

# One TrUE 3... Quantum Security you can count on, indefinitely.

**Steal now, crack later is real.** Bad actors are harvesting encrypted data today, just waiting for the Quantum computing power to decrypt its secrets. That's because in a few short years Quantum computers a hundred million times faster than today's classical processors will be attacking our cryptographic defences. The privacy and security our digital society relies on — from government, health and safety, to business and finance — everything will be under threat. Only Quantropi can provide TrUE protection — now and forever.

By delivering novel cryptographic solutions that preserve truth and trust, **Quantropi** is bound to become the new standard for Quantum secure data and communications solutions, no matter what. Our next-generation technology protects data in motion and data at rest — defending against both today's threats, and tomorrow's Quantum-based attacks. Powered by quantum mechanics expressed as linear algebra, Quantropi's patented solutions are uniquely capable of all three prerequisites for end-to-end cryptographic quantum security: **Trust**, **Uncertainty**, and **Entropy**.

## Only TrUE Technologies...

1. Establish **Trust** between any two parties via MASQ™ — quantum-secure *asymmetric* encryption. (Licensable product coming soon.)
2. Ensure **Uncertainty** to attackers, rendering data uninterpretable forever, via QEEP™ — quantum-secure *symmetric* encryption.
3. Securely distribute Quantum **Entropy** — true random number generation and quantum-secure distribution to harden systems and networks against quantum attacks— via SEQUR™.

All of Quantropi's TrUE Quantum-Secure cryptographic solutions are accessible via our flagship **QiSpace™ platform**. So governments, enterprises and developers can have confidence that their sensitive data and communications are, and always will be, secure and private. No matter where the future takes us.

### Company

Founded 2018

### Industry Space

Cybersecurity

### Innovation Focus

Quantum Secure Data  
and Communications Solutions

### Patented Technologies

**6 Patents granted**, including core patents for *Quantum Entropy Expansion Protocol* and *Galois Public Key Envelope*; **5+ Pending**, including *Quantum Public Key Envelope* (innovative optical technology, not part of QiSpace™)

### Licensable Products

**MASQ™** Quantum-Secure Asymmetric Encryption (in development)

**QEEP™** Quantum-Secure Symmetric Encryption

### SEQUR™

- Quantum Entropy as a Service (QEaaS)
- Quantum Delivery
- Digital QKD

### Target Sectors

Government  
Technology  
Finance  
Telco

### Platform

**QiSpace™** Platform

### Technical Validation

2 papers published at IEEE Quantum Week 2020:

[Shannon Perfect Secrecy in a Discrete Hilbert Space](#)

[Quantum Public Key Distribution using Randomized Glauber States](#)

1 paper published at IEEE ICCS 2020:

[Generating Just-in-Time Shared Keys \(JIT-SK\) for TLS 1.3 Zero RoundTrip Time \(0-RTT\)](#)

1 paper published at IEEE ICCS 2021:

[Quantum Safe Lightweight Cryptography with Quantum Permutation Pad](#)

### Awards and Recognition

- 2020 BOBs Best New (Ottawa) Business Award
- Berlin Falling Walls 2020 finalist
- TCS Canada Cyber Companies 2020
- TCS Canada Quantum Technologies 2021
- TCS B2B Program — Collision 2021

### Supporters & Partners:



[www.quantropi.com](http://www.quantropi.com)



# QiSpace™ the First TrUE Quantum-Secure Platform for Enterprise

Whether it's hardening infrastructure and applications by enabling cloud and application developers to securely distribute strong random for "bring your own keys", replacing vulnerable PKI or digital signature schemes with an efficient PQC, or even enhancing or replacing AES itself — our next-generation technology enables a seamless transition to quantum security.

Easily integrated, rapidly deployed, with minimal investment in new hardware or infrastructure, **QiSpace™** is positioned to deliver major CapEx and OpEx savings. Our patented technologies are readily deployed on ANY existing network, over unlimited distances, at full network speeds. Making ours the only company in the world capable of quantum-secure key generation and distribution over TODAY's Internet.

Best of all, QiSpace™ requires minimal investment in new tech infrastructure. Customers can immediately harden their applications and processes to ensure quantum *resilience*, before seamlessly transitioning to 100% *permanent* quantum security.

## Performance Highlights

**SEQR™** ✓ 1 Gbps+ Quantum Entropy as a Service  
✓ Transmission over 15,000km

**QEEP™** ✓ Compatible with lightweight and constrained devices  
✓ 18x faster encryption than AES-256

**MASQ™** ✓ Public Key 1-4KB, Private Key 192B  
(*in dev*) ✓ Digital Signature: NIST Quantum Security Level 5, Short Digital Signatures 96B

## Experienced, Disciplined Management Team

### James Nguyen — Co-founder & CEO

Visionary business strategist, start-up enthusiast, rainmaker with 10+ successful years as banker, CIO, VP Asia for various companies in graphene, mining & energy storage tech, now focused exclusively on leading the crack team behind the world's first logical Quantum-Secure Key Distribution solution.



### Dr. Randy Kuang — Co-founder & Chief Scientist

Quantum physicist and serial entrepreneur, with 25 years in telco and 35 patents. Directed research in quantum communication at Nortel and co-founded Inbay Technologies to develop identity and authentication solutions. IEEE selection committee member.



### Michael Redding — CTO

Strategic, passionate sponsor of game-changing emerging technology. 30 years with Accenture, Managing Director & co-founder of Accenture Ventures. Exceptional track record of global partnerships and equity investments.



### Cory Michalyshyn — CFO

Experienced finance professional and growth leader, former CFO with Celtic House Venture Partners, CFO & COO with Solink and fractional CFO with multiple SaaS tech companies.



### Raj Narula P. Eng. — VP Business Development & Strategy

Seasoned technology executive, business builder with prior ops/ advisory roles in Recognia (Trading Central), Belair Networks (Ericsson), March Networks (Infinova), Sandvine (Prodera), Neurolanguage (ADEC), Bridgewater Systems (Amdocs) and Co-Founder of TenXc Wireless (CCI) and TaraSpan.



### Ken Dobell — VP Marketing

Data-driven performance marketing leader, digital media pioneer & award-winning brand strategist with 25 years of success as agency principal & consultant/advisor with KPMG, Fidelity, Eddyfi/NDT, Coveo, Keurig DrPepper, and more.

