

QCRYPT PUBLIC LECTURE

Cryptography and Cybersecurity in the Quantum Era

—An hour-long talk by Michele Mosca,
Institute for Quantum Computing,
University of Waterloo



**MONDAY, SEPT. 12
FROM 6 TO 7 P.M.**

**Carnegie Institution for Science
1530 P St. NW
Washington, D.C. 20005**

**Free and Open to the Public
No Registration Needed**

2016.QCRYPT.NET

The emergence of quantum technologies is a critical game-changer that offers new opportunities and challenges for cyber technologies and security.

Quantum computers offer the promise of doing computations previously thought to be impossible, and enabling the solution of important problems for humankind.

However, quantum computers will also break some of the pillars of modern-day cybersecurity. This poses a major challenge for academia, industry and governments, who need to work together to design and deploy new tools that will remain secure in the era of quantum computers.

The flip-side is that quantum information technologies will also enable new tools for helping secure information—tools known as quantum cryptography.

Keynote speaker Michele Mosca will explain the basic ideas behind quantum cryptography and some of the novel applications it enables. He will discuss its impact on the foundations of quantum information science and technology, and its direct, practical applications to society.

MICHELE MOSCA is an award-winning researcher whose cutting-edge work on quantum computing has been published widely in top journals and textbooks. He is globally recognized for his drive to help academia, industry and government prepare our cyber systems to be safe in an era with quantum computers. He is a co-founder of the Institute for Quantum Computing at the University of Waterloo, Canada, and a founding member of the Perimeter Institute for Theoretical Physics.



JOINT CENTER FOR
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AND COMPUTER SCIENCE

QCrypt 2016 is an annual international conference for students and researchers working on all aspects of quantum cryptography. This year's conference is hosted by the Joint Center for Quantum Information and Computer Science, a partnership between the University of Maryland and the National Institute for Standards and Technology (NIST).