LIOR SEEMAN

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RESEARCH INTERESTS

My research interests lie at the intersection of computer science, economics, social science, and cognitive science. I am interested in game theory, bounded rationality, cryptography, algorithms, social networks, and the interplay between them.

EDUCATION

Cornell University, Department of Computer Science   2010 - Present
PhD Candidate, Computer Science
- *Thesis:* Game Theory with computationally bounded agents
- *Advisors:* Joe Halpern and Rafael Pass
- *GPA:* 4.1

Tel Aviv University, Israel   2005 - 2008
B.Sc., Double major in Computer Science and Management
Summa cum laude
- Ranked 2nd in class, Computer Science
- Ranked 1st in class, Management

AWARDS AND HONORS

Simon's foundation Award   2014
Graduate Students in Theoretical Computer Science

McMullen fellowship   2010 - 2011
Cornell CS department

Adi Lautman Program for Outstanding Students, TAU   2006 - 2008
Awarded to 50 students out of 15,000; Full tuition three-year scholarship and stipend

Rector's list, Tel Aviv University (top 0.1%)   2006 - 2008
Two-time recipient

Dean's list, Tel Aviv University, Faculty of Exact Sciences   2005 - 2008
Three-time recipient

Dean's list, Tel Aviv University, Faculty of Management   2005 - 2006

Intel Award, Outstanding Undergraduate Engineering Students   2007

Journal

- Joseph Y. Halpern, Rafael Pass and Lior Seeman, Decision Theory with Resource-Bounded Agents, **Topics in Cognitive Science**, Volume 6, Issue 2, pages 245–257, April 2014

Conference

- Aviad Rubinstein, Lior Seeman and Yaron Singer, Approximability of Adaptive Seeding under Knapsack Constraints, **EC 2015**

- Joseph Y. Halpern, Rafael Pass and Lior Seeman, Not Just an Empty Threat: Subgame-Perfect Equilibrium in Repeated Games Played by Computationally Bounded Players, **WINE 2014**

- Joseph Y. Halpern, Rafael Pass and Lior Seeman, The Truth Behind the Myth of the Folk Theorem, **ITCS 2014**

- Lior Seeman and Yaron Singer, Adaptive Seeding in Social Networks, **FOCS 2013**

- Joseph Y. Halpern, Rafael Pass and Lior Seeman , I'm Doing as Well as I Can: Modeling People as Rational Finite Automata, **AAAI 2012**

- Konstantinos Mamouras, Sigal Oren, Lior Seeman, Lucja Kot and Johannes Gehrke ,The Complexity of Social Coordination, **VLDB 2012**

Working papers

- Ashwin Badanidiyuru, Christos Papadimitriou, Aviad Rubinstein, Lior Seeman and Yaron Singer, Submodular Adaptive Seeding

- Joseph Y. Halpern, Rafael Pass and Lior Seeman, Computational Extensive-Form Games

Submodular Adaptive Seeding:
- Carnegie Mellon University, Theory Lunch, March 2015
- Weizmann Institute of Science, Theory Lunch, January 2015
- Institute of Information Science - Academia Sinica, Taiwan, December 2014
- Poster presentation, Seventh New York Computer Science and Economics Day, December 2014
- Google research, Algorithms Seminar, November 2014

Adaptive Seeding in Social Networks:
- Sixth New York Computer Science and Economics Day, November 2013
- Cornell University, CS Theory seminar, October 2013

The Truth Behind the Myth of the Folk Theorem:
- Hebrew University of Jerusalem, Computation and Economics Seminar, January 2015
- MSR New England, Game Theory and Computation Seminar, March 2014
- Harvard University, EconCS Seminar, March 2014
- Google research, summer algorithms seminar, August 2012

TEACHING EXPERIENCE

Cornell University, Department of Computer Science   2012 - 2013
Part time Teaching Assistant
- *"The Structure of Information Networks",* Prof. Jon Kleinberg, Fall 2013
- *"Network Flows",* Prof. David Williamson, Fall 2012

Cornell University, Department of Computer Science   2012
Teaching Assistant
- *"Introduction to Analysis of Algorithms",* Prof. Robert Kleinberg, Spring 2012

Tel Aviv University, Faculty of Management   2008 - 2009
Teaching Associate
- *"Introduction to Finance for undergraduate students",* Prof. Avi Wohl, Fall 2008 and Spring 2009

GRADUATE COURSE WORK

Analysis of Algorithms (Robert Kleinberg), The Structure of Information Networks (Jon Kleinberg), Combinatorial Optimizations (David Shmoys), Algorithmic Game Theory (Eva Tardos), Reasoning about Uncertainty (Joe Halpern), Cryptography (Rafael Pass), Topics in Mathematical Programming (David Shmoys and David Williamson), Database Systems (Johannes Gehrke), Probabilistic Graphical Models (Adam Siepel), Advanced Programming Languages (Nate Foster).

PROFESSIONAL EXPERIENCE

Google, AdX group, Google Contributor (NY, NY)   Summer 2013
Summer Intern
- Developed a product that allows users to avoid web ads while still making monetary contribution when visiting websites by buying their own ad slots
- Designed and implemented product's bidding algorithm
- Tested different heuristics for converting a monthly budget to individual bids according to users' behavior
- In charge of algorithm development from design to production including analysis tools and front end

Google, Google Research (Mountain View, CA)   Summer 2012
Summer Intern
- Worked on a theoretical project on influence maximization in social networks resulting in a FOCS 2013 paper
- Conducted related experiments on real Google+ data

Intel, Mobile Wireless Group (Petach Tikva, Israel)   2007 - 2010
FW Developer
- Designed and implemented FW modules for Intel's WIMAX 4G chip
- Started as a part time student position and was offered a full time position upon graduation
- Selected to receive an award for outstanding performance in the integration of a new test system into the product development cycle

PROFESSIONAL SERVICE

- **Sub referee**: STOC 2015, TCC 2015, ITCS 2015, WINE 2014, CRYPTO 2014, EUROCRYPT 2014, WINE 2013

- **Journal reviewer**: Games and Economic Behavior

OTHER ACTIVITIES

Volunteer work:
- Math tutor – part of the Intel Israel volunteer network, (Petach Tikva, 2007)
- CCNA teacher - assisted underprivileged high school students in their pursuit to gain a profession and become certified Cisco network associates (Tel Aviv university, 2006-2007)

Hobbies: Sports, Movies, and Traveling

Languages: English (fluent), Hebrew (native)

REFERENCES

- **Joe Halpern**, Professor of Computer Science, Cornell University
  halpern@cs.cornell.edu

- **Rafael Pass,** Associate Professor of Computer Science, Cornell University
  rafael@cs.cornell.edu

- **Yaron Singer**, Assistant Professor of Computer Science, Harvard University
  yaron@seas.harvard.edu