

MUTIARA SONDJAJA

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Country of citizenship: Indonesia

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- EDUCATION** Ph.D. in Operations Research, May 2014 (Expected)
M.S. in Operations Research, December 2012
Cornell University, Ithaca, NY, USA
School of Operations Research and Information Engineering (ORIE)
Dissertation: *A quadratic cone relaxation-based algorithm for linear programming*.
Advised by James Renegar
- B.S. in Mathematics, May 2008
Harvey Mudd College, Claremont, CA, USA
- RESEARCH INTERESTS** Convex optimization, interior-point methods, hyperbolic programming; numerical methods in optimization; applications of optimization and operations research methods
Dissertation work: A quadratic cone relaxation based algorithm for linear programming, with extensions to semidefinite programming and hyperbolic programming.
- TEACHING** **Instructor**, Cornell University
ORIE 3310/5310: Optimization 2, Spring 2013 (approx. 120 students)
ORIE 3310/5310: Optimization 2, Summer 2010 (7 students)
- Teaching Assistant**, Cornell University
ORIE 3300/5300: Optimization 1, Fall 2010, 2009 (Head TA), 2013
ORIE 3310/5310: Optimization 2, Spring 2011, 2010 (Head TA), 2009 (Head TA)
ORIE 4580/5580: Simulation Modeling and Analysis, Fall 2011, 2012
ORIE 4350: Game Theory, Spring 2012
Summer Mathematics Institute, Cornell University, Summer 2009
ORIE 3500/5500: Probability and Statistics 2, Fall 2008
- Co-Instructor**, Cornell Prison Education Program, Fall 2013
Jointly taught an algebra course to inmates in Auburn Correctional Facility, Auburn, NY
- Research Mentor**, Cornell ORIE, Summer 2013
Advised and mentored two undergraduate students on summer projects, one in approximation algorithms and one in combinatorics
- Teaching Assistant**, Johns Hopkins University, Center for Talented Youth,
Individually-Paced Mathematics Sequence, June-July 2005
- RESEARCH VISIT** **Research Intern**, Microsoft Research, Bangalore, India, June-August 2008
- TECHNICAL REPORTS** *Fourier analysis on boolean functions and Mansour's conjecture*, Technical report, Microsoft Research India, August 2008. Advised by Satya Lokam.
Understanding Kakutani's Fixed Point Theorem, Senior thesis, Harvey Mudd College, May 2008. Advised by Francis Su.
A Combinatorial Lusternik-Schnirelmann-Borsuk Theorem, Technical report, Claremont Colleges Mathematics REU, Summer 2007.
With Kyle Kinneberg, Aaron Mazel-Gee, and Francis Su.
Strongly Taut Restricted Block Monoid over \mathbb{Z} , Technical report, Trinity University Mathematics REU, Summer 2006.
With Paul Baginski, Scott Chapman, Ross Kravitz, and Victoria Noquez.

CONFERENCES, Contributed Talk, Joint Mathematics Meetings, January 2014
 WORKSHOPS Contributed Talk, INFORMS Annual Meeting, October 2013
 Participant, Teaching Effectiveness Colloquium, INFORMS Annual Meeting, October 2013
 Contributed Talk, Women in Mathematics in New England, Smith College, October 2012

AWARDS School of ORIE Outstanding Teaching Assistant Awards, 2009-2010 and 2010-2011

LEADERSHIP, **Judge**, Cornell Mathematical Contest in Modeling, November 2013
 SERVICE, & Judged manuscripts submitted by teams of undergraduate students in a Cornell-wide
 OUTREACH mathematical modeling competition
Workshop Leader, Expanding Your Horizons, Cornell University, April 2013, 2014
 Designed an hour-long workshop introducing middle school girls to a selection of graph
 optimization topics. Recruited other graduate and undergraduate student volunteers.
Mentor, Diversity Program in Mathematics, Cornell University, 2012-2013
 Mentored and advised one first-year potential mathematics major
Mentor, Cornell SWE, *Undergraduate-Grad mentoring program*, 2011-2012
 Mentored and advised two undergraduate operations research students
Organizer, Cornell ORIE Ph.D. Students' Colloquium, 2011-2012
 Initiated weekly student colloquium to encourage communication and collaboration
 among graduate students in ORIE. Organized the first semester of the seminar.
Co-President, Cornell Operations Research Graduate Association, 2010-2011
 Organized activities for current students. Organized prospective students weekend.
Panelist, Cornell Undergraduate Chapter of INFORMS,
Getting an M.Eng/Ph.D. Panel, March 2011
 Answered questions from undergraduate students on various aspects of graduate school
Panelist, INFORMS Annual Meeting, *Navigating Graduate School Panel*, November 2010
 Answered questions from undergraduate students on various aspects of graduate school
Student Buddy, Expanding Your Horizons, Cornell University, April 2009-2011
 Accompanied participants (middle school students) to their science workshops

COURSEWORK Mathematical Programming, Convex Optimization, Scheduling Theory, Nonlinear Program-
 ming, Semidefinite Programming, Algorithms, Data-Sparse Matrix Computations, Real
 Analysis, Probability, Stochastic Processes, Statistical Inference, Simulations, Bayesian
 Statistics, Optimal Learning

SKILLS Technical: Matlab, R, AMPL, Java, C++
 Languages: English (fluent), Indonesian (fluent), French (basic), Mandarin (basic)

PROFESSIONAL SIAM, INFORMS, MAA
 ORGANIZATIONS

REFERENCES Available upon request