



OPERATIONS  
RESEARCH  
CENTER

Operations Research Center  
Massachusetts Institute of Technology

**GRADUATE STUDENT DIRECTORY**

November 2011

## Jason Acimovic

Operations Research Center, E40-131  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
Email: acimovic@mit.edu

5 Carlisle St Unit 3  
Cambridge, MA 02139  
(804) 683-4955

---

---

**Education**      **Massachusetts Institute of Technology**, Cambridge, MA  
Candidate for PhD in Operations Research; expected completion, June, 2012.  
Advisor: Professor Stephen Graves

**Yale University**, New Haven, CT  
BS in Physics, 1999.

### Experience

**2010-present**      **Individual Operations Consultant**  
Working with a small health care consulting business to develop analytical models of patient insurance claim behavior.

**2009**  
(Summer)      **Amazon.com**  
*Operations Research Intern*  
Modeled facility needs and proposed improvements on Supply Chain Planning Team.  
Optimized utilization of floor and shelf space in warehouses.  
Developed simulations to test and quantify benefits of different stowing strategies.

**2005**      **Médecins Sans Frontières**  
*Field Logistician*  
Ran support for a field hospital and two clinics in eastern Liberia.  
Responsible for sanitation, supply chain, finance, human resources, and fleet management.  
Responded to emergencies - Cholera outbreaks, unreachable field teams, hospital generator failures, and evacuation preparedness.  
Worked and lived with people from diverse cultures – Coworkers included ex-patriots from Sweden, Democratic Republic of Congo, Liberia, Afghanistan, Iraq, Kenya, Croatia, Norway, France, Belgium, and Britain.

**2002-2005**      **Film Industry**  
*Location Scout/Location Manager*  
Worked on commercials, TV shows, and feature films including Maze, The New World, Failure to Launch, War of the Worlds, and Iron-Jawed Angels.  
Coordinated the moving of large film companies with dozens of tractor trailers and hundreds of staff through cities, farms, and neighborhoods.  
Worked closely with and met the needs of electricians, farmers, national park service, directors, artists, restaurateurs, carpenters, actors, weapons experts,

security guards, caterers, helicopter pilots, grips, city engineers, police officers, and truck drivers.

**2000-2002**

**CapitalOne**

*Senior Operations Analyst*

Developed strategies and cost beneficial solutions for customers in collections.

Designed and put into operation outbound call intensity tests. Coordinated call center floor managers, IT department, dialer experts, outsourcing contacts, business managers, and statisticians to perform these experiments.

Found unique ways to educate and motivate peers, including presenting a satirical but educational "How to be a bad analyst" presentation.

Received Circle of Excellence Award for implementing a system scoring profitability of accounts.

**Publications**

*"Making Better Fulfillment Decisions on the Fly in an Online Retail Environment"*, with S. Graves, et al., working paper, 2011.

*"A Groovy Kind of Club: Examining the Impact of New Grooves Rules on the PGA TOUR"* with D. Fearing, working paper, 2011.

*"How to Catch a Tiger: Understanding Putting Performance on the PGA TOUR"* with D. Fearing and S. Graves, *Journal of Quantitative Analysis in Sports*, vol. 7, no. 1, 2011.

Recognized in:

Michael Chawsky, *"Cut Your Putts in Half!"*, *Golf Magazine*, August, 2011.

Steve Beslow and Farrell Evans, *"Truth in Numbers"*, *Sports Illustrated*, March 7, 2011.

Michael Agger, *"The Dark Art of Putting: A New Stat Sheds Light on Golf's Most Mystical Skill"*, *Slate*, August 11, 2010.

<http://www.slate.com/id/2263080/>

John Paul Newport, *"A Stat Is Born: Golf's New Way to Measure Putting"*, *The Wall Street Journal*, March 12, 2010, sec. Golf Journal.

*"Fundamental Limits to Force Detection Using Quartz Tuning Forks"*, with R.D. Grober, J. Schuck, D. Hessman, P.J. Kindlemann, J. Hespanha, A.S. Morse, K. Karrai, I. Tiemann, and S. Manus, *Review of Scientific Instruments*, vol. 71, Jul. 2000, pp. 2776-2780.

**Teaching at MIT**

**2010, 2011**

**MIT, Sloan School of Management**, Cambridge, MA

*Instructor, Curriculum Developer*

Pre-term Data, Models, and Decisions

Evaluation: 4.36/5

- 2010, 2011**     **MIT, Sloan School of Management**, Cambridge, MA  
*Teaching Assistant*  
Data, Models, and Decisions  
Instructor: Professor Andreas Schulz  
Evaluation: 4.36/5
- 2010, 2011**     **MIT, Sloan School of Management**, Cambridge, MA  
*Instructor, Curriculum Developer*  
Excel for Data, Models, and Decisions
- 2009**            **MIT, Sloan School of Management**, Cambridge, MA  
*Teaching Assistant*  
Supply Chain Planning  
Instructor: Professor Stephen Graves  
Evaluation: 4.23/5
- 2009**            **MIT, Sloan School of Management**, Cambridge, MA  
*Teaching Assistant*  
Supply Chain Design  
Instructor: Professor David Simchi-Levi  
Evaluation: 4.23/5
- 2008**            **MIT, Sloan School of Management**, Cambridge, MA  
*Teaching Assistant*  
Probability and Statistics for Engineers  
Instructors: Professors Arnold Barnett and Roy Welsch  
Evaluation: 4.36/5

**Computer Skills and Interests**

AMPL, CPLEX, Crystal Ball, JMP, SQL, PL/SQL, R

**Citizenship**     Citizen of USA

## Chaithanya Bandi

Operations Research Center  
Massachusetts Institute of Technology  
77 Massachusetts Avenue, E40-130  
Cambridge, MA 02139

Office phone: (617) 955-4629  
Cell phone: (617) 642-8284  
Email: cbandi@mit.edu  
Web: www.mit.edu/~cbandi

---

### Education

- 2008-present** **Massachusetts Institute of Technology**, Cambridge, MA  
Candidate for Ph.D. in Operations Research, studying optimization and decision theory under uncertainty, with applications to option pricing, portfolio optimization and queueing theory. GPA 5.0 / 5.0  
Expected completion date: June, 2013.  
Advisor: Prof. Dimitris Bertsimas
- 2004-2008** **Indian Institute of Technology Madras**, Chennai, India  
Bachelor of Technology in Computer Science and Engineering, with a minor in Operations Research.

### Work Experience

- 2011** **Investment Technology Group (ITG)**, Boston, MA  
(Summer) *Quantitative Analyst* in the Financial Engineering Research group at ITG.  
Developed and refined models to capture the price impact of a given trading strategy. This was within a larger framework that intends to identify optimal trading strategies for a given set of market conditions.
- 2007** **Lehman Brothers**, Tokyo, Japan  
(Summer) *Summer Analyst* in the Exotic Quants Desk.  
Worked on implementation of pricing models for Exotic and Hybrid Products. Implemented both Monte-Carlo methods as well as PDE methods. Used C++ and the corresponding excel interfaces in this work.
- 2008-present** **Operations Research Center, MIT**, Cambridge, MA  
*Research Assistant*  
Research focused on the theoretical and practical problems that arise in multi-stage, dynamic optimization under uncertainty. Application areas: finance (option pricing, endowment management), and applied probability (analysis of generalized queueing networks with multiple classes of jobs).
- 2009** **Yahoo! Research**, Bengaluru, India  
(Summer) *Research Intern, Yahoo! Advertising Sciences*  
Developed a new pricing model, known as the Dynamic CPM pricing model, in the context of display advertising. Also studied the ad-serving problem under this scheme.

**2006**  
(Summer)

**Bell Labs, Bengaluru, India**  
*Intern*

Involved in the implementation of an automated testing tool for the purpose of testing the SoftRouter architecture. Perl and occasionally Ocaml were used.

### **Publications**

*"Robust Option Pricing – An Epsilon-Arbitrage Approach"*, with D. Bertsimas and S. Chen. Submitted for journal publication, 2009. Won the Best Presentation Award at INFORMS Annual Meeting 2010.

*"The Robust Queueing Network Analyzer - Single Class of Customers"*, with D. Bertsimas. In preparation.

*"The Robust Queueing Network Analyzer - Multiple Classes of Customers"*, with D. Bertsimas. Working paper.

*"Dynamic CPM Pricing Models for Display Advertising"*, with D. Garg. Submitted for conference publication.

*"Deciding a Cricket Match After Interruptions"*, with M.Frankovich. Presented at NESSIS 2009. Won the Best Poster Award in NESSIS 2009.

*"Algorithms and Heuristics for the Single Machine CTV Minimization Problem"*, with G. Srinivasan, B.Srirangacharyulu and N.S.Narayanaswamy). Submitted for conference publication. Accepted at the Annual conference of the *Operations Research Society of India (ORSI)*.

### **Honors and Awards**

Presidential Fellowship award from MIT to pursue doctoral studies.

Fellowship award from University of California, Berkeley (UCB) to pursue doctoral studies. (Declined)

Award for Academic Excellence at IIT Madras for the year 2004-2005 and 2005-2006.

KVPY Fellowship award from Department of Science and Technology, Govt. of India 2002-2004.

Gold Medal at the International Chemistry Olympiad Training Camp 2004.

Third Position in the Regional Mathematics Olympiad 2004.

All India Second Position in the National Science Olympiad 2003.

### **Computer Skills and Interests**

Languages: C/C++, Python, Java, Ocaml, Perl

Scientific computing: Matlab, Maple

Mathematical Modeling: AMPL, OPL, CPLEX, LP-Solve, Yalmip, SDPT3.

Platforms: Windows, Unix/Linux, Mac OS X.

**Citizenship** Citizen of India

## Allison An Chang

Operations Research Center, E40-130  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
(617) 253-6185 Email: aachang@mit.edu

70 Pacific Street, Apt. 337B  
Cambridge, MA 02139  
(908) 670-1367

---

**Education**      **Massachusetts Institute of Technology**, Cambridge, MA  
Ph.D. in Operations Research; expected completion, June, 2012.  
Advisors: Dimitris Bertsimas and Cynthia Rudin

**Brown University**, Providence, RI  
Sc.B. in Applied Mathematics, May, 2007.  
*Magna Cum Laude, Phi Beta Kappa, Sigma Xi*

### Research Experience

**2008-present**    **MIT, Sloan School of Management**, Cambridge, MA  
*Research Assistant*  
Designing mixed integer optimization methods for machine learning problems, namely supervised ranking and associative classification.

**2007-2008**      **MIT, Sloan School of Management**, Cambridge, MA  
*Research Assistant*  
Studied methods to improve the initialization of the homogeneous self-dual embedding model. Implemented methods in MATLAB.

### Teaching Experience

**2009-2010**      **MIT, Sloan School of Management**, Cambridge, MA  
(Fall)            *Teaching Assistant: Statistical Thinking and Data Analysis (undergraduate)*  
Held recitations and office hours. Graded weekly quizzes and exams. Topics included hypothesis testing, regression, and non-parametric methods.

**2008**             **MIT, Electrical Engineering and Computer Science**, Cambridge, MA  
(Fall)            *Teaching Assistant: Optimization Methods (graduate)*  
Held recitations and office hours. Graded problem sets and exams. Topics included linear, network, integer, dynamic, and non-linear optimization.

**2005-2006**      **Brown University, Computer Science**, Providence, RI  
(Spring)        *Teaching Assistant: Introduction to Scientific Computing and Problem Solving*  
Held office hours and lab sections. Graded assignments and projects. Topics included basic programming concepts in C.

## Professional Experience

- 2009**            **Analytics Operations Engineering, Inc.**, Boston, MA  
(Summer)        *Intern*  
Performed data analysis for consulting. Used Excel, Access, and R in studying historical data to assist clients with equipment leasing decisions and inventory management.
- 2007**            **UCLA Institute for Pure and Applied Mathematics**, Los Angeles, CA  
(Summer)        *Intern in RIPS Program: Computer Experiments for Function Approximations*  
Evaluated various methods for function approximation, passive sampling, and adaptive sampling. Used C to implement and test methods.
- 2006**            **NASA Goddard Space Flight Center**, Greenbelt, MD  
(Summer)        *Intern in SIECA Program: Data Mining for Extra-Solar Planets*  
Wrote C programs to query U.S. Naval Observatory's catalog of stars and to implement clustering and classification algorithms on star data.
- 2004**            **Stanford Linear Accelerator Center**, Menlo Park, CA  
(Summer)        *Research Assistant: Stabilization of Final Focus Magnets for Next Linear Collider*  
Gathered data from sensors on magnet prototype system. Analyzed vibrations using MATLAB to determine sources of vibration and possible damping methods.

## Publications

### *Conference Papers*

*"A Discrete Optimization Approach to Supervised Ranking"*, with D. Bertsimas and C. Rudin. In *Proceedings of the 5<sup>th</sup> INFORMS Workshop on Data Mining and Health Informatics*, Austin, TX, November, 2010.

### *Working Papers*

*"Methods for Ranking Problems in Machine Learning: an Integer Optimization Approach"*, with D. Bertsimas and C. Rudin. Submitted to *Journal of Machine Learning Research*, under review, 2011.

*"How to Reverse-Engineer Quality Rankings"*, with C. Rudin, M. Cavaretta, R. Thomas, and G. Chou. Submitted to *Machine Learning*, under review, 2011.

## Honors and Awards

- 2011**            INFORMS Data Mining Section Best Student Paper Competition Finalist
- 2007**            Rohn Truell Premium for High Distinction in Applied Mathematics  
Anne Crosby Emery Alumnae Fellowship
- 2004**            Karen T. Romer Undergraduate Teaching and Research Assistantship Award

## **Skills and Interests**

**Computer** R, MATLAB, AMPL, C, LaTeX, Unix, Word, Powerpoint, Excel, Access  
**Language** Native English speaker, proficient in Mandarin Chinese, elementary French  
**Activities** MIT Ballroom Dance Club, INFORMS MIT Chapter, MIT Gilbert & Sullivan Players, Music (piano, clarinet), Table tennis, Skiing, Ice skating

**Citizenship** Citizen of USA

## Wang Chi Cheung

Operations Research Center, E40-130  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
(617) 253- 7412 Email: wangchi@mit.edu

224 Albany Street, Apt. 122  
Cambridge, MA 02139  
(857) 600-7435

---

**Education**      **Massachusetts Institute of Technology, Cambridge, MA**  
Candidate for PhD in Operations Research; expected completion, June, 2016.

**University of Cambridge, United Kingdom**  
Bachelor of Arts in Mathematics, June, 2010. GPA Level: First Class.

### Research Experience

**2010 - 2011**      **Institute for Infocomm Research, A\*STAR, Singapore**  
*Research Engineer*  
Analyzed large scale heterogeneous wireless networks by Stochastic Geometry  
Devised the optimal strategies on spectrum allocation and cell association in two-tier femtocell networks.  
Enhanced the link reliability, network throughput as well as energy efficiency in such networks.  
Proposed generalizations of our work to multi-tier networks for future wireless architecture.  
Supervised by Dr. Tony Quek and collaborated with Dr. Marios Kountouris.

**2009**  
Summer      **University of Waterloo, Canada**  
*Research Attachment Student*  
Applied algebraic combinatorics to the analysis of Perfect State Transfer (PST) in quantum computation.  
Converted of an intractable matrix problem on PST into a binary code problem.  
Derived characterizations of PSTs in cubelike graphs.  
Supervised by Prof. Chris Godsil.

### Publications

*"Spectrum Allocation and Optimization in Femtocell Networks"*, with T.Q.S. Quek and M. Kountour, in Proc. IEEE ICC, Ottawa, CANADA, Jun. 2012, submitted.

*"Access Control and Cell Association in Two-Tier Femtocell Networks"*, with T.Q.S. Quek and M. Kountouris, in Proc. IEEE WCNC, Paris, FRANCE, Apr. 2012, submitted.

*"Throughput Optimization, Spectrum Allocation and Cell Association in Two-Tier Femtocell Networks"*, with T.Q.S. Quek and M. Kountouris, IEEE J. Select. Areas Commun., accepted. (*Special Issue on Femtocell Networks*)

*“Energy Efficiency Analysis of Two-Tier Heterogeneous Networks”*, with T.Q.S. Quek and M. Kountouris, in Proc. IEEE European Wireless, Vienna, AUSTRIA, Apr. 2011, pp. -. (*Invited Paper*)

*“Stochastic Analysis of Two-Tier Networks: Effect of Spectrum Allocation”*, with T.Q.S. Quek and M. Kountouris, in Proc. IEEE ICASSP, Prague, CZECH, May 2011, pp. -.

*“Perfect State Transfer in Cubelike Graphs”*, with C. Godsil, *Linear Algebra and its Applications*, accepted.

## **Honors and Awards**

National Science Scholarship (PhD) (5 years of full graduate funding)  
*Agency for Science, Technology and Research, Singapore, 2011 – 2016.*

Bundy Scholarship  
*Magdalene College, University of Cambridge, 2010.*

Davison Prize  
*Magdalene College, University of Cambridge, 2009.*

Walton Prize  
*Magdalene College, University of Cambridge, 2008, 2010.*

National Science Scholarship (BS) (3 years of full undergraduate funding)  
*Agency for Science, Technology and Research, Singapore, 2007 – 2010.*

## **Computer Skills**

Matlab, C, AMPL, Latex

**Citizenship**    Citizen of Hong Kong

# Virod Chiraphadhanakul

Operations Research Center,  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
(617) 253-6185 Email: virot@mit.edu

1 Rindale Ave. Unit 6  
Cambridge, MA 02140  
Phone: (617) 888-3634  
<http://web.mit.edu/virot/www>

---

**Education**      **Massachusetts Institute of Technology, Cambridge, MA**  
Candidate for PhD in Operations Research; expected completion, June, 2013.

**Massachusetts Institute of Technology, Cambridge, MA**  
Dual SM in Transportation and Operations Research, June, 2010.  
Thesis title: *Routing and Scheduling Models for Robust Allocation of Slack*  
GPA: 5.0/5.0

**Chulalongkorn University, Bangkok, Thailand**  
Bachelor of Engineering (Computer Engineering), April, 2007.  
Thesis title: *Voice Recognizing Toy*  
GPA: 3.97/4.00, Graduated 1st in a class of 700 students

## Experience

**2010-Present**    **MIT, Operations Research Center, Cambridge, MA**  
*Research Assistant*  
Working with Professor Cynthia Barnhart as part of the Future Urban Mobility research group in the Singapore-MIT Alliance for Research and Technology (SMART) Center. Focusing on models for the planning, design, and operations of mobility-on-demand systems. Developing optimization models for limited-stop bus service design.

**2011**  
(Summer)        **FedEx Services, Pricing Science and Engineering, Memphis, TN**  
*Revenue Management Intern*  
Developed visual analytics tools that visualize different performance metrics of FedEx's network (such as load factors and freight densities) and how packages shipped using different services are routed throughout the network. The tools facilitate analysis of both historical data and solutions from optimization models to gain insights into current network performance and understand behavior of the optimization models.

**2010**  
(Fall)            **MIT, Department of Civil & Environmental Engineering, Cambridge, MA**  
*Teaching Assistant*  
Provided assistance in the course "Transportation Systems Analysis: Performance and Optimization" for Professors Amedeo Odoni and Cynthia Barnhart. This is one of the core subjects for students pursuing Master of Science in Transportation. Responsibilities: giving biweekly recitations, preparing and grading problem sets, and holding office hours. (20 students, rating: 6.4/7.0)

- 2010**  
(Spring) **MIT, Sloan School of Management, Cambridge, MA**  
*Teaching Assistant*  
Provided assistance to Professors Stephen Graves and David Simchi-Levi in two graduate-level/MBA courses: "Supply Chain Planning" and "Manufacturing System and Supply Chain Design". Responsibilities: giving review sessions on basic inventory models and queuing models, grading case write-ups and problem sets, and holding office hours. (75 students, rating: 5.6/7.0)
- 2007-2010** **MIT, Operations Research Center, Cambridge, MA**  
*Research Assistant*  
Worked with Professor Cynthia Barnhart on a collaborative research project between MIT and Jeppesen. Conducted research on robust airline schedule planning. Created a visualization tool to facilitate analysis of large amounts of data. Developed optimization models for aircraft re-routing and flight schedule adjustment. Evaluated the resulting schedules through simulation based on various performance metrics and performed a comprehensive empirical analysis.
- 2006**  
(Summer) **The Siam Cement Group (SCG), Bangkok, Thailand**  
*Summer Intern – Computer Engineer*  
Developed web applications using ASP and MS Access.

### **Publications**

*"Incremental Bus Service Design: Combining Local and Limited-Stop Bus Services"*, with Cynthia Barnhart, working paper, 2011.

*"Robust Flight Schedules through Slack Re-Allocation"*, with Cynthia Barnhart, submitted for publication, 2011.

*"2010 RAS Problem Solving Competition: A Locomotive Refueling Problem"*, with Cristian Figueroa, technical report, 2010.

### **Honors and Awards**

- 2011** UPS Doctoral Fellowship, awarded based solely on merit to a student who conducts doctoral research in logistics, supply chain, and freight transportation, MIT Center of Transportation and Logistics.
- 2011** Semifinalist (Transportation Category), MIT Clean Energy Prize, a venture creation and innovation competition open to all United States university students.
- 2010** Third Prize, 2010 Railway Application Section Problem Solving Competition, Institute for Operations Research and the Management Sciences (INFORMS). The competition was not limited to students, and there were 31 submissions from 12 countries.
- 2007** Schoettler Fellowship, granted to first-year graduate students on the basis of merit, MIT.

- 2006 Outstanding Academic Achievement, awarded to the top-scoring engineering student of each university by Engineering Institute of Thailand under H.M. the King's Patronage (EIT).
- 2006 Outstanding Academic Achievement, awarded to the best engineering student, Chulalongkorn University.
- 2006 Merit award, "Best mobile game – Symbian" category, Thailand Animation and Multimedia exhibition.
- 2005 Winner Overall Score, DTAC & Nokia iAwards 2005, a mobile application development contest organized jointly by Nokia and DTAC, Thailand's second largest mobile communications provider.

**Leadership**

- 2011 Director, MIT-Harvard Thai Night 2011
- 2008 Social Chair, Thai Student Association at MIT
- 2006 Chief Editor, 2006 Yearbook, Faculty of Engineering, Chulalongkorn University
- 2004 President of Engineering Students, Faculty of Engineering, Chulalongkorn University

**Computer Skills and Interests**

- Computer** Programming Languages: Java, C#, C, .NET, SQL  
Mathematical/Statistical Tools: Matlab, R, S-Plus, SAS, CPLEX, OPL  
Platforms: Windows, Mac OS X, Unix/Linux
- Interest** Graphic design, visualization, typography, photography, singing, guitar
- Citizenship** Citizen of Thailand

## Maxime Cohen

Operations Research Center, E40-149  
Massachusetts Institute of Technology  
77 Massachusetts Avenue  
Cambridge, MA 02139

Email: maxcohen@mit.edu  
Phone: (617) 256-6986

---

- Education**      **Massachusetts Institute of Technology**, Cambridge, MA  
Candidate for PhD in Operations Research; expected completion, June, 2014.  
Advisor: Professor Georgia Perakis
- Technion Israel Institute of Technology**, Haifa, Israel  
MSc. in Electrical Engineering, June, 2009.  
Thesis title: *Network Time Synchronization using Decentralized Kalman Filtering*
- Technion Israel Institute of Technology**, Haifa, Israel  
BSc. in Aero/Astro, June, 2006.  
Summa Cum Laude.

### Experience

- 2009**              **Matrix ABC Capital Markets Ltd (acquired and merged into GHF group)**  
(Spring)              *Trader*  
Specialization: Trading of futures in the short-term interest rate European market (Euribor).
- 2008-2011**        **Eurolaxo Ltd (Israel)**  
*Founder and Partner*  
Field: Private real estate investment company.
- 2006-2009**        **Teaching Experience**  
*Teaching Assistant: Random Signals, Control Systems and Non-Linear Control Systems*  
Instructor for *Linear Control Lab* course of the Control and Robotics lab in the Technion EE department and supervisor of undergraduate projects.  
Teacher of psychometric test prep course for several groups of students with the *Icône Company*. (TA evaluation: 4.4/5).

### Publications

- "*Consumer Subsidies and Optimal Supplier policy for Solar Technology Adoption in the Presence of Pricing*", with Rubin Lobel and Georgia Perakis, to be submitted.
- "*Consumer Subsidies and Industry Response Dynamics Under Multi-period Stochastic Demand*", with Rubin Lobel and Georgia Perakis, to be submitted.
- "*Designing Consumer Subsidies with Industry Response*", with Rubin Lobel and Georgia Perakis, MIT Energy Research Conference, Oct. 2011, Cambridge MA.

"Decentralized algorithms for sequential network time synchronization", with Nahum Shimkin, Proc. NETCOOP 2010 – 4<sup>th</sup> Workshop on Network Control and Optimization, Ghent, Belgium, Dec. 2010, pp. 97-104.

"Sunsailor: Solar Powered UAV", with S. Tsach, L. Ankri, Y. Ehrlich, T. Goldenberg, H. Levy, I. Regev, A. Vladimirsky, A. Weider, and Z. Yossef, Proc. 47<sup>th</sup> Israel Annual Conf. on Aerospace Sciences, Feb. 2007.

## **Honors and Awards**

2011: MIT Energy Initiative Fellowship.

2006-2008: Technion scholarship and Excellence scholarship. Lady Davis Fellow.

2007: Winner of Technion Creativity in Science and Technology competition (2007 most innovative project).

2007: Best student project in the competition of the 47<sup>th</sup> Israel Annual Conference on Aerospace Sciences.

2002-2006: Technion presidential honors in 5 out of 8 semesters and Dean honors in 2 out of 8 semesters.

## **Languages, Computer Skills and Interests**

Languages: French (native), English (fluent), Hebrew (fluent) .

Programming languages: Matlab, Maple, C/C++.

Leadership: Officer at the INFORMS student chapter at MIT (2010-2011).

Extracurricular activities: Volunteering for non-profit organization "*Dereh' Eretz Kadima*", and sports: Squash, soccer (MIT Intramural team), karate and tennis, hiking/travelling.

**Citizenship** Citizen of France

## Adam Elmachtoub

Operations Research Center, E62-385  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
Email: ane@mit.edu

23 Gorham St. Apt. 2  
Somerville, MA, 02144  
(908) 596-1040

---

**Education**      **Massachusetts Institute of Technology, Cambridge, MA**  
PhD Candidate in Operations Research; expected completion, June, 2013.  
Minor: Operations Management

**Cornell University, Ithaca, NY**  
BS in Operations Research and Engineering, May, 2009.  
Minor: Applied Mathematics

### Work Experience

**2009-Present**    **Operations Research Center, MIT, Cambridge, MA**  
*Research Assistant*  
Researched methods to (i) select ideal customers for a given business, using only limited demand information, to best match their supply chain capabilities, and (ii) find near-minimal cost inventory policies for problems with generalized ordering and holding cost structures.

**2009**            **Institute for Computational Sustainability, Cornell, Ithaca, NY**  
(Summer)      *Research Assistant*  
Developed optimization models for deciding which areas of land to preserve and protect in order to save the Red-Cockaded Woodpecker from extinction.

**2008**            **ZS Associates, Princeton, NJ**  
(Summer)      *Operations Research Analyst*  
Restructured a pharmaceutical company's sales force in Mexico which involved optimizing the frequency of sales visits based on medical specialty as well as creating a doctor-specific ordering of what products to promote.

### Teaching Experience

**2008**            **Operations Research and Information Engineering, Cornell, Ithaca, NY**  
(Fall)          *Teaching Assistant*  
Taught a recitation for approximately 30 students and graded homework and exams for the core course Optimization I taken by undergraduates and masters students. Overall rating: 4.6/5.0

**2007**            **School of Engineering, Cornell, Ithaca, NY**  
(Fall)          *Workshop Facilitator*  
Led and organized a workshop on linear algebra for about 15 students.

## **Publications**

*"Supply Chain Management with Online Customer Selection"*, with Retsef Levi. Submitted to Operations Research.

*"Approximation Algorithms for Generalized Deterministic Inventory Problems"*, with Maurice Cheung, Retsef Levi, and David Shmoys. Working paper.

*"Leveraging Cost Sharing Mechanisms for Online Selection Problems"*, with Retsef Levi. Working paper.

*"Maximizing the Spread of Cascades Using Network Design"*, with Daniel Sheldon, Bistra Dilkina, Ryan Finseth, Ashish Sabharwal, Jon Conrad, Carla Gomes, David Shmoys, Will Allen, Ole Amundsen, and Buck Vaughan. In *UAI-2010: 26th Conference on Uncertainty in Artificial Intelligence*, pp. 517–526, 2010.

*"From Random Polygon to Ellipse: An Eigenanalysis"*, with Charles F. van Loan. *SIAM Review*, 52(1): 151-170, 2010.

## **Honors and Awards**

MIT Charles M. Vest Presidential Fellowship  
National Defense Science and Engineering Graduate (NDSEG) Fellowship  
Cornell Engineering Degree Marshall (Best GPA in Cornell Engineering)

Merrill Presidential Scholar (Top 1% at Cornell)  
Byron W. Saunders Prize (Best GPA in Cornell Operations Research)

## **Skills**

Programming in Matlab, AMPL, Java, Excel  
Fluent in English, spoken Arabic, basic Spanish

## **Other Interests**

Standup comedy, backgammon, billiards, sports analytics

**Citizenship** Citizen of USA and Lebanon

## Kristine Johnson

Operations Research Center, Room E40-149  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
Email: krisdj@mit.edu

154 Cedar Street, #4-3  
Somerville, MA, 02144  
678-595-8484

---

**Education**      **Massachusetts Institute of Technology**, Cambridge, MA  
Candidate for PhD in Operations Research; expected completion, June, 2014.  
Advisor: Professor David Simchi-Levi

**Georgia Institute of Technology**, Atlanta, GA  
BS in Industrial and Systems Engineering, December, 2007.

### Experience

**2010-present**      **Massachusetts Institute of Technology**, Cambridge, MA  
*Research Assistant*  
Analyze non-monetary trade economies used for exchange of resources.  
Model such systems as a stochastic game and develop policies to match  
potential trade partners over time. Applications in economics, computer  
science, and other fields.

**2007-2010**      **Alvarez & Marsal Business Consulting**, LLC, Atlanta, GA  
*Consultant*

- Supply Chain Stream Lead for Sarbanes-Oxley implementation project. Responsible for outlining all supply chain processes, identifying risks, developing controls to mitigate risks, designing streamlined processes, and testing all documentation developed.
- Profitability Model Developer for \$3B Chemical/Building Product Manufacturer. Responsible for developing dynamic profitability models for manufacturing facilities, implementing new costing methods to correctly burden appropriate items, integrating costing methods and profitability models with ERP systems, and performing customer/SKU rationalization analyses to help make sales and manufacturing decisions. Results of work directly helped client avoid bankruptcy.

**2006**  
(Fall)      **BlueLinx Corporation**, Atlanta, GA  
*Senior Design Analyst*  
Worked collaboratively with customers, sales representatives, industrial engineers, warehousing consultants, and operations managers to develop transportation solutions for large companies. Transportation solutions included determining most efficient methods of transportation, designing systems, routing schedules, and pricing.

**2005-2006**      **UPS Supply Chain Solutions**, Alpharetta, GA  
*Project Manager/Co-op*  
Worked collaboratively with customers, sales representatives, industrial engineers, warehousing consultants, and operations managers to develop transportation solutions for large companies. Transportation solutions included determining most efficient methods of transportation, designing systems, routing schedules, and pricing.

**2004**  
(Summer)      **Central Intelligence Agency**, Langley, VA  
*Industrial Engineering Intern*  
With Top Secret clearance performed quantitative and qualitative research to improve the Mail, Courier, and Logistics Services (MC&LS) processes. Research included studying each process in detail, gathering metrics, performing statistical analyses on data, researching new data collection tools, benchmarking other companies, studying employee morale and customer satisfaction, and studying the current pricing scenario. Developed new business plan for MC&LS to make the processes more efficient and the pricing scenario more profitable. Earned Exceptional Performance Award for superior accomplishment and valuable service to the CIA.

### **Research**

Undergraduate research, "Predicting NCAA Basketball Margins of Victory Using the LRMC Model". Worked with Joel Sokol to find the best model to predict the outcome of each game of the NCAA Men's Basketball Tournament. Created a model that is significantly better than other common methods used. Model is now used by the NCAA board for determining NCAA Men's Basketball Tournament bids. Work cited in A Logistic Regression / Markov Chain Model For NCAA Basketball by Paul Kvam and Joel Sokol.

### **Honors and Awards**

Georgia Institute of Technology President's Scholarship, Governor's Scholarship, George Wingfield Semmes Memorial Scholarship, Caterpillar Logistics Scholarship, Kurt Salmon Associates Scholarship, and Henry Ford Scholarship recipient  
Central Intelligence Agency's Exceptional Performance Award  
Outstanding Tutor Award, Georgia Tech Learning Assistance Program  
Qualified with MIT Triathlon for USA Triathlon Collegiate Championships

### **Computer Skills and Interests**

Programming experience in Visual Basic, Matlab, CPLEX, Java, C, and Lindo.  
Proficient in Microsoft Access, Excel, and MapPoint.

**Citizenship**      Citizen of USA

## Wei Sun

Operations Research Center, E40-133  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
Email: sunwei@mit.edu

235 Albany St, #5102C  
Cambridge, MA, 02139  
(617) 407-9616  
www.mit.edu/~sunwei

---

**Education**      **Massachusetts Institute of Technology, Cambridge, MA**  
PhD in Operations Research; expected completion, June 2012.

**Massachusetts Institute of Technology, Cambridge, MA**  
M.S. in Computational Design and Optimization, 2006.  
Thesis title: *Price of Anarchy in an Oligopoly Market*

**National University of Singapore, Singapore**  
M.S. in Computational Engineering, 2005.  
Thesis title: *Dynamic Control and Optimization of Bioreactors*

**National University of Singapore, Singapore**  
B.Eng. in Electrical and Computer Engineering, 2001-2005.  
First Class Honors  
Thesis title: *Dynamic Remote Interaction Tracking System for the Mixed Reality Pacman*

### Teaching Experience

**2009-2011**      **MIT, Sloan School of Management, Cambridge, MA**  
*Teaching Assistant*  
TA three core courses for MBA students, Executive MBA students and Sloan Fellows. Held weekly recitations and office hours, created and graded problems sets and exams, advised student projects.  
15.060 Data, Models and Decisions, Fall 2009 (60 MBA students).  
15.734 Introduction to Operations Management, Spring 2011 (62 EMBA students).  
15.778 Management of Supply Networks for Products and Services, Summer 2011 (102 Sloan Fellows).

### Publications

"*Congestion Pricing for Service Industries*", with G. Perakis. Under review with Management Science, 2011. Received 2<sup>nd</sup> Prize in INFORMS 2011 Service Science Section Best Student Paper Competition.

"*Efficiency of Supply Chains with Retailer Asymmetry*", with G. Perakis. Under review with Operations Research, 2011.

"*Price of Anarchy in Supply Chains with Partial Positive Externalities*", with G. Perakis. Under review with *Operations Research Letters*, 2011.

"*Efficiency of Service Industries with Differentiated Services and a Shared Resource*", with G. Perakis. Extended abstract accepted at MSOM Conference, 2011.

"*A Congestion Pricing for Airport Efficiency*", with G. Perakis. Proceedings of 7th Triennial Symposium on Transportation Analysis (TRISTAN), 2010.

"*Loss of Coordination in a Competitive Supply Chain with Endogenous Pricing*", with G. Perakis. Extended abstract accepted at MSOM Conference, 2010.

"*A Pricing Contract for Airport Congestion*", with G. Perakis. Extended abstract accepted at MSOM Conference, 2009.

"*Optimal Contract Design for Joint Ventures in the Healthcare Industry*", with R. Levi, G. Perakis, C. Shi, working paper, 2011.

"*Price of Myopia – Analysis on Greedy Behavior in Multi-Stage Games*", with G. Perakis, working paper, 2011

## **Professional Experience**

**2007**                    **Credit Suisse, Singapore**  
(Spring)                *Quantitative Analyst*  
Developed mathematical models for evaluating a class of exotic financial instruments and worked with clients to address portfolio restructuring needs.

## **Computer Skills and Interests**

Matlab, Python, GAMS, C/C++, Java, Mathematica  
AMPL, OPL, CPLEX, LP-Solve, Yalmip

**Citizenship**        Citizen of Singapore

## Hai Wang

Operations Research Center, E40-144  
Massachusetts Institute of Technology  
77 Massachusetts Avenue  
Cambridge, MA 02139  
(617) 253-6185 Email: haiwang@mit.edu

550 Memorial Drive, 22C-1  
Cambridge, MA, 02139  
(617)794-8387

---

---

**Education**      **Massachusetts Institute of Technology, Cambridge, MA**  
Candidate for PhD in Operations Research; expected completion, June, 2014.  
Candidate for dual SM in Operations Research/Transportation; expected completion, June, 2012. GPA: 5.0/5.0.  
Advisors: Prof. Amedeo Odoni and Prof. Cynthia Barnhart

**Tsinghua University, Beijing, China**  
BS in Civil Engineering, July, 2009. GPA: 93/100.  
Thesis title: *Dynamic OD Estimation Based on Kalman Filtering*

### Professional Experience

**2011–present**    **MIT Operations Research Center, Cambridge, MA**  
*Research Assistant*  
Aircraft Network Delay model and Airline Passengers Delay model analysis, airline competition.

**2010-present**    **MIT Transportation Research Group, Cambridge, MA**  
*Research Assistant*  
Analyzed Last Mile Problems with operation research elements, based in Singapore.

**2008-2009**      **Institute of Transportation, Tsinghua University, Beijing, China**  
*Research Assistant*  
Analyzed different dynamic OD estimation models for the city planning program in Beijing, ultimately applying Kalman Filtering Theory

**2007-2008**      **Department of Civil Engineering, Tsinghua University, Beijing, China**  
*Research Assistant*  
Validate the Plane Assumption, do research on program of redundancy of structures under earthquake condition.

### Leadership

**2011-present**    **MIT-China Innovation & Entrepreneurship Forum, MIT**  
*Founder and Operations Director* for the forum

**2011-present**    **Chinese Student & Scholar Associate, MIT**  
*President*, Chief organizer of more than 100 activities

- 2009**            **Graduation Committee, CE, Tsinghua University**  
*Chairman* of the committee for activity planning and manage
- 2008-2009**      **Project Management Associate, Tsinghua University**  
*Minister*, Department of Human Resource
- 2006-2009**      **Department & Grade Activity of CE, Tsinghua University**  
*Captain* of CE soccer team, Champion of Tsinghua soccer championships
- 2006**            **Social Practice Group in the Putian SOS Children Village**  
*Vice President*, aided orphaned children in Putian SOS

**Awards and Honors**

Chyn Duog Shish Memorial Fellowship of MIT  
 Excellent Graduate of Civil Engineering in China (Top 0.5%)  
 Excellent Graduate of Tsinghua University (Top 1%)  
 Jiang Nanxiang Scholarship (Top Ten of 13,000 students in Tsinghua)  
 Second Prize in Structure Competition of Tsinghua, Third of 200 teams  
 National Excellent Comprehensive Scholarship of China (Top 1%)  
 First Class Comprehensive Scholarship of Tsinghua University (Top 1%)  
 Ranked 1st in 450,000 of Sichuan Province NCEM "General Science Test"  
 First Prize in National Mathematics Olympics Competition, Chengdu City  
 Third Prize in National Physics Olympics Competition, Sichuan Province

**Membership & Skills**

Languages: Native speaker of Chinese, Advanced English, Beginner French  
 Technology: MS Word, Excel, PowerPoint, SQL, UML, MatLab, Java, OPL,  
 TransCAD, R, Biogeme  
 Member of the China Volunteer Association

**Citizenship**    Citizen of People's Republic of China

## Yuan Zhong

Operations Research Center, E40-115  
Massachusetts Institute of Technology  
Cambridge, MA 02139  
(617) 253-6185 Email: zhyu4118@mit.edu

235 Albany Street  
Cambridge, MA, 02139  
(617) 999-7080

---

**Education**      **Massachusetts Institute of Technology**, Cambridge, MA  
Candidate for PhD in Operations Research; expected completion, June, 2012.  
Academic distinctions, i.e., magna cum laude

**California Institute of Technology**, Pasadena, CA  
M.A in Mathematics, June, 2008.

**University of Cambridge**, Cambridge, United Kingdom  
B.A in Mathematics, June, 2006.

### Teaching Experience

**2011**              **MIT Sloan School of Management**, Cambridge, MA  
(Summer)      *Teaching Assistant*  
15.066 System Optimization and Analysis for Manufacturing  
Holding office hours and recitation. Grading quizzes and exams.

**2010**              **MIT EECS**, Cambridge, MA  
(Fall)            *Teaching Assistant*  
6.436/15.085 Fundamentals of Probability  
Holding office hours and recitations. Grading exams.

**2006 - 2008**      **Caltech Mathematics**, Pasadena, CA  
(Semester)      *Teaching Assistant*  
Statistics and Freshman Calculus  
Holding office hours and recitations. Grading quizzes and exams.

### Work Experience

**2010**              **Oracle Corporation**, Burlington, MA  
(Summer)      *Intern Scientist*  
Analyzed large-scale networked data of retail transactions to design ranking schemes according various composite criteria of interests to a retail business.

### Research Experience

**2010**              **Hewlett and Packard Research Laboratory**, Palo Alto, CA  
(January)      *HP/MIT Researcher in Residence Program*  
Investigated the Energy Method for Image Restoration in both the PDE and the discrete setting.

**2004**  
(Summer)

**Computational Dynamics Group, DAMTP, Cambridge, UK**

*Summer Research Assistant*

Studied fundamentals of fluid dynamics; developed numerical procedures in C to investigate the phenomenon of shear layer instabilities.

### **Publications**

*"Optimal Queue-Size Scaling in Switched Networks"*, with D. Shah and N. Walton, submitted to the *Annals of Applied Probability*, 2011.

*"Qualitative Properties of Alpha-Fair Policies in Bandwidth-Sharing Networks"*, with D. Shah and J. N. Tsitsiklis, submitted to the *Annals of Applied Probability*, 2011.

*"Optimal Scaling of Average Queue Sizes in an Input-Queued Switch: an Open Problem"*, with D. Shah and J. N. Tsitsiklis, *Queueing Systems*, Vol. 68, no. 3-4, pp. 375-384, 2011.

*"Qualitative Properties of Alpha-Weighted Scheduling Policies"*, with D. Shah and J. N. Tsitsiklis, *Proceedings of the ACM Sigmetrics 2010*, New York, NY, June 2010.

*"Optimal Queue-Size Scaling in Stochastic Processing Networks"*, with D. Shah and N. Walton, in preparation.

*"A Note on Queue-Size Scaling for Input-Queued Switches"*, with D. Shah and J. N. Tsitsiklis, in preparation.

*"On the Existence of Heavy-Traffic Limit Points for Alpha-Weighted Policies"*, with D. Shah and J. N. Tsitsiklis, in preparation.

### **Honors and Awards**

Cambridge Commonwealth Trust, 2003 – 2006.

Singapore Mathematics Olympiad Gold Medal (1<sup>st</sup> place), July 2001.

Singapore Ministry of Education Scholarship, 1999 – 2002.

### **Computer Skills and Interests**

Matlab, C, R, SQL, LaTeX.

**Citizenship** Citizen of P. R. China