Susan E. Martonosi

Professor of Mathematics
Harvey Mudd College
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Updated: April 2025

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA
Ph.D. in Operations Research, 2005

Cornell University, Ithaca, NY
B.S. in Operations Research and Industrial Engineering, 1999
Summa Cum Laude

ACADEMIC APPOINTMENTS

2017 – present:
Professor of Mathematics, Harvey Mudd College, Claremont, CA
2018 – present:
Extended Graduate Faculty, Claremont Graduate University, Claremont, CA
2022 – 2025:
Chair of the Faculty (elected), Harvey Mudd College, Claremont, CA
2014 – 2019:
Joseph B. Platt Professor for Teaching Excellence, Harvey Mudd College, Claremont, CA
2016 – 2019:
Director, Global Clinic, Harvey Mudd College, Claremont, CA
2011 – 2017:
Associate Professor of Mathematics, Harvey Mudd College, Claremont, CA
2010-2014:
Mathematics Clinic Director, Harvey Mudd College, Claremont CA
2008:
Visiting Assistant Professor, Cornell University, Ithaca, NY
2005 – 2011:
Assistant Professor of Mathematics, Harvey Mudd College, Claremont, CA

REFEREED PUBLICATIONS (* indicates coauthors who contributed to the work as undergraduates)

2025. "Happily, Ever After – The Effect of Marriage and Children on Life Expectancy in the United States," (with K. Crusius and B. Behzad), to appear in *Chance* (a journal of the American Statistical Association).

2025. "International Vaccine Allocation: An Optimization Framework," (with A. Holleran* and M. Veatch), under review, https://arxiv.org/abs/2303.05917.
2025. "Strategies for the Global Alliance for Vaccines and Immunization in International Vaccine Pricing and Procurement," (with B. Behzad, Z. Meznarich, and R. Proano), under review.
2024. "Diversity, Equity and Inclusion and Operations Management: Critical Linkages and Research Opportunities," (with numerous coauthors). *Production and Operations Management Journal*, DOI: 10.1177/10591478251318107/
2024. "To Give or Not To Give? Pandemic Vaccine Donation Policy," (with A. Holleran* and M. Veatch). *Public Health*, Volume 233, Pages 164-169, https://doi.org/10.1016/j.puhe.2024.05.011.
2024. "The All-Pairs Vitality-Maximization (VIMAX) Problem," (with A. Paul*), *Annals of Operations Research* https://doi.org/10.1007/s10479-024-06022-4.
2023. "Prevalence and Propagation of Fake News," (with B. Behzad, B. Bheem*, D. Elizondo*), *Statistics and Public Policy* (a journal of the American Statistical Association), DOI https://doi.org/10.1080/2330443X.2023.2190368.
2023. "Predicting Elite NBA Lineups Using Individual Player Order Statistics," (with M. Gonzalez* and N. Oshiro*), *Journal of Quantitative Analysis in Sports* (a journal of the American Statistical Association) https://www.degruyter.com/document/doi/10.1515/jqas-2022-0039/html.
2021. "Pricing the COVID-19 vaccine: A mathematical approach," (with B. Behzad and K. Cummings), *Omega*, 102451, https://doi.org/10.1016/j.omega.2021.102451
2021. "Using Ranked Survey Data in Education Research: Methods and Applications," (with A. Bargagliotti, M. Orrison, A. Johnson, and S. Fefer), *Journal of School Psychology*, Volume 85, pp. 17-36, https://doi.org/10.1016/j.jsp.2020.12.005
2021. "Centers for Disease Control and Prevention as a Strategic Agent in the Pediatric Vaccine Market: An Analytical Approach," (with K. Cummings* and B. Behzad), *Manufacturing, Service and Operations Management*, Vol. 23, No. 6, pp. 1333-1682, C2. https://doi.org/10.1287/msom.2020.0902
2020. "Operations Research," (with A. Paul) chapter in *Data Science for Mathematicians*, edited by N. Carter, CRC Press/Chapman and Hall publishing.
2017. "Active Learning in ORMS Education." *Wiley Encyclopedia of Operations Research and Management Science*, to appear.
2016. "A Survey of Statistical Capstone Projects," (with T. D. Williams). *Journal of Statistics Education*, Vol. 24, No. 3, pp. 127-135. https://www.tandfonline.com/doi/full/10.1080/10691898.2016.1257927
2016. "Multi-year optimization of malaria intervention: a mathematical model" (with H. Dudley, C. J Orellana*, A. Goenka*). *Malaria Journal*, 15:133, https://doi.org/10.1186/s12936-016-1182-0.
2016. "Real Clients, Real Problems, Real Data: Client-Driven Statistics Education", (with T. D. Williams). *Mathematics Education: A Spectrum of Work in Mathematical Sciences Departments.* J. Dewar, P. Hsu, and H. Pollatsek (eds). Springer. https://link.springer.com/chapter/10.1007/978-3-319-44950-0_12

2015. "Characteristics of Optimal Solutions to the Sensor Location Problem" (with D. R. Morrison*). *Annals of Operations Research*, Vol. 226, No. 1, pp 463–478 https://doi.org/10.1007/s10479-014-1638-y.
2012. "Cooperative Search with Autonomous Vehicles in a 3D Aquatic Testbed" (with M. Keeter*, D. Moore*, R. Muller*, E. Nieters*, J. Flenner, A. L. Bertozzi, A. G. Percus, R. Levy). *Proceedings of the 2012 American Control Conference*.
2012. "Project-Based ORMS Education". *Wiley Encyclopedia of Operations Research and Management Science*.
2011. "Dynamic Server Allocation at Parallel Queues". *IIE Transactions,* Vol. 43, No. 12, pp. 863-877. https://doi.org/10.1080/0740817X.2011.564602
2011. "Flight Delays at RegionEx" (with A. Farahat). *INFORMS Transactions on Education*, Vol. 11, No. 3, pp. 100-105 https://doi.org/10.1287/ited.1110.0066cs.
2009. "Applying Risk Assessment to Secure the Containerized Supply Chain", (with M. van de Voort, H. Willis and D. S. Ortiz). *Managing Risk and Security: The Safeguard of Long-Term Success for Logistics Service Providers*. Bern: Haupt Verlag, 2009.
2007. "Applying Risk Assessment to Secure the Containerized Supply Chain", (with M. van de Voort, H. Willis and D. S. Ortiz). *Managing Critical Infrastructure Risk*, I. Linkov, R. J. Wenning, G. A. Kiker (eds.). Springer.
2006. "How Effective Is Security Screening of Airline Passengers?", (with Arnold I. Barnett). *Interfaces Special Issue on Homeland Security,* https://doi.org/10.1287/inte.1060.0231.
2005. "Evaluating the viability of 100 per cent container inspection at America's ports", (with Henry Willis and David Ortiz). *The Economic Impacts of Terrorist Attacks*, H. W. Richardson, P. Gordon, J. E. Moore II (eds.). Edward Elgar Publishing.
2004. "Terror is in the Air", (with Arnold I. Barnett). *Chance* (a journal of the American Statistical Association), **(17)**:2, 22-24 https://doi.org/10.1080/09332480.2004.10554896.

MANUSCRIPTS

2011. "A New Framework for Network Disruption", (with D. Altner, M. Ernst, E. Ferme, K. Langsjoen, D. Lindsay, S. Plott, A. S. Ronan). http://arxiv.org/abs/1109.2954

OTHER PUBLICATIONS

2023. "'To My Younger Self' Mentorship Program: Guidance for universities and professional communities to improve student mentoring," (with B. Behzad). https://pubsonline.informs.org/do/10.1287/orms.2023.02.19/full/
2023. "PRedicting PRobabilities with PR," (with A. Benjamin and R. Stubbe). Math Overboard column of *PrimeTime Backgammon Magazine* https://usbgf.org/primetime-magazine-spring-2023/
2022. "Head of the Class: Diversity, Equity, and Inclusion in the OR/MS Classroom". *OR/MS Today,* https://doi.org/10.1287/orms.2022.04.05.

2019. "What's Your StORy? Susan Martonosi" (interview by K. Tucker). *OR/MS Today*, https://doi.org/10.1287/orms.2019.04.18.
2018. "INFORMS Awards and Prizes", (with N. Hall). *OR/MS Today,* https://doi.org/10.1287/orms.2018.02.02.
2012. "The INFORMS Undergraduate Operations Research Prize", (with J. Sokol, D. Czerwinski and F. Erhun). *OR/MS Today*, Vol. 29, No. 2.
2009. "Student-Written Executive Summaries: Educational Tool and Time Saver", *Focus Magazine*.
2008. "Securing OR's Future Through Undergraduate Research", *OR/MS Today*, pp. 10-11.
2007. "Grading Quickly and Consistently Using Equivalence Classes", *Focus Magazine*.

AWARDS AND HONORS

2023. Award for the Advancement of Women in OR/MS, Forum on Women in ORMS (WORMS), Institute for Operations Research and the Management Sciences.
2020. INFORMS Award for Teaching of ORMS Practice, Institute for Operations Research and the Management Sciences.
2014 – 2019. Joseph B. Platt Chaired Professor for Teaching Excellence, Harvey Mudd College.
2017. Mathematician in Residence, Budapest Semesters in Mathematics Summer Program.
2012. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member, Mathematical Association of America.
2009. First place winner of the INFORMS Case Study Competition, "Flight Delays at RegionEx" (with Amr A. Farahat.)
2006 – 2007. Project NExT Fellow, Mathematical Association of America.
2002 – 2005. Alfred P. Sloan Foundation Fellowship (through MIT Global Airline Industry Program).
2001. Ida M. Green Fellowship Award, MIT.
1999. Merrill Scholar, Cornell University.
1998. Marshall Scholarship Finalist.

INVITED TALKS

2024. "Modeling the Prevalence and Propagation of Fake News in Social Media," Air Force Research Lab.
2024. "Modeling the Prevalence and Propagation of Fake News in Social Media", Joint Statistical Meetings, Portland, Oregon.
2023. "To Give or Not To Give? Vaccine Nationalism During a Pandemic", USC Data Sciences and Operations Seminar.
2022. "Boosting Student Learning with a More Inclusive Classroom", INFORMS Teaching Effectiveness Colloquium.

2021. "Balancing Cost and Profit in the Public Sector Vaccine Market: Case Studies of DTaP and COVID-19", UCI Paul Merage School of Business Operations and Decision Technologies Colloquium, February 2021
2021. "Balancing Cost and Profit in the Public Sector Vaccine Market: Case Studies of DTaP and COVID-19", MIT Operations Research Center IAP Seminar on Policymaking in OR, January 2021.
2019. "Mathematical Models as a Tool in Public-Health Decision-Making," U. of San Francisco.
2019. "Backwards Syllabus Design: Designing your syllabus with the end in mind," INFORMS Teaching Effectiveness Colloquium.
2019. "Building Successful and Inclusive Research Teams," AMS Sectional Meeting, UC Riverside.
2018. "Mathematical Models as a Tool in Public-Health Decision-Making", Stauffer Series, Harvey Mudd College.
2017. "Projects in the ORMS Classroom", INFORMS Teaching Effectiveness Colloquium
2017. "Models for Preventing and Treating Malaria in Resource-Constrained Regions," Budapest Semesters in Mathematics Summer Program.
2014. "Syllabus and Course Design", INFORMS Teaching Effectiveness Colloquium.
2014. "Senior Capstone Projects: A Taste of the Real World," USC Viterbi School of Engineering, Engineering Education, Active Learning Retreat.
2014. "Using Math to Fight Terrorism", UC Irvine Undergraduate Math Seminar.
2013. "Models for Preventing and Treating Malaria in Resource-Constrained Regions," USC Engineering Honors Colloquium.
2013. "Models for Preventing and Treating Malaria in Resource-Constrained Regions," CSU San Bernardino Mathematics Colloquium.
2012. "Pretty Cars Don't Go Here: Bringing students to the trenches in project-based courses," INFORMS Teaching Effectiveness Colloquium.
2012. "An ORnate ORation on OR," MAA MathFest, Alder Award Session.
2011. "Senior Capstone Projects: A Taste of the Real World", OR Society of East Africa Conference, Keynote Address.
2011. "A Network Flow Approach to Terrorist Network Disruption", UCLA Statistics Seminar.
2011. "Disrupting Terrorist Networks," Naval Post-Graduate School Operations Research Seminar.
2011. "Using Math to Fight Terrorism," Cornell Summer Institute Undergraduate Seminar.
2011. "Dynamic Screener Allocation at Parallel Security Checkpoint Queues", USC METRANS Seminar.
2011. "Using Math to Fight Terrorism", Pacific Coast Undergraduate Mathematics Conference, Plenary Address.
2009. "Disrupting Terrorist Networks", CSU San Bernardino Mathematics Colloquium.
2009. "OR Models for Counterterrorism", University of Southern California Women in Mathematics Lecture Series.
2009. "Disrupting Terrorist Networks", Harvey Mudd College Stauffer Lecture Series.
2008. "Disrupting Terrorist Networks", Claremont Colleges Mathematics Colloquium.
2008. "Operations Research Models for Homeland Security", ORIE Colloquium, Cornell University.

2008. "My Peace Corps Experience: Not how *I* changed the world, but how the world changed me", CSU Fullerton Mathematics Colloquium.
2007. "A Queueing Model for Airport Security", CSU San Bernardino Mathematics Colloquium.
2007. "Some Issues in Homeland Security", Department of Industrial and Systems Engineering, Georgia Tech, Invited speaker in course on airline operations.
2007. "Some Probabilistic Conundrums", HMC Presidential Inauguration.
2006. "Some Issues in Homeland Security", Mathematics Colloquium, Occidental College.
2006. "A Queueing Model for Airport Security", Claremont Statistics Colloquium.
2006. "A Queueing Model for Airport Security", Department of Statistics, University of California at Riverside.
2006. "Quantitative Methods for the Deterrence of Terrorists", Department of Industrial and Systems Engineering, USC.
2005. "Secure Flights? Models and Observations" MIT Global Airline Industry Program, Industry Advisory Board Meeting.
2005. "Loopholes and Deterrence in Airline Passenger Pre-Screening Systems", Homeland Security Institute, Advancing Analytic Techniques in Deterrence Analysis Workshop.
2004. "Some Issues in Airline Security", MIT Global Airline Industry Program, Industry Advisory Board Meeting, 2004.

CONFERENCE TALKS

2023. "To Give or Not To Give? Pandemic Vaccine Donation Policy", INFORMS Healthcare Analytics Conference, Toronto.
2022. "Promoting Inclusion through Effective Groupwork", INFORMS Annual Meeting, Indianapolis.
2022. "Diversity, Equity, and Inclusion: How To Get Started" (panelist), INFORMS Annual Meeting, Indianapolis.
2022. "To My Younger Self: A Mentoring Program for Women-Identifying Doctoral Students" (flash talk), INFORMS Annual Meeting, Indianapolis.
2021. "Multi-year Interventions Against Malaria", INFORMS Annual Meeting, Anaheim
2019. "Flipping the Intro to OR Course," INFORMS Annual Meeting, Seattle.
2017. "Global Collaboration: An Essential Skill in the 21st Century", 6th International Symposium on Advanced Technology, Kogakuin University, Tokyo, Japan.
2017. "Field-Based Projects", INFORMS Annual Meeting, Houston, TX.
2014. "Models for Preventing and Treating Malaria in Resource-Constrained Regions", International Federation of Operations Research Societies Conference, Barcelona, Spain.
2012. "Flight Delays at RegionEx: A Case Study on Business Data Analysis," INFORMS Annual Meeting, Phoenix, Sponsored Session.
2012. "Senior Capstone Projects: A Taste of the Real World," INFORMS Annual Meeting, Phoenix, Sponsored Session.
2011. "A New Approach to Network Disruption," INFORMS Annual Meeting, Charlotte, Sponsored Session.
2011. "A Network Flow Approach to Terrorist Network Disruption", Joint Statistical Meetings, Miami, Invited session.

2011. "Senior Capstone Projects: A Taste of the Real World", International Federation of Operations Research Societies Conference, Melbourne, Australia, Invited session.
2011. "A Network Flow Approach to Terrorist Network Disruption", International Federation of Operations Research Societies Conference, Melbourne, Australia.
2010. "Disrupting Terrorist Networks", MAA Western Sectional Meeting.
2010. "A Network Flow Approach to Terrorist Network Disruption", INFORMS Annual Meeting, Austin.
2008. "Disrupting Terrorist Networks Using Network Flow Centrality", INFORMS Annual Meeting, Washington, D.C.
2008. "Constrained Defense Allocations for Multiple Targets", INFORMS Annual Meeting, Washington, D.C.
2008. "Incorporating OR Practice in an Intro Course", INFORMS Annual Meeting, Washington, D.C.
2007. "Mathematics Clinic Projects: A Capstone Experience for Students, An Exercise in Self-Restraint for Faculty", MathFest, San Jose.
2006. "Deterring the Determined: Quantitative Methods for the Deterrence of Terrorists", INFORMS Annual Meeting, Pittsburgh.
2005. "Some Issues in Airline Security: A Quantitative Perspective" Society for Risk Analysis Annual Meeting, Orlando.
2005. "Evaluating the Security and Efficiency of the Global Containerized Supply Chain: A Case Study of 100% Screening" INFORMS Annual Meeting, San Francisco.
2004. "Securing Baggage Holds: A Quantitative Analysis of Three Security Measures", INFORMS Annual Meeting, Denver.
2003. "Security Profiling of Airline Passengers: How Effective Would it Be?", INFORMS Annual Meeting Atlanta.

TEACHING EXPERIENCE

Harvey Mudd College

Deterministic Operations Research (2006, 2007, 2009, 2011, 2012, 2015, 2016, 2017, 2019 spring and fall, 2021, 2022, 2023, 2024)
Introduction to Statistics and Probability (2005, 2006, 2007, 2009, 2011, 2014, 2016, 2017, 2018, 2022, 2023-su, 2024, 2024-su)
Mathematical Modeling Seminar (2009, 2010, 2011, 2012)
Single and/or Multivariable Calculus (2013, 2014, 2015, 2016, 2019, 2021)
Linear Algebra I and II (2005, 2006, 2007, 2008, 2017 spring and summer, 2020)
Intermediate Probability (2009, 2013, 2020, 2022)
Stochastic Processes (2010, 2012, 2014, 2018, 2023, 2025)
Traffic and Transportation Engineering Lab (2012, 2013, 2014)
Statistical Linear Models (2006, 2008, 2018)
Discrete Mathematics (2019 spring and fall)
Advanced Topics in Operations Research (2010, 2012)
Design and Analysis of Experiments (2007, 2011)

Mathematics Forum (2009, 2014)

University of California – Irvine, Paul Merage School of Business
Management Science (2021)

Claremont Graduate University
Discrete Models, 2012, 2013

Massachusetts Institute of Technology
Engineering Probability and Statistics (Teaching Assistant, 2002, 2003)

U. S. Peace Corps
High School Mathematics (taught in French), Republic of Guinea, 1999-2001

Cornell University
Engineering Probability and Statistics (Teaching Assistant, 1998)
Java Programming (Tutor, 1997)

PROFESSIONAL EXPERIENCE

2020 – 2024, Owner, SMART-OR Analytics Consulting, LLC
2020 – 2021. *Consultant*, Private Sponsor.

- Developed and tested a large-scale mixed integer programming formulation that improves client profitability by as much as 16% over an in-house heuristic.
- Developed evolutionary heuristics to solve a large-scale combinatorial optimization problem.

2008. Contracted Participant*,* International Transport Forum Joint Transport Research Centre Round Table: "Security, Risk Perception and Cost Benefit Analysis", Dec. 10-11
2008. *Consultant*, Private Sponsor.
2005 – 2006. *Consultant*, **Homeland Security Institute**
2002 – 2005. Research Assistant, MIT Global Airline Industry Center.
2004 (Summer). Summer Associate*,* RAND Corporation.
1999 (Spring). Research Assistant*,* Cornell University.
1998 (Summer). Research Assistant*,* Cornell University.
1997 (Fall). Intern, Procter and Gamble (Management Systems), Global Category Management.

STUDENT RESEARCH SUPERVISION

2025. Yolanda Ba and Lizzie Rogers (Independent Study). Modeling the Propagation of Fake News on Social Media
2024-25. Max Collins (Senior Thesis), The Vitality Maximization Problem.
2024-25. Forrest Bicker, Tiger Che, Alex Martin Sahil Rane, Devon Tau, FedEx Clinic Project.

2023-24. Bella Jariel, Mathus Leungpathomaram, Kevin Phan, Julian Sanders, Abby Steele, FedEx Clinic Project

2023-24. Isaac Hershenson (Independent Study). Quantitative Analysis of High Pressing in Soccer

2022-23. Raffa Gonzalez, Jennifer Granados, Nathan Nabal, Shifa Somji, Andrew Yu, FedEx Clinic Project.

2022-23. Zooey Meznarich (Senior Thesis), Pediatric Vaccine Procurement for UNICEF/GAVI.

2022. Zooey Meznarich (Summer research), Pediatric Vaccine Procurement for UNICEF/GAVI.

2022. Amy Liu and Moe Sunami (Summer research), Modeling the Propagation of Fake News on Social Media

2021-22. Max Holloway (Senior Thesis), Mechanisms for the Efficient Hedging of Public Information Events

2022. Zooey Meznarich and Claire Chang (Independent Study), Pediatric Vaccine Procurement for UNICEF/GAVI

2022. Xintong Wang (Independent Study), VIMAX: The Vitality Maximization Problem

2022. Megan Li, Ruth Mekonnen, and Hannah Lu (Independent Study), Modeling the Propagation of Fake News on Social Media

2021. Megan Li and Sonia Bliss (Independent Study), Modeling the Propagation of Fake News on Social Media

2021. Jacob Waldor (Independent Study), VIMAX: The Vitality Maximization Problem

2021. Bhavana Bheem, Deyana Marsh (Independent Study), Modeling the Propagation of Fake News on Social Media

2020. Seth Isaacson and Abel Sapirstein (Summer research), Developing a large-scale mixed integer programming scheduling formulation

2019-20. Bhavana Bheem, Daniela Elizondo, Deyana Marsh, Steven Witkin (Summer research, Independent Study), Modeling the Propagation of Fake News on Social Media

2019-20. Sam Ness (Independent Study), Infrastructure Investments for Net Zero Emissions at Harvey Mudd College

2019. Sam Tan (Independent Study), Convex Optimization

2019. Ishaan Ghandi (Independent Study), Algorithmic Game Theory

2019. Michael Gao (Independent Study), Fake News Propagation

2018. Nathanial Diamant (Independent Study), Gaussian Processes.

2018. Martin Gonzalez, Michael Gao, Tyler Sam, Sam Tan (Independent Study), Statistical Learning Methods for Basketball Analytics

2018. Martin Gonzalez, Isys Johnson, Nicolas Oshiro (Summer research), Statistical Learning Methods for Basketball Analytics

2018. Martin Gonzalez, Will Meng, Cat Ngo, Tyler Sam (Independent Study), Statistical Learning Methods for Basketball Analytics

2018. Kayla Cummings (Senior Thesis in Math, Pomona), "Operations Research to Model Government Influence on Vaccine Prices." **First Place Recipient of the INFORMS Undergraduate OR Prize.**

2018. Lucius Bynum (Senior Thesis in Math), "From Partially Ranked Data to Fully Ranked Decisions: Prescriptive Analytics for Professional Basketball Data."

2018. Hamzah Khan (Senior Thesis in Math), "Using Reinforcement Learning to Evaluate Flexibility in Simple Temporal Networks with Uncertainty."
2017. Robert (Skipper) Gonzalez (Summer research), "Basketball Analytics".
2017. Kayla Cummings, Emily First, Dan McCabe, Veronica Rivera, Joe Sinopoli (Independent Study), Network Optimization.
2017. Kayla Cummings (Independent Study), Pediatric Vaccine Pricing.
2017. Yichen Lu (Senior Thesis in Math, Pomona), "Modeling the Vehicle Routing Problem in the Real World."
2017. Dina Sinclair (Senior Thesis in Math), "Game Theory Models for Pediatric Vaccine Pricing."
2017. SoCalGas Mathematics Clinic Team, "Evaluation and Optimization of SoCalGas Routing Planning and Algorithms."
2012 – 2015. Harry Dudley (Independent research) "Models for Preventing and Treating Malaria in Resource-Constrained Regions."
2015. PotaVida Global Clinic Team, "Creating a Low-Cost Turbidity-Sensitive Solution for Solar Disinfection of Drinking Water."
2014 (Summer). Harry Dudley, Cesar Orellana, Shanika Lazo, Abhishek Goenka, "Models for Preventing and Treating Malaria in Resource-Constrained Regions."
2014. NationBuilder Clinic Team, "Predictive Behavior Modeling for Community Organizing."
2014. Sam Gutekunst (Senior Thesis in Math), "Characterizing Network Disruption".
2013. E. & J. Gallo Winery Clinic Team, "Livingston Cooperage Optimization Model".
2013. Taryn Ohashi (Senior Thesis in Math), "Improving a Multiple-Timestep Optimization Model of Malarial Intervention Policy."
2012 (Summer). Taryn Ohashi, Katarina Hoeger, Tracey Luke, Tristan Williams, Flora Xu, "Preventing Malaria: A Multiple-Timestep Approach to Optimizing Intervention Policy."
2012. Alice Paul (Sr. Thesis in Math), "Detecting Covert Members of Terrorist Networks". **First Place Recipient of the INFORMS Undergraduate OR Prize.**
2011. Chandler May (Sr. Thesis in Math), "Verification of Solutions to the Sensor Location Problem."
2011. DYNAR Clinic Team, "Cooperative Autonomous Aquatic Vehicles: Mathematics and Robotics".
2010 (Summer). Liz Ferme, Kira Langsjoen, Danika Lindsay, Andrew Ronan, "Disrupting Terrorist Networks".
2010. Jacob Feldman (Sr. Thesis in Math), "Revenue Management: Optimizing a Restaurant's Reservation Scheduling".
2010. Yaniv Ovadia (Sr. Thesis in Math), "Reconstruction of Gomory-Hu Trees in Response to Vertex Deletion". **Honorable Mention for the INFORMS Undergraduate OR Prize**.
2009. Brett Cooper (Independent Study), "Disrupting Terrorist Networks".
2009 (Summer). Lee Wiyninger, David Zitter, "Disrupting Terrorist Networks", 2009.
2008. Robert Best, Annika Eberle, Dmitri Skjorshammer (Engineers for a Sustainable World foreign study project), "Alternative Agricultural Techniques in Koundara, Guinea", EPA P3 Award Grant Proposal.
2008, 2009. David Lapayowker (Independent Study), "Disrupting Terrorist Networks".
2008. WorldQuant Clinic Team, "Efficient Large-Order Stock Trading."

2008. David Morrison (Sr. Thesis in Math), "Characteristics of Optimal Solutions to the Sensor Location Problem".
2008. Katie Bayard (Sr. Thesis in Math, Pomona College), "A Markov Chain Analysis of Pitching Statistics."
2007 (Summer). Michael Ernst, Sean Plott, "Disrupting Terrorist Networks."
2007 (Summer). Tim Sweda, "Optimal Defense Allocations to Deter Terrorists."
2007. D4 Networks Clinic Team, "A Scheduling and Pricing Model for an Air Taxi Business."
2007. Eugene Quan (Sr. Thesis in Math), "Effective Cost Allocation for Deterrence of Terrorists."
2006 (Summer). Minal Shankar, "Assessing the Value of Information in Deterring Terrorists."
2006 (Summer). Daniel Walton "Optimal Defense Allocations to Deter Terrorists".
2006. Sean Fogarty (Sr. Thesis in Math/Bio), "Location, Location, Location: A Facility Location Approach to Territorial Patrol in the Eastern Collared Lizard (Crotaphytus collaris)."

SERVICE TO THE PROFESSION

2023 – 2026. Treasurer, INFORMS
2022 – present. Executive Advisory Board member, AI4OPT, Georgia Institute of Technology.
2022 – present. Co-editor, special issue of *INFORMS Transactions on Education*: Diversity, Equity, and Inclusion in the OR/MS Classroom
2022 – present. Senior editor, special issue of *Production and Operations Management* on diversity, equity and inclusion in supply chain and operations management.
2022. INFORMS Diversity, Equity, and Inclusion Ambassador for the project *To My Younger Self: A Mentoring Program for Women Doctoral Students*
2022 – 2023. Member of the INFORMS Ad Hoc Committee on Committee Diversity
2021 – 2022. Member of the INFORMS Finance Committee
2020 – 2022. Member of the INFORMS Diversity, Equity, and Inclusion Committee (Chair: 2020-21)
2016 – present. Editorial Board member for *INFORMS Transactions on Education*
2020 – 2021. Member of the Task Force on Diversity, Equity, and Inclusion for *Management Science*
2016 – 2019. Vice President for Membership and Professional Recognition, INFORMS
2018. External Reviewer, Program review at a liberal arts college mathematics department.
2015. Past-President, INFORMS Forum for Women in OR/MS.
2015. INFORMS Professional Recognition Committee.
2013 – 2015. MAA Morgan Prize Committee.
2011 – 2015. VP of Meetings, INFORMS Forum on Education.
2014 – 2015. Chair, INFORMS Academic Database Committee.
2014. President, INFORMS Forum for Women in OR/MS.
2013. President-Elect, INFORMS Forum for Women in OR/MS.
2011 – 2013. Committee Member and Chair (2012), INFORMS Doing Good with Good OR Prize Committee.
2008 – 2010, 2012, 2022. Invited Panelist, INFORMS Combined Colloquia.
2012. Member, MAA Course Area Study Group on OR Curriculum for the Committee on the Undergraduate Program in Mathematics.

2010-2011. Committee Member and Chair, INFORMS Undergraduate Research Prize Committee.
2009-2010. VP of Meetings (Jr. and Sr.), INFORMS Forum for Women in OR/MS.
2006 – present. Session Chair, INFORMS Annual Meeting (numerous times).
2005 – present. Journal Reviewer.
American Statistician
Annals of Operations Research
Discrete Applied Mathematics
European Journal of Operations Research
Humanistic Mathematics
IEEE Transactions on Intelligent Transportation Systems
IEEE Transactions on Systems, Man and Cybernetics, Part A
IIE Transactions
INFORMS Transactions on Education
Interfaces
Journal of Quantitative Analysis in Sports
Journal of Statistics Education
Malaria Journal
Management Science
Mathematical and Computer Modeling
National Science Foundation
OMEGA
Operations Research
Production and Operations Management
Risk Analysis
Rose Hulman Mathematics Journal
SIAM Review
Science
Socio-Economic Planning Sciences
Terrorism Research
The UMAP Journal (Undergraduate Mathematics and its Applications)
Wiley Publishing

SERVICE TO HARVEY MUDD COLLEGE

2022 – 2025. Chair of the Faculty (elected)
2024 – 2025. Engineering Department Manufacturing Faculty Search Committee
2024. Co-Chair, VP Academic Affairs and Dean of Faculty Search Committee
2024. VP Advancement Search Committee
2024. Strategic Planning Steering Committee
2023 – 2024. Presidential Inauguration Steering Committee
2021 – 2022. Ad hoc Reappointment, Promotion, and Tenure Review and Planning Team (RPT)^2
2021 – present. Faculty Executive Committee (elected)
2018 – 2020. Reappointment, Promotion and Tenure Committee (elected)

2018 – 2020. Claremont Colleges Data Science Working Group
2016 – 2019. Global Clinic Director.
2014 – 2018. Hixon Faculty Support Committee.
2016 – 2018. Faculty Executive Committee.
2017-2018. Co-chair, Math Department Search Committee
2009 – 2015. Faculty Executive Committee.
2010 – 2014. Mathematics Clinic Director.
2014 (Spring). Assessment and Accreditation Committee.
2012 – 2013. Associate Chair, Mathematics Department.
2011 – 2014. Mentor, Mudders Mentoring Mudders Program.
2009 – 2011. Global Clinic Advisory Board.
2009 – 2010. Operations Research, Statistics and Math Finance seminar series founder and organizer.
2009. Nelson Series planning committee.
2009 (Spring). Computing Committee.
2008 – 2009. Multicultural Ally Program.
2007 – present. Faculty and Department Chair search committees: numerous.
2007 – 2010. PI, "Harvey Mudd College Mathematics Conference Series", NSF- DMS-0713682 (Co-PI: M. Orrison). Organizer, 2007 Conference: "Public Sector Operations Research".
2007 – 2010. Faculty Advisor, Engineers for a Sustainable World student chapter.
2007 – 2008. Subcommittee on Improving Diversity through Faculty Hiring.
2007 – 2008. Core Coordinators Committee.
2006 – 2008. Incident Management Team.
2006 – 2008. Faculty-in-Residence, Sontag dormitory.
2006 – 2007. Strategic Planning "Looking Outside the Box" committee.

OUTREACH

2018. Speaker, "Fractals". Pathways Outreach Program (Stanton Elementary School, Glendora)
2016. Speaker, "Fractals". Pathways Outreach Program (Pepper Tree Elementary School, Upland)
2015. Speaker, "Who Wants To Be a Millionaire?" Pathways Outreach Program (Sierra Vista Elementary School, Upland).
2013. Career Panelist, AfterMath Conference.
2013. Speaker (three workshops) Pathways Outreach Program (Sierra Vista Elementary School, Upland).
2011, 2006. Speaker, "Some Probabilistic Conundrums". Pathways Outreach Program
2007. Speaker, "Making Decisions Using Math", Pathways Outreach Program.
2006-8, 2011-13. Workshop Presenter, "Making Decisions Using Math". SWE WEST Conference.
2006. Speaker, "Using Math to Prevent Terrorism", HMC Summer Institute.
2005. Speaker, "Some Probabilistic Conundrums". Los Angeles Professional Development and Outreach Group.

WORKSHOPS ATTENDED

2022. The Inclusive STEM Teaching Project online course.
2019. Project Kaleidoscope STEM Leadership Institute
2018 – 2019. Claremont Colleges Professional Development Peer Network
2018 – 2019. Claremont Colleges Leadership Development Program
2018 – 2019. Claremont Colleges Center for Teaching and Learning Active Learning Fellowship.
2018. MESCal Unconference on Diversity, Equity and Inclusion in the Mathematical Sciences.
2015 – 2016. Data Science Specialization, Johns Hopkins University online courses:
"The Data Scientists Toolbox"; "R Programming"; "Getting and Cleaning Data"; "Exploratory Data Analysis"; "Statistical Inference"; "Regression Models"; "Reproducible Research"; "Machine Learning"; "Developing Data Products".
2014. "Tackling the Challenges of Big Data", MIT Professional Education online course.
2009. "Advances in Count Data Regression", Southern California American Statistical Association Workshop in Applied Statistics.
2008. "OR Practice in Africa", Washington, D.C.
2007. "Teaching Effectiveness Colloquium", INFORMS Annual Meeting.
2007. "The Art of Teaching Mathematics", Harvey Mudd College, June 11-12, 2007.
2007. "Statistics Education for Undergraduate Students", University of California at Riverside.
2007. "Advances in Latent Variable Modeling", Southern California American Statistical Association Workshop in Applied Statistics.
2006. "Applied Longitudinal Analysis" Southern California American Statistical Association Workshop in Applied Statistics.

MEDIA COVERAGE

2022. KTLA5 Morning News, "Harvey Mudd College mathematician weighs in on Mark Kriski's lottery method". https://ktla.com/video/harvey-mudd-college-mathematician-weighs-in-on-mark-kriskis-lottery-method/7873140/
2011. WAMC Northeast Public Radio, Academic Minute, Dec. 21, 2011. Available online at http://www.publicbroadcasting.net/wamc/news.newsmain?action=article&ARTICLE_ID=1885870
2006. Gilden, J. "Pi in the sky: Math could help protect against terrorism", *LA Times*, Nov. 19, 2006, L3.

LANGUAGES
English: Native speaker
French: Proficient

PROFESSIONAL MEMBERSHIPS
Institute for Operations Research and Management Science (INFORMS)