8th Conference on the Theory of Quantum Computation, Communication and Cryptography

TQC 2013, May 21–23, 2013, Guelph, Ontario, Canada

Edited by

Simone Severini
Fernando Brandao

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Editors

Simone Severini
Department of Computer Science
University College London
`s.severini@ucl.ac.uk`

Fernando Brandao
Department of Computer Science
University College London
`f.brandao@ucl.ac.uk`

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Contents

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Preface

The 8th Conference on the Theory of Quantum Computation, Communication and Cryptography was held at the University of Guelph, from the 21st to the 23rd May 2013.

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 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 Jop Briët (CWI, Amsterdam), Aram Harrow (MIT, Cambridge), Iordanis Kerenidis (CNRS – Université Paris Diderot-Paris 7, Paris), Thomas Vidick (MIT, Cambridge), and Stephanie Wehner (National University of Singapore, Singapore).

The conference was possible thanks to the financial support of the Institute for Quantum Computing (IQC) at the University of Waterloo, the Perimeter Institute for Theoretical Physics (PI), the Fields Institute for Research in Mathematical Sciences, and the University of Guelph.

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, and to Sarah Plosker, James Howard, and Tyler Jackson, for their help af the registration desk. 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!

October 2013 Fernando Brandao and Simone Severini

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