

TQC 2010

13 – 15 April 2010

5th Conference on Theory of Quantum Computation, Communication and Cryptography
University of Leeds, UK

Quantum computation, quantum communication, and quantum cryptography are sub-fields of quantum information processing, an interdisciplinary field of information science and quantum mechanics. The TQC conference series focuses on theoretical aspects of these sub-fields. The objective of the conference is to bring together researchers so that they can interact with each other and share problems and recent discoveries. It will consist of invited talks, contributed talks, and a poster session. As has happened for previous TQCs, a conference proceedings volume will be published in Springer's Lecture Notes in Computer Science, to which selected speakers will be invited to contribute.

Topics

- quantum algorithms
- models of quantum computation
- quantum complexity theory
- simulation of quantum systems
- quantum cryptography
- quantum communication
- quantum estimation and measurement
- quantum noise
- quantum coding theory
- fault-tolerant quantum computing
- entanglement theory

Previous workshops

TQC 2009, IQC, University of Waterloo, Waterloo, Canada
TQC 2008, University of Tokyo, Tokyo, Japan
TQC 2007, NAIST, Nara, Japan
TQC 2006, NTT R&D Center, Atsugi, Kanagawa, Japan

Organizing committee

Dave Bacon (Washington)
Stephen Bartlett (Sydney)
Katie Barr (Leeds)
Katherine Brown (Leeds)
Barry Cooper (Leeds)
Peter Crompton (Leeds)
Vladimir V. Kisil (Leeds)
Viv Kendon (Leeds; chair)
Neil Lovett (University of Leeds)
Stefano Pirandola (York)
Mike Stannett (Sheffield)
Rob Wagner (Leeds)

Important dates

- › **Submission deadline: January 4, 2010**
- › **Notification of acceptance: February 11, 2010**
- › **Conference: April 13–15, 2010**

Program committee

Dagmar Bruß (Düsseldorf)
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Matthias Christandl (München)
Wim van Dam (Santa Barbara; chair)
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Debbie Leung (Waterloo)
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Juan Pablo Paz (Buenos Aires)
Francesco Petruccione (KwaZulu-Natal)
David Poulin (Sherbrooke)
Martin Rötteler (NEC, Princeton)
Miklos Santha (Paris Sud)
Simone Severini (UCL; co-chair)
Seiichiro Tani (NTT, Tokyo)
Jean-Pierre Tillich (INRIA, Rocquencourt)
Pawel Wocjan (Central Florida)

Invited Speakers

Frédéric Magniez (LRI, Paris)
Kae Nemoto (NII, Tokyo)
Frank Verstraete (Vienna)
Ronald de Wolf (CWI, Amsterdam)
Anton Zeilinger (Vienna)

Steering committee

Yasuhito Kawano (NTT, Tokyo)
Michele Mosca (Waterloo and PI)
Vlatko Vedral (Oxford and Singapore)

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