

# QIP 2008 Schedule

Monday, December 17, 2007

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- 0900–0930 Registration
- 0930–1015 Ronald de Wolf (tutorial lecture)  
*Quantum computation and Shor's factoring algorithm*
- 1015–1100 Scott Aaronson (tutorial lecture)  
*An invitation to quantum complexity theory*
- 1100–1125 Tea
- 1125–1135 Welcome
- 1135–1220 Andris Ambainis (invited talk)  
*An  $O(N^{1/2+o(1)})$  time algorithm for evaluating Boolean formulas on a quantum computer*
- 1220–1400 Lunch
- 1400–1445 Ben Reichardt (invited talk)  
*Span-program-based quantum algorithm for evaluating formulas*
- 1450–1520 Gábor Ivanyos, Luc Sanselme and Miklos Santha  
*An efficient quantum algorithm for the hidden subgroup problem in nil-2 groups*
- 1520–1545 Tea
- 1545–1605 Keiji Matsumoto  
*Self-teleportation and its application on LOCC estimation and other tasks*
- 1605–1625 Stefano Pironio, Miguel Navascues and Antonio Acin  
*Quantum probabilities, semidefinite programming, and optimization over Hilbert spaces*
- 1625–1645 Jean Christian Boileau, Lana Sheridan, Martin Laforest and Stephen Bartlett  
*Quantum reference frames and the classification of rotationally-invariant maps*
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## Tuesday, December 18, 2007

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- 0900–0945 Michael Wolf (invited talk)  
*Quantum evolution from a snapshot*
- 0950–1035 Oded Regev (invited talk)  
*A hypercontractive inequality for matrix-valued functions*
- 1035–1100 Tea
- 1100–1130 Nikhil Bansal, Sergey Bravyi and Barbara Terhal  
*Classical approximation schemes for the ground-state energy of quantum and classical Ising spin glasses on planar graphs*
- 1130–1150 Daniel E. Browne, Elham Kashefi, Mehdi Mhalla and Simon Perdrix  
*Determinism in measurement based quantum computation*
- 1150–1210 Dan Browne, Matthew Elliot, Steven Flammia, Seth Merkel, Akimasa Miyake and Anthony Short  
*Phase transition of computational power in the resource states for one-way quantum computation*
- 1210–1230 Zhengfeng Ji, Jianxin Chen, Zhaohui Wei and Mingsheng Ying  
*The LU-LC conjecture is false*
- 1230–1420 Lunch
- 1420–1545 Poster session and tea
- 1545–1645 Business meeting
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## Wednesday, December 19, 2007

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- 0900–0945 Patrick Hayden (invited talk)  
*Counterexamples to the maximal  $p$ -norm multiplicativity conjecture for  $p > 1$*
- 0950–1035 Avi Ben-Aroya (invited talk)  
*Quantum expanders: motivation and constructions*
- 1035–1100 Tea
- 1100–1130 Toby Cubitt, Aram Harrow, Debbie Leung, Ashley Montanaro and Andreas Winter  
*Counterexamples to additivity of minimum output  $p$ -Renyi entropy for  $p$  close to 0*
- 1130–1150 Aram Harrow  
*Quantum expanders from any classical Cayley graph expander*
- 1150–1210 Jonathan Walgate and Andrew Scott  
*Completely entangled random subspaces*
- 1210–1240 Andrew Cross, Graeme Smith, John Smolin and Bei Zeng  
*Codeword stabilized quantum codes*
- 1240–1420 Lunch
- 1420–1645 Free afternoon
- 1930– Conference Banquet at the India Habitat Centre
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## Thursday, December 20, 2007

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- 0900–0945 Renato Renner (invited talk)  
*Generalized entropies*
- 0950–1035 Fernando Brandao (invited talk)  
*A reversible theory of entanglement and its relation to the second law*
- 1035–1100 Tea
- 1100–1130 Gilles Brassard, Anne Broadbent, Joseph Fitzsimons, Sebastien Gambs and Alain Tapp  
*Anonymous quantum communication*
- 1130–1150 Stefano Pironio, Antonio Acin, Nicolas Brunner, Nicolas Gisin, Serge Massar and Valerio Scarani  
*Device-independent security of quantum key distribution*
- 1150–1210 Ivan Damgaard, Serge Fehr, Renato Renner, Louis Salvail and Christian Schaffner  
*A tight high-order entropic quantum uncertainty relation with applications*
- 1210–1230 Ivan Damgaard, Serge Fehr, Louis Salvail and Christian Schaffner  
*Secure identification and QKD in the bounded-quantum-storage model*
- 1230–1420 Lunch
- 1420–1450 Simon-Pierre Desrosiers and Frédéric Dupuis  
*Quantum entropic security and approximate quantum encryption*
- 1450–1520 Julia Kempe, Oded Regev and Ben Toner  
*The unique games conjecture with entangled provers is false*
- 1520–1545 Tea
- 1545–1605 Stephanie Wehner and Andreas Winter  
*Higher entropic uncertainty relations for anti-commuting observables*
- 1605–1625 Scott Aaronson  
*Quantum copy-protection*
- 1625–1645 Yi Zhao, Fred Fung, Bing Qi, Christine Chen and Hoi-Kwong Lo  
*Quantum hacking: experimental demonstration of time-shift attack*
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## Friday, December 21, 2007

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- 0900–0945 Falk Unger (invited talk)  
*Upper bounds on the noise threshold for fault-tolerant quantum computing*
- 0950–1035 Dorit Aharonov (invited talk)  
*Quantum algorithms and universality with non-unitary operators: Approximating the Potts model and the Tutte polynomial*
- 1035–1100 Tea
- 1100–1130 Graeme Smith  
*The private classical capacity with a symmetric side channel*
- 1130–1150 Julia Kempe, Hirotada Kobayashi, Keiji Matsumoto, Ben Toner and Thomas Vidick  
*On the power of entangled provers: immunizing games against entanglement*
- 1150–1210 Tsuyoshi Ito, Hirotada Kobayashi, Daniel Preda, Xiaoming Sun and Andrew C.-C. Yao  
*Generalized Tsirelson inequalities, commuting-operator provers, and multi-prover interactive proof systems*
- 1210–1230 Julien Degorre, Marc Kaplan, Sophie Laplante and Jérémie Roland  
*The complexity of simulating non-signaling distributions*
- 1230–1420 Lunch
- 1420–1450 Oded Regev and Ben Toner  
*Simulating quantum correlations with finite communication*
- 1450–1520 Julia Kempe, Hirotada Kobayashi, Keiji Matsumoto and Thomas Vidick  
*Using entanglement in quantum multi-prover interactive proofs*
- 1520–1545 Tea
- 1545–1605 Kazuo Iwama, Harumichi Nishimura, Rudy Raymond and Shigeru Yamashita  
*Unbounded-error classical and quantum communication complexity*
- 1605–1625 Robert Koenig and Renato Renner  
*Sampling of min-entropy relative to quantum knowledge*
- 1625–1645 Matthias Christandl and Ben Toner  
*De Finetti theorems for finitely exchangeable conditional probability distributions*
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