

Eden Chlamtac

Curriculum Vitae

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EDUCATION

- Princeton University** 2003–
Ph.D. Candidate in Computer Science
Advisor: Prof. Sanjeev Arora
- Weizmann Institute of Science** 2000-2003
MSc in Computer Science
Advisor: Prof. Uriel Feige
Thesis Topic : Cover Times of Random Walks and Markov Chains
GPA: 97.46.
- Tel Aviv University** 1997-2000
BS in Mathematics and Computer Science
GPA: 93.20 (overall), 92.08 (Computer Science), 94.16 (Math)

RESEARCH INTERESTS

- Approximation Algorithms
- Convex Optimization

My main area of interest is in designing and analyzing approximation algorithms which use Semidefinite Programming (SDP) relaxations. Much of my work has focused on applying this technique to the classical Graph Coloring problem, as well as Unique Games and Hypergraph Maximum Independent Set. Recently, I was able to show a first positive result using SDP hierarchies, which have been the focus of many negative results.

HONORS

- **Recipient of Francis Upton Fellowship** 2003-2007
- **Graduated Magna Cum Laude from Tel Aviv University** 2002
- **Dean's List For Academic Achievement (Tel Aviv University)** 1997/1998, 1999/2000

PUBLICATIONS

- **Approximation Algorithms Using Hierarchies of Semidefinite Programming Relaxations**, Proceedings of 48th Symposium on Foundations of Computer Science (FOCS 2007).
- **How to Play Unique Games Using Embeddings** (with Konstantin Makarychev and Yury Makarychev), Proceedings of 47th Symposium on Foundations of Computer Science (FOCS 2006).
- **New Approximation Guarantee for Chromatic Number** (with Sanjeev Arora and Moses Charikar), Proceedings of 38th Symposium on Theory of Computing (STOC 2006).
- **Improved Approximation of the Minimum Cover Time** (with Uriel Feige), Theoretical Computer Science, Volume 341, Issue 1, Pages 22–38, 2005.

INVITED TALKS

- **INFORMS Annual Meeting, Pittsburgh, PA** November 2006
Invited talk on *New Approximation Guarantee for Chromatic Number*
- **Joint ALADDIN/Theory/OR Seminar, Carnegie Mellon University** November 2006
Invited talk on *New Approximation Guarantee for Chromatic Number*
- **CSE Theory Seminar, University of Washington** November 2006
Invited talk on *New Approximation Guarantee for Chromatic Number*
- **China Theory Week, ICST, Tsinghua University, China** September 2007
Invited talk on *Coloring, Independent Sets and SDP Hierarchies*
- **IP Seminar, IBM T.J. Watson Research Center** October 2007
Invited talk on *Coloring, Independent Sets and SDP Hierarchies*
- **NYU/Courant Theory Seminar** December 2007
Invited talk on *Coloring, Independent Sets and SDP Hierarchies*

Upcoming:

- **CS Theory Seminar, University of Toronto** November 2007
Invited talk on *Coloring, Independent Sets and SDP Hierarchies*
- **10th International Workshop on High Performance Optimization Techniques (HPOPT 2008)** June 2008
Invited talk on *Coloring, Independent Sets and SDP Hierarchies*

TEACHING EXPERIENCE

- **Computer Science Department, Princeton University, NJ** Spring 2005
Teaching Assistant for COS 226: *Algorithms and Data Structures*
- **Computer Science Department, Princeton University, NJ** Fall 2004
Teaching Assistant for COS 126: *General Computer Science*
- **Faculty of Mathematics and Computer Science, Weizmann Institute of Science, Rehovot, Israel** Fall 2001, Spring 2002
Teaching Assistant for *Algorithms and Their Complexity*
- **School of Computer Science, Tel Aviv University, Tel Aviv, Israel** Spring 2000
Teaching Assistant for *Discrete Mathematics*
- **School of Computer Science, Tel Aviv University, Tel Aviv, Israel** Fall 1999
Teaching Assistant for *Extended Introduction to Computer Science (using SCHEME)*

PROGRAMMING LANGUAGES

C, C++, Java

REFERENCES

Prof. Sanjeev Arora

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Princeton University
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Prof. Moses Charikar

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Prof. Uriel Feige

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