

Anthony J. Bonifonte

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Education

Georgia Institute of Technology, Atlanta GA

Ph.D. in Operations Research, May 2017 (Expected)

- Minor in Undergraduate Education
- Advisor Dr. Turgay Ayer

M.S. in Operations Research, May 2015

Oberlin College, Oberlin OH

B.A. in Mathematics, May 2011

- Minor in Biology

Teaching Experience and Mentorship

Instructor, Industrial and Systems Engineering department, Georgia Tech

- ISyE 3039 Methods for Quality Improvement, Summer 2015, Summer 2016, Fall 2016
 - Summer 2015 Overall effectiveness survey question score 4.9 / 5.0
 - Summer 2016 Overall effectiveness survey question score 4.9 / 5.0
- ISyE 3770 Probability and Statistics with Applications, Spring 2015
 - Overall effectiveness survey question score 4.3 / 5.0

Teaching Assistant, Georgia Tech

- ISyE 6338 Supply Chain Strategy, Spring 2016
- ISyE 6339 Supply Chain Information Systems, Spring 2016
- ISyE 6333 Operations Research for Supply Chain Engineering 1, Fall 2015
- ISyE 3103 Supply Chain Logistics, Spring 2013
- ISyE 6669 Deterministic Optimization, Fall 2012
- ISyE 3104 Manufacturing and Warehousing, Summer 2012
- ISyE 2027 Introduction to Probability with Applications, Spring 2012

Mentees, Georgia Tech. Served as primary mentor, meeting 1 hour per week

- Ije Okafor, Summer 2016. SURE program
- Simon Chow, Spring 2013 – Spring 2015
 - Won President's Undergraduate Research Award in Spring 2015
 - Currently pursuing Ph.D. in statistics at Georgia Tech
- Haeun (Ashley) Park, Summer 2014
- Allison Clark, Summer 2012. SURE program

TA Fellow, Georgia Tech, 2014-2016

- Led campus wide training sessions for teaching assistants on effective teaching practices and legal and administrative procedures. Promoted to senior TA fellow in summer of 2015

Guest Lecturer, Georgia Tech

- ISyE 3104 Manufacturing and Warehousing, Summer 2012
- ISyE 2027 Introduction to Probability with Applications, Spring 2013

ExCo Instructor Oberlin College 2008-2011

Created, designed, and taught 1 credit courses

- Philosophy of Calvin and Hobbes - examined social relevance of the strip, implications of comics as an art medium, and imbedded symbolism
- History of Piracy - Explored societal perceptions of 17th century piracy and its reconciliation with the romanticized views of today

Research Interests and Publications

Cardiovascular Disease Modeling Georgia Tech and Emory University, Fall 2011-present

- Used tools from probability, statistics, optimization, and simulation to build risk prediction models of cardiovascular disease, create population optimal policies for hypertension treatment, and develop Bayesian methods of personalizing treatment decisions

Hepatitis C Management in Prisons Georgia Tech and Emory University, Spring 2012- present

- Developed data-driven stochastic model of Hepatitis C progression. Optimized treatment prioritization decisions to maximize societal welfare

STEM Education Georgia Tech, Summer 2013 – present

- Developed and tested classroom game for teaching design of experiments and robust surface methodology
- Worked with the Center for the Enhancement of Teaching and Learning on effective rubric design

Oberlin Police Department Dec 2009-June 2011

- Analyzed crime data, summarized findings, and made staffing and patrol recommendations

Invasion Ecology Biology Department, Oberlin College, 2009- 2011, with Dr. Angie Roles

- Investigated invasion biology by designing and statistically analyzing experiments to examine invasive and native crayfish populations in Northeast Ohio

Publications

1. **A. Bonifonte**, T. Ayer, E. Veledar, A. Clark, & P.W. Wilson, "Antecedent blood pressure as a predictor of cardiovascular disease", *Journal of the American Society of Hypertension* (2015) 9(9): 690-696.
2. J. Norback, T. Utschig, **A. Bonifonte**, & G. Ross, "Final results of reliability testing for the Norback-Utschig Presentation Scoring System and implications for instruction", paper presented at 2014 ASEE Annual Conference, Indianapolis, Indiana.
<https://peer.asee.org/20496>
3. **A. Bonifonte**, T. Ayer, B. Haaland, & P.W. Wilson, "Analytics in blood pressure management and control: from data to decisions", to be submitted to *Operations Research* November 2016 (scheduled).
4. T. Ayer, **A. Bonifonte**, C. Zhang, (co-first authors), A. Spaulding, & J. Chhatwal, "Prioritizing hepatitis C treatment in U.S. prisons", Submitted to *Operations Research* September 2016 (under review).
5. **A. Bonifonte**, "An interactive spreadsheet game for teaching design of experiments and response surface methodology" Submitted to *Informations Transactions on Education* September 2016 (under review).

Conference Presentations

1. **A. Bonifonte**, T. Ayer, B. Haaland, P. Wilson, "A stochastic model of blood pressure progression", Joint Math Meetings, January 4-7, 2017 (scheduled).
2. T. Ayer, C. Zhang, **A. Bonifonte**, A. Spaulding, J. Chhatwal, "Prioritizing hepatitis C treatment in United States prisons", INFORMS Conference, Nov 13-16, 2016 (scheduled).
3. **A. Bonifonte**, "An interactive spreadsheet based game for teaching design of experiments and response surface methodology", INFORMS Conference, Nov 13-16, 2016 (scheduled).
4. **A. Bonifonte**, T. Ayer, B. Haaland, P. Wilson, "A continuous time stochastic model to optimize blood pressure treatment decisions", INFORMS Conference, Nov 13-16, 2016 (scheduled).
5. **A. Bonifonte**, T. Ayer, B. Haaland, P. Wilson, "An analytics approach to hypertension management", Health Systems: The Next Generation, September 16, 2016.
6. C. Zhang, T. Ayer, **A. Bonifonte**, J. Chhatwal, A. Spaulding, "Prioritizing Hepatitis C Treatment in United States Prisons", INFORMS Conference, Nov 1-4 2015.
7. **A. Bonifonte**, T. Ayer, E. Veledar, A. Clarke, P. Wilson, "Role and importance of antecedent blood pressure in predicting outcomes in cardiovascular disease," High Blood Pressure Research Conference, September 9-12, 2014.
- J. Norback, T. Utschig, **A. Bonifonte**, & G. Ross, "Final Results of Reliability testing for the Norback-Utschig Presentation Scoring System", ASEE, June 15-18, 2014.
8. **A. Bonifonte**, A. Roles, "The ecological effects of invasive crayfish *O. rusticus*", Oberlin College Senior Symposium, April 29 2011.
9. **A. Bonifonte**, A. Roles, "The effects of invasive crayfish *O. rusticus* on aquatic biodiversity", Midwest Ecology and Evolution Conference, April 1-3, 2011.
10. **A. Bonifonte**, A. Roles, "The ecological effects of invasive crayfish *O. rusticus* in northeast Ohio", Ohio Foundation of Independent Colleges Undergraduate Research Symposium, February 16, 2011.

Honors, Awards, and Fellowships

Pierskalla Award Finalist, INFORMS Organization, 2016

- Nominated as finalist for paper "Prioritizing hepatitis C treatment in U.S. prisons". Winner to be determined Annual INFORMS conference. Awarded to recognize excellence in health care management science.

Outstanding Graduate Student Instructor Award Winner, Center for the Enhancement of Teaching and Learning, Georgia Tech, 2016

- Selected as winner from ~400 candidates and 7 finalists

Outstanding Graduate Student Instructor Award Winner, Industrial and Systems Engineering Department, Georgia Tech, 2016

Advanced Teaching Certificate: Center for Enhancement of Teaching and Learning, Georgia Tech, 2015

- Awarded for completing 4 courses in undergraduate instruction, covering teaching pedagogies, course design, assessment strategies, and teaching practicum.

George Fellowship Health Systems Institute, Georgia Tech and Emory University, 2013

- Awarded for academic strength, capacity for leadership, and commitment to Health Systems research

High Honors in Mathematics: Oberlin Math Department, 2010-2011, with Dr. Robert Bosch

- Year-long study of Pure and Applied Convex Optimization. Focused study in optimal factory floor planning

The Orr Prize Math Department, Oberlin College, 2011

- Granted to one graduating student displaying outstanding achievement in math

Spirit of the BCSL Award, Bonner Center for Service and Learning, Oberlin College, 2011

- Awarded to one student each year who exemplifies the mission and goals of the Bonner Center through community service

Engaged Community Partner Award, Bonner Center, Oberlin College, 2011

- Presented for creating new College-Community relationships

William Putnam Math Competition Oberlin College, 2008-2010

- 2010- Selected to be 1 of 3 students representing Oberlin College

Service

Georgia Tech Undergraduate Research Office Fall 2011-present

- Reviewed applications for President's Undergraduate Research Awards (PURA) and made recommendations on which to fund
- Judged undergraduate research poster sessions

Atlanta Science Fest Spring 2014 - present

- Volunteered for STEM promotion and outreach at Atlanta area schools
- Completed visits with 6 schools

Ad hoc Referee Spring 2013 - present

- Management Science, Operations Research, Production and Operations Management Society, Manufacturing and Service Operations Management

Georgia Tech Center for Education Integrating Science, Mathematics, and Computing Summer 2012

- Assisted Rockdale County public school system in addressing Georgia State Standards of Education. Gave presentations to high school teachers regarding novel ways of presenting math and biology concepts to students

Oberlin College Bonner Scholars Program Oberlin College, 2009-2011

- Engaged in tutoring high school students at The Bridge in downtown Oberlin
- Co-created Spring Into Service, a program inviting students campus wide to participate in volunteering for local nonprofit organizations in the spring
- Advised Oberlin school district administrator on optimal bus routes and created TSP heuristic to solve the problem