Preface

The Conference on Theory of Quantum Computation, Communication, and Cryptography (TQC) is an annual meeting on theoretical aspects of quantum information processing. The goal of the conference is to foster developments in this rapidly growing, interdisciplinary field by providing a forum for the presentation and discussion of original research.

The fifth iteration of TQC was held during April 13–15, 2010, at the University of Leeds, United Kingdom. It included invited talks, contributed talks, and a poster session, as well as a rump session consisting of short talks on recent developments. Authors of selected contributed talks were invited to submit a paper to these proceedings.

TQC 2010 would not have been possible without the contributions of numerous individuals and organizations, and we sincerely thank them for their support.

In putting together the scientific program, we were very grateful for the hard work and advice of the Program Committee, listed herein. The logistics of the conference were expertly managed by the Organizing Committee, also listed herein, and we thank them for their efforts to make the conference a success.

We would like to thank the invited speakers, Frédéric Magniez, Kae Nemoto, Frank Verstraete, Ronald de Wolf, and Anton Zeilinger, for their contributions to the program.

We would like to thank the members of the Conference Series Steering Committee, Yasuhito Kawano, Michele Mosca, and Vlatko Vedral, for their important advice.

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Finally, we would like to thank Springer for publishing the proceedings of TQC in the Lecture Notes in Computer Science series.

October 2010

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# Table of Contents

Asymptotically Optimal Discrimination between Pure Quantum States .......................................................... 1  
*Michael Nussbaum and Arleta Szkola*

On Quantum Estimation, Quantum Cloning and Finite Quantum de Finetti Theorems ................................................ 9  
*Giulio Chiribella*

Simple Sets of Measurements for Universal Quantum Computation and Graph State Preparation ............................. 26  
*Yasuhiro Takahashi*

Computational Depth Complexity of Measurement-Based Quantum Computation .................................................. 35  
*Dan Browne, Elham Kashefi, and Simon Perdrix*

Local Equivalence of Surface Code States ........................................... 47  
*Pradeep Sarvepalli and Robert Raussendorf*

Testing Non-isometry Is QMA-Complete ....................................... 63  
*Bill Rosgen*

Quantum Search with Advice ..................................................... 77  
*Ashley Montanaro*

Simulating Sparse Hamiltonians with Star Decompositions ............... 94  
*Andrew M. Childs and Robin Kothari*

The Polynomial Degree of Recursive Fourier Sampling .................... 104  
*Benjamin Johnson*

Generalized Self-testing and the Security of the 6-State Protocol ...... 113  
*Matthew McKague and Michele Mosca*

A Conceptually Simple Proof of the Quantum Reverse Shannon Theorem ................................................................. 131  
*Mario Berta, Matthias Christandl, and Renato Renner*

Geometric Entanglement of Symmetric States and the Majorana Representation ..................................................... 141  
*Martin Aulbach, Damian Markham, and Mio Murao*

Monogamy of Multi-qubit Entanglement in Terms of Rényi and Tsallis Entropies .............................................................. 159  
*Jeong San Kim and Barry C. Sanders*
Bypassing State Initialisation in Perfect State Transfer Protocols on Spin-Chains .................................................... 168
C. Di Franco, M. Paternostro, and M.S. Kim

Teleportation of a Quantum State of a Spatial Mode with a Single Massive Particle .................................................. 175
Libby Heaney

Author Index .................................................. 187