9th Conference on the Theory of Quantum Computation, Communication and Cryptography

TQC 2014, May 21–23, 2014, National University of Singapore, Singapore

Edited by

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Preface

The 9th Conference on the Theory of Quantum Computation, Communication and Cryptography was held at the National University of Singapore, from the 21st to the 23rd May 2014.

Quantum computation, quantum communication, and quantum cryptography are subfields of quantum information processing, an interdisciplinary field of information science and quantum mechanics. The TQC conference series focuses on theoretical aspects of these subfields. The objective of the conference is to bring together researchers so that they can interact with each other and share problems and recent discoveries.

A list of the previous editions of TQC follows:

- TQC 2013, University of Guelph, Canada
- TQC 2012, The University of Tokyo, Japan
- TQC 2011, Universidad Complutense de Madrid, Spain
- TQC 2010, University of Leeds, UK
- TQC 2009, Institute for Quantum Computing, University of Waterloo, Canada
- TQC 2008, University of Tokyo, Japan
- TQC 2007, Nara Institute of Science and Technology, Nara, Japan
- TQC 2006, NTT R&D Center, Atsugi, Kanagawa, Japan

The conference consisted of invited talks, contributed talks, a poster session, a rump session, and a business meeting. The invited talks were given by Fernando G. S. L. Brandão (University College London, London), Vittorio Giovannetti (NEST, Scuola Normale Superiore, Pisa) and Yaoyun Shi (University of Michigan, Ann Arbor).

The conference was possible thanks to the financial support of the Centre for Quantum Technologies, Singapore.

We wish to thank the members of the Program Committee and all subreviewers for their precious help. Our warm thanks also go to the members of the Local Organizing Committee, for their considerable efforts in organizing the conference. We would like to thank Marc Herbstritt and Michael Wagner (Dagstuhl Publishing) for their technical help. Finally, we would like to thank the members of the Steering Committee for giving us the opportunity to work for TQC. And, of course, all contributors and participants!

November 2014

Steven T. Flammia and Aram W. Harrow

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