

Noam Goldberg

Education

PhD, Rutgers Center for Operations Research (RUTCOR), Rutgers University, New Brunswick, NJ, Expected 2009

- Advisor: Prof. Jonathan Eckstein
- Research of optimization algorithms for classification with exact complexity penalties, algorithms for sequential decision making.
- Advanced courses in algorithms, discrete optimization, combinatorics, artificial intelligence, network design & game theory
- GPA 3.77

Master of Science, Leon Recanati School of Business, Tel Aviv University, Tel Aviv, Israel, 2004

- Decisions & Operations Research
- Thesis title: "The Connected Facility Problem – With an Application to Virtual Private Networks – A Computational Study of Proposed Solution Techniques".

Bachelor of Science, University of Toronto, Toronto, Ontario, Canada, 1998

- Computer Science major
- Graduated with High Distinction

Bachelor of Business Administration, Schulich School of Business, York University, Toronto, Ontario, Canada, 1996

- Special Honors program
- Concentration in Investment and Finance

Work experience

Intern, Sandia National Lab, Livermore, CA, Summer 2008

- Mentors: Dr. Tamara G. Kolda and Dr. Ann Yoshimura
Researched global derivative free optimization methods and specifically extending the DIRECT algorithm for using external trial points.

Research Assistant, Rutgers University, New Brunswick, NJ, 2007 – May 2008

- Mentors: Prof. Paul Kantor and Prof. Endre Boros
- NSF funded project, "Deceptive Detection Strategies for Container Inspection".
- Duties include implementation of optimization algorithms and interfaces as well as basic research.

Teaching Assistant, Rutgers University, New Brunswick, NJ, 2004 – 2007

- Taught recitations and graded courses in Precalculus, Calculus II and Theory of Linear Optimization.

Summer Research Project, Prof. Peter Hammer, RUTCOR (NSF and NIH funded project). August 2005.

- Implemented a local search and simulated annealing algorithm for fine tuning Logical Analysis of Data (LAD) parameters through cross-validation.

Operations Research Intern, Health Products Research, Strategic Planning Department, Whitehouse, NJ, Summer 2005.

- Updated an LP model with additional constraints in a marketing strategy and call plan optimization application (based on C++ and CPLEX).
- Studied and fine tuned the performance of a MIP formulation for a call plan problem in CPLEX.

System Engineer, ECI Telecom, Petach Tikva, Israel, 2000 – 2004

- Defined and specified software requirements for operation of provider bridge (i.e. Ethernet over optical transport) equipment.
- Researched and defined MPLS protection network architectures for an Ethernet over MPLS switching product.
- Defined embedded and management software functionality to support automatic network topology discovery
- Defined and designed distributed software architectures for a standby management system.
- Represented the company at an international forums and standardization bodies
- Led a group of representatives of different companies in the telecommunications industry in order to devise an information model for network management of provider Ethernet services.

▪ **Software Engineer**, ECI Telecom, Petach Tikva, Israel, Fall 1998 – Spring 2000

- Designed and implemented an Element Management System database synchronization of hundreds of Network Elements, each containing tens of thousands of managed objects (in C++).
- Designed and implemented a logical compression of a management system database.
- Designed and implemented management interfaces and functionality for equipment redundancy.

Publications

Published:

- With Chung-chieh Shan, “Boosting Optimal Logical Patterns Using Noisy Data”, Proceedings of the SIAM International Conference on Data Mining, 2007. (FP acceptance rate 12%).

Reports and/or working papers:

- With Jonathan Word, Endre Boros and Paul Kantor, “Optimal Sequential Inspection Policies”, RUTCOR Research Report (RRR) #14-2008 and DIMACS Technical Report #2008-7.
- With Tamara G. Kolda and Ann Yoshimura, “Concurrent Optimization with DUET: DIRECT Using External Trial Points”, Sandia National Labs, Technical Report #SAND2008-5844.

Work in progress:

- With Jonathan Eckstein, “Improved Branch-and-Bound for the Maximum Monomial Agreement Problem”
- With Jonathan Eckstein “Branch-and-price boosting for classification with an exact complexity penalty”.

Patent applications and technical publications:

- With I. Kaspit and I. Balter, US#10/824,378, EU#04008847.8, IL#155449: “Technology for Improving Spanning Tree Protocols in Ethernet Networks Supporting VLANs”. Submitted by ECI Telecom.
- With E. Yehuda, patent pending IL#159979: “Fast Rerouting of Traffic in a Circuit Switched Mesh Network”. Submitted by ECI Telecom.
- Contributions incorporated in the TeleManagement Forum Multi-Technology Network Management documents #513, #608 and #814.

Presentations

- “Boosting Optimal Logical Patterns Using Noisy Data”, SDM07, Minneapolis MN, May 2007.
- “Boosting Optimal Logical Patterns Using Noisy Data”, INFORMS Annual Meeting, Seattle WA, November 2007.
- “Boosting Optimal Logical Patterns Using Noisy Data”, Operations Research Seminar, Technion, Israel Institute of Technology, January 2008.
- “Dynamic Programming Algorithm for Enumeration of Efficient Container Inspection Policies”, DHS University Network Summit, Student Day, March 2008.
- “Dynamic Programming Algorithm for Enumeration of Efficient Container Inspection Policies”, Informatics and Decision Sciences seminar, Sandia National Labs, July 2008.
- “Concurrent Optimization with DUET: DIRECT Using External Trial Points”, Informatics and Decision Sciences seminar, Sandia National Labs, August 2008.

Awards

- York University Continuing Education Scholarship, 1997
- University of Toronto Dean's List, 1998
- Recognized for distinction within the first few months on the job in a letter signed by the CEO of the business unit.
- NATO Advanced Studies Institute travel grant for the Summer School in Combinatorial Optimization, Montreal 2006
- Rutgers University Graduate School travel grants, 2006, 2007
- DIMACS travel grant, 2006
- SIAM Student Travel Award, SDM 2007

Technical Skills

- **Software:** MS-Office, Maple, S-PLUS, SPSS, Visio, CPLEX
- **Programming:** C++, C, JAVA, MATLAB, AMPL, MOSEL
- **Operating System:** UNIX, Linux, Windows
- **Communication & management protocols:** SDH/SONET, WDM/OTN, Ethernet, MPLS/VPLS, CMIP, TL1, SNMP, CORBA
- Proven ability to master new protocols, programming languages and systems quickly and thoroughly

Professional Membership

- Member of IEEE Computer Society (2003), SIAM (2006), INFORMS (2007)
- Refereed for IEEE Intelligence and Security Informatics 2007.
- Chaired the session "Data Mining – Statistical Issues" in INFORMS Annual Meeting 2007

Other

- Bilingual; fluent both in English and Hebrew
- Dual American and Israeli citizenship

References

- Professor Endre Boros
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Tel: (732) 445 3235

- Professor Jonathan Eckstein
Rutgers Business School and RUTCOR
Email: jeckstei@rutcor.rutgers.edu
Tel: (609) 258 1044

- Dr. Tamara G. Kolda
Sandia National Labs, Livermore, CA
Email: tgkolda@sandia.gov
Tel: (925) 294 4769

- Professor Chung-chieh Shan
Department of Computer Science, Rutgers University
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