Publications - Avinatan Hassidim

Journal Publications

1. Monotonicity and Implementability. Itai Ashlagi, Mark Braverman, Avinatan Hassidim and Dov Monderer. **Econometrica** September 2010, pages 1749–1772.

2. Quantum State Restoration and Single-Copy Tomography for Ground States of Hamiltonians. Eddie Farhi, David Gosset, Avinatan Hassidim, Andy Lutomirski Daniel Nagaj and Peter Shor. [arxiv:0912.3823] **Editor's choice of PRL** (Physical Review Letters), Reviewed in **Nature Physics** and **Scientific American** November 2010, pages 190503—190507.

3. Quantum algorithms for testing properties of distributions. Sergey Bravey, Aram Harrow, Avinatan Hassidim. **IEEE Transactions on Information Theory** June 2011, pages 3971—3981.

4. Adaptive versus non-adaptive strategies for quantum channel discrimination. Aram W. Harrow, Avinatan Hassidim, Debbie W. Leung and John Watrous. Physical Review A, **PRA** 2010, pages 032339 — 032345.

5. Position Auctions with Budgets: Existence and Uniqueness. Itai Ashlagi, Mark Braverman, Avinatan Hassidim, Ron Lavi and Moshe Tennenholtz. BE journal of theoretical economics, advances tier (top tier). Volume 10, Issue 1, Article 20.

6. Quantum Algorithm for Linear Systems of Equations. Aram Harrow, Avinatan Hassidim, Seth Lloyd. Editor's suggestion of Physical Review Letters (**PRL**), vol. 15, no. 103, pp. 150502. Invited talk at QIP 2010. Selected to the October 2009 issue of The Virtual Journal of Quantum Information. [arXiv:0811.3171]

7. No Nonlocal Box is Universal. Frédéric Dupuis, Nicolas Gisin, Avinatan Hassidim, André Allan Méthot, Haran Pilpel. Journal of Mathematical Physics **JMP** 48, 082107. [arxiv:0701.142]. Selected to the September 2007 issue of the Virtual Journal of Quantum Information.

Refereed Conference Publications

1. Tzvika Hartman, Avinatan Hassidim, Haim Kaplan, Danny Raz and Michal Segalov, How to split a flow, INFOCOM 2012.

2. Emilie Danna, Avinatan Hassidim, Haim Kaplan, Alok Kumar, Yishay Mansour, Danny Raz and Michal Segalov, Upwards max min fairness, INFOCOM 2012.

3. Eddie Farhi, David Gosset, Avinatan Hassidim, Andy Lutomirski and Peter Shor, Quantum money based on knot theory. Innovations in Theoretical Computer Science (**ITCS**) 2012.

4. Bohua Zhan, Shelby Kimmel and Avinatan Hassidim, Super-Polynomial Quantum Speed-ups for Boolean Evaluation Trees with Hidden Structure. Innovations in Theoretical Computer Science (**ITCS**) 2012.

5. Network Topology Estimation via Phylogenetic Reconstruction Animashree Anandkumar, Avinatan Hassidim and Jon Kelner. *best paper award* **Sigmetrics** 2011.

6. Avinatan Hassidim, Haim Kaplan, Yishay Mansour, Noam Nisan, Non-Price Equilibria in Markets of Discrete Goods. ACM conference on Electronic Markets **EC** 2011.

7. Itai Ashlaghi, Mark Braverman and Avinatan Hassidim, Matching with Couples Revisited. ACM conference on Electronic Markets **EC** 2011.

8. Mark Braverman, Avinatan Hassidim and Yael Tauman Kalai, Leaky Pseudo-Entropy Functions. Innovations in Computer Science (**ICS**) 2011.

9. Alan Edelman Avinatan Hassidim, Huy N. Nguyen and Krzysztof Onak, An Efficient Partitioning Oracle for Bounded Treewidth. **RANDOM** 2011.

10. Caching for Multicore Machines. Avinatan Hassidim. Innovations in Computer Science (**ICS**) 2010, Pages 501-509.

11. Trace Reconstruction on a Tree. Alexander Andoni, Constantinos Daskalakis, Avinatan Hassidim, Sebastien Roch. Innovations in Computer Science (**ICS**) 2010, pages 358-369.

12. Making and Breaking Quantum Money. Andrew Lutomirski, Scott Aaronson, Eddie Farhi, David Gosset, Jon Kelner, Avinatan Hassidim and Peter Shor. Innovations in Computer Science (**ICS**) 2010, pages 20-31.

13. Derandomizng Algorithms on Product Distributions. Ariel Gabizon and Avinatan Hassidim. Innovations in Computer Science (**ICS**) 2010, 397-405.

14. Perfect Revenue From Perfectly Informed Players. Jing Chen, Avinatan Hassidim and Silvio Micali. **ICS** 2010, pages 94-105. Invited to Recent Developments in Mechanism Design, 2010.

15. Quantum algorithms for testing properties of distributions. Sergey Bravey, Aram Harrow, Avinatan Hassidim. **STACS** 2010, pages 131-142. Subsided by the journal version.

16. Local Graph Partitions for Approximation and Testing. Avinatan Hassidim, Jonathan Kelner, Huy N. Nguyen and Krzysztof Onak. **FOCS** 2009, pages 22-31.

17. Sorting and Selection with Imprecise Comparisons. Miklós Ajtai, Vitaly Feldman, Avinatan Hassidim and Jelani Nelson. **ICALP** 2009, pages 37-48.

18. Quantum Multiprover Interactive Proofs with Communicating Provers. Michael Ben-Or, Avinatan Hassidim and Haran Pilpel. **Invited talk at QIP 2009**. **FOCS** 2008, pages 467-476.

19. The Bayesian Learner is Optimal for Noisy Binary Search (and pretty good for quantum as well). Michael Ben-Or and Avinatan Hassidim. [arxiv:0703.231]. **QIP** 2006. **FOCS** 2008, pages 221-230.

20. Broadcasting with Side Information. Noga Alon, Eyal Lubetzky, Uri Stav, Amit Weinstein Avinatan Hassidim. **FOCS** 2008, pages 823-832.

21. Secure Multiparty Quantum Computation with (Only) a Strict Honest Majority. Michael Ben-Or, Claude Crépeau, Daniel Gottesman, Avinatan Hassidim and Adam Smith. **QIP** 2006. **FOCS** 2006, pages 249-260.

22. Fast Quantum Byzantine Agreement. Michael Ben-Or and Avinatan Hassidim. **STOC** 2005, pages 481-485.

Work in progress

1. Matching with Couples Revisited. Itai Ashlaghi, Mark Braverman and Avinatan Hassidim Submitted, 2010.

2. Non Mallable Extractors. Mark Braverman, Avinatan Hassidim, Swastik Kopparty and Shubhangi Saraf.

3. Unit Demand Auctions with Budget Constraints. Itai Ashlagi, Mark Braverman and Avinatan Hassidim.

4. Phylogenetic Reconstruction with Insertions and Deletions. Alex Andoni, Mark Braverman and Avinatan Hassidim. Preprint 2010.

5. Quantum Computation Without Introducing Fresh Qubits. Michael Ben-Or and Avinatan Hassidim.

6. Quantum Money. Scott Aaronson, Eddie Farhi, David Gosset, Avinatan Hassidim, Jon Kelner and Andrew Lutomerski. Invited survey to **CACM**. **Invited to QIP 2011**