
URB	Universal Randomized Benchmarking
URL	Uniform Resource Locator
US	United States
USB	Universal Serial Bus
USC	University of Southern California
USTC	University of Science and Technology of China
UT	Universiteit Twente
UvA	Universiteit van Amsterdam

V	Vertex
	Vertical
	Voltage
VB	Virtual Basic
	Volumetric Benchmark
VCSEL	Vertical-Cavity Surface-Emitting Laser
VLPC	Visible Light Photon Counter
VLSI	Very Large-Scale Integration
VLSQ	Very Large-Scale Quantum
VM	Virtual Machine
VMI	Virtual Machine Image
VOLE	Vector Oblivious Linear Evaluation
VOLEitH	VOLE-in-the-Head
VPN	Virtual Private Network
VQA	Variational Quantum Algorithm
VQC	Variational Quantum Circuit
VQE	Variational Quantum Eigensolver
VQF	Variational Quantum Factoring
VQLS	Variational Quantum Linear Solver
vs.	versus
VS	Virtual Studio
VSC	Virtual Studio Code
VTT	Valtion Teknillinen Tutkmuskeskus
VU	Vrije Universiteit

W	Watt
WAN	Wide Area Network
WCA	Wegman-Carter Authentication
WEF	World Economic Forum
Wi-Fi	Wireless Fidelity
WML	Winnow Machine Learning
WOTS	Winternitz One-Time Signature

x	location
X	*P*auli X gate (aka NOT gate)
XACC	eXtreme-scale ACCelerator
XEB	*C*ross-Entropy Benchmarking
XMSS	eXtended Merkle Signature Scheme
XMSSMT	Multi-*t*ree XMSS
XOR	eXclusive OR
XRB	*Ex*tended Randomized Benchmarking
XUV	*Ex*treme Ultra-Vacuum

Y	*P*auli Y gate
Y2Q	Years to Quantum

Z	*P*auli Z gate
ZKP	Zero-Knowledge Proof
ZNE	Zero-Noise Extrapolation
ZQWL	Zapata *C*omputing Quantum Workflow Language