

Date: June, 2009

## RESUME

Full name: Ron Lavi  
Marital status: Married + one child  
Web site: <http://ie.technion.ac.il/~ronlavi>

### ACADEMIC DEGREES

2004, Ph.D. in Computer Science, The Hebrew University  
Thesis title: "Auction Theory in Computational Settings"  
1999, M.Sc. in Computer Science, The Hebrew University  
1993, B.Sc. in Economics and Computer Science, The Hebrew University

### ACADEMIC APPOINTMENTS

2006 – present, Senior Lecturer, Faculty of Industrial Engineering and Management, The Technion – Israel Institute of Technology  
2004 – 2006, Post-doctoral fellow, Social and Information Sciences Laboratory, California Institute of Technology.

### PROFESSIONAL EXPERIENCE

2008, Consultant, Google Tel-Aviv  
1993 – 1999, Systems and communication-networks engineer, The Israeli Air Force

## **RESEARCH INTERESTS**

Mechanism design, auction theory, E-commerce, computational aspects of game theory

## **TEACHING EXPERIENCE**

Auction Theory (graduate and advanced undergraduate)

Auction Theory for MBA students

Introduction to Financial Management (a mandatory course in the undergraduate economics program)

## **PUBLIC PROFESSIONAL ACTIVITIES**

2006, reviewer and panelist member for an NSF grants committee

2007-2009, reviewer for the U.S.- Israel Bi-national Science Foundation and the Israeli Science Foundation

2009, member of an ISF grants committee

Reviewer for: Games and Economic Behavior, SIAM journal on Computing, Algorithmica, Journal of the ACM, Journal of Economic Theory, Operations Research, Operations Research Letters, Journal of Artificial Intelligence Research, IEEE Journal on Selected Areas in Communications, ACM Transactions on Internet Technology, Annals of Mathematics and Artificial Intelligence, Electronic Commerce Research, International Journal of Game Theory, Various CS conferences (FOCS, STOC, SODA, ACM-EC, PODC, WINE, APPROX, IJCAI, etc.)

## **HONORS**

2003-2004 Study scholarship from the authority for research students, The Hebrew University

2003-2004 Leibniz Student Fellowship, The Hebrew University.

2001-2004 Vatat scholarship for Ph.D. studies, The Hebrew University.

1992 Dean's list of excellent undergraduate students, The Hebrew University.

## **GRADUATE STUDENTS**

### **Theses in Progress**

Ira Shein, 2009 (expected), Bayesian Analysis of Sequential Auctions under Future Uncertainties

Avinoam Marom, 2010 (expected), Maximizing Cost-Effectiveness of Influence in Social Networks

Liri Finkelstein, 2011 (expected), Secretary Problems and Online Auctions with a Matroid Demand Structure

Alex Bogautov, 2011 (expected), Rationalizability in the Generalized English Auction

## **RESEARCH GRANTS**

2007 – 2011 “Impossibilities and Alternative Solution Concepts for Algorithmic Mechanism Design”. A BSF grant joint with Prof. Robert Kleinberg from Cornell University.

2007 – 2010 “Algorithmic Game Theory for Auction Design and Electronic Social Systems”. ISF grant.

## **PUBLICATIONS**

### **Theses**

Ron Lavi, “The Home Model for Load Balancing in a Computing Cluster”, M.Sc. Thesis, The Hebrew University, 1999

Ron Lavi, “Auction Theory in Computational Settings”, Ph.D. Thesis, The Hebrew University, 2004

### **Refereed papers in professional journals**

#### **Published papers**

R. Lavi and N. Nisan, “Competitive Analysis of Incentive Compatible On-Line Auctions”, Theoretical Computer Science, 310, pp. 159 –180, 2004.

S. Bikhchandani, S. Chatterji, R. Lavi, A. Mu'alem, N. Nisan, and A. Sen, "Weak monotonicity characterizes deterministic dominant strategy implementation", *Econometrica* 74(4), pp. 1109 – 1132, 2006.

R. Lavi, A. Mu'alem, and N. Nisan, "Two Simplified Proofs for Roberts' Theorem", *Social Choice and Welfare* 32, pp. 407 – 423, 2009.

M. Babaioff, R. Lavi, and E. Pavlov, "Single Value Combinatorial Auctions and Implementation in Undominated Strategies", *Journal of the ACM*, 56(1), pp. 4:1 – 4:32, 2009.

### **Accepted papers**

R. Lavi and C. Swamy, "Truthful Mechanism Design for Multi-Dimensional Scheduling via Cycle Monotonicity", *Games and Economic Behavior*.

### **Book Chapters and Review Papers**

R. Lavi, "Computationally-Efficient Approximation Mechanisms", In N. Nisan, T. Roughgarden, E. Tardos and V. Vazirani, editors, *Algorithmic Game Theory*, pp. 301 – 329, Cambridge University Press, 2007.

R. Lavi, "Searching for the Possibility – Impossibility Border of Truthful Mechanism Design", *ACM SIGecom Exchanges* 7(1), pp. 1 – 5, 2007.

R. Lavi, "Algorithmic Mechanism Design", In Ming-Yang Kao, editor, *Encyclopedia of Algorithms*, pp. 16 – 25, Springer, 2008.

R. Lavi, "Mechanism Design", In Robert A. Meyers, editor, and Marilda Sotomayor, section editor for Game Theory, *Encyclopedia of Complexity and System Science*, Springer, in press.

### **CONFERENCES**

#### **Refereed papers in Conference proceedings**

R. Lavi and A. Barak, "Improving the PVM Daemon Network Performance by Direct Network Access", *Proceedings of the 5th EuroPVM/MPI'98*, Springer, pp. 44-51, 1998.

R. Lavi and N. Nisan, "Competitive Analysis of Incentive Compatible On-Line Auctions", *Proceedings of the 2nd ACM Conference on Electronic Commerce*, ACM Press, pp. 233 – 241, 2000.

R. Lavi and A. Barak, "The Home Model and Competitive Algorithms for Load Balancing in a Computing Cluster", Proceedings of the 21st International Conference on Distributed Computing Systems, IEEE Computer Society, pp. 127 – 134, 2001.

R. Lavi, A. Mu'alem, and N. Nisan, "Towards a Characterization of Truthful Combinatorial Auctions", Proceedings of the 44th Annual IEEE Symposium on Foundations of Computer Science, IEEE Computer Society, pp. 574 – 583, 2003.

Y. Bartal, F.Y.L. Chin, M. Chrobak, S.P.Y. Fung, W. Jawor, R. Lavi, J. Sgall, T. Tichy, "Online competitive algorithms for maximizing weighted throughput of unit jobs", Proceedings of the 21st Annual Symposium on Theoretical Aspects of Computer Science, Springer, pp. 187 – 198, 2004.

R. Lavi and C. Swamy, "Truthful and Near-optimal Mechanism Design via Linear Programming", Proceedings of the 46th Annual IEEE Symposium on Foundations of Computer Science, IEEE Computer Society, pp. 595 – 604, 2005.

M. Babaioff, R. Lavi, and E. Pavlov, "Mechanism Design for Single-Value Domains", Proceedings of the 20th National Conference on Artificial Intelligence, AAAI Press / The MIT Press, pp. 241 – 247, 2005.

R. Lavi and N. Nisan, "Online Ascending Auctions for Gradually Expiring Items", Proceedings of the 16th Annual ACM-SIAM Symposium on Discrete Algorithms, SIAM Press, pp. 1146 – 1155, 2005.

M. Babaioff, R. Lavi, and E. Pavlov, "Impersonation-Based Mechanisms", Proceedings of the 21st National Conference on Artificial Intelligence, AAAI Press, 2006.

M. Babaioff, R. Lavi, and E. Pavlov, "Single Value Combinatorial Auctions and Implementation in Undominated Strategies", Proceedings of the 17th Annual ACM-SIAM Symposium on Discrete Algorithms, ACM Press, pp. 1054 – 1063, 2006.

R. Lavi and C. Swamy, "Truthful Mechanism Design for Multi-Dimensional Scheduling via Cycle Monotonicity", Proceedings of the 8th ACM Conference on Electronic Commerce, ACM Press, pp. 252 -- 261, 2007.

S. Dobzinski, R. Lavi, and N. Nisan, "Multi-Unit Auctions with Budget Limits", Proceedings of the 49th Annual IEEE Symposium on Foundations of Computer Science, IEEE Computer Society, pp 250 – 259, 2008.

I. Ashlagi, S. Dobzinski, and R. Lavi, "An Optimal Lower Bound for Anonymous Scheduling Mechanisms", Proceedings of the 10th ACM Conference on Electronic Commerce, ACM Press, 2009.

## **Participation in organizing conferences**

The 2005 SISL workshop, California Institute of Technology, October 2005, Co-organizer (with S. Crockett, A. Galeotti, and T. Stoenescu)

The 7th ACM Conference on Electronic Commerce, University of Michigan, June 2006, Program committee member

Workshop on Alternative Solution Concepts, University of Michigan, June 2006, Co-organizer (with J. Hartline and A. Ronen)

The 21st National Conference on Artificial Intelligence (AAAI), Carnegie-Mellon University, July 2006, Program committee member

The 8th ACM Conference on Electronic Commerce, San-Diego, June 2007, Program committee member

The 22nd National Conference on Artificial Intelligence (AAAI), Vancouver, July 2007, Program committee member

The 11th conference on Theoretical Aspects of Rationality and Knowledge (TARK), Brussels, June 2007, Program committee member

The 9th ACM Conference on Electronic Commerce, Chicago, July 2008, Program committee member

The 23rd National Conference on Artificial Intelligence (AAAI), Chicago, July 2008, Program committee member

The 10th ACM Conference on Electronic Commerce, Stanford University, July 2009, Program committee member

The Second International Symposium on Algorithmic Game Theory, Paphos, Cyprus, October 2009, Program committee member

The 5th Workshop on Internet and Network Economics, Rome, Italy, December 2009, Program committee member

## **Other Presentations**

Electronic Market Design, Schloss Dagstuhl, Germany, June 2002

Algorithmic Game Theory and the Internet, Schloss Dagstuhl, Germany, July 2003

The DIMACS workshop on large-scale games, Northwestern University, April 2005

The INFORMS 2005 annual meeting, San Francisco, November 2005

Second Bertinoro Workshop on Algorithmic Game Theory, Italy, July 2006

Computational Social Systems and the Internet, Schloss Dagstuhl, Germany, July 2007

The DIMACS workshop on The Boundary between Economic Theory and Computer Science, Rutgers University, October 2007