

Julia Gaudio
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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA *2016-present*

- PhD student at the Operations Research Center (GPA 5.0/5.0)
- Affiliated with MIT LIDS (Laboratory for Information and Decision Systems)
- Microsoft Research PhD Fellow
- Advised by Patrick Jaillet and David Gamarnik
- Research interests: Applied probability, statistics, optimization

Brown University, Providence, RI *2015-2016*

- ScM Computer Science (GPA 3.88/4.0)
- Thesis title: Algorithms for Large-Scale Prescriptive Evacuations (Advisor: Pascal Van Hentenryck)
- GPA: 3.88/4.0

Brown University, Providence, RI *2012-2016*

- ScB Applied Mathematics, Magna Cum Laude (GPA 3.94/4.0)

University of Toronto Schools (UTS), Toronto, Canada *2006-2012*

RESEARCH EXPERIENCE

Microsoft Research Redmond, Washington

Summer 2018

I developed an optimization framework for real-time workplace shuttle optimization, working with Ishai Menache, Luke Marshall, and Ece Kamar.

Google, Mountain View, California

Summer 2016

During my internship with the Speech Team (Google Research and Machine Intelligence), I implemented algorithms based on ICA (Independent Component Analysis) for separation of mixed speech in reverberant environments.

National Information and Communications Technology Australia, Canberra, Australia

Summer 2015

I improved NICTA's evacuation planning algorithms, working with Professor Pascal Van Hentenryck. My contribution led to a substantial increase in the number of people who could be successfully evacuated in the event of a major flood, and led to two conference publications in AAAI. Additionally, we have submitted two corresponding US Patent applications.

Imperial College London, London, UK

Summer 2014

I worked in Dr. Fang Xie's laboratory to synthesize nanoparticles for biosensing applications.

Women's College Research Institute, Toronto, Ontario

Summer 2013

I created thematic maps using census data to explore geographic trends in population longevity.

PUBLICATIONS

J. Gaudio. Attracting Random Walks. arXiv:1903.00427 (Submitted to the *Annals of Applied Probability*)

- J. Gaudio**, S. Amin, and P. Jaillet. Exponential Convergence Rates for Stochastically Ordered Markov Processes with Random Initial Conditions. arXiv:1810.07732. (Submitted to *Systems and Control Letters*.)
- J. Romanski**. Algorithms for Large-Scale Prescriptive Evacuations. 2016. Master's thesis, Brown University.
- J. Romanski** and P. Van Hentenryck. Benders Decomposition for Large-Scale Prescriptive Evacuations. 2016. *Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16)*, Phoenix, AZ.
- K. Kumar, **J. Romanski**, and P. Van Hentenryck. Optimizing Infrastructure Enhancements for Evacuation Planning. 2016. *Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16)*, Phoenix, AZ.
- J. Romanski**, W. Wu, P.J. Anderson; P.C. Austin, and P.A. Rochon. Visualising the distribution of individuals of advanced age in Canada: linking census data to maps. 2015. *Age and Ageing*.

CONFERENCE PRESENTATIONS

- J. Romanski**, S. Amin, and P. Jaillet. Exponential Convergence Rates for Stochastically Ordered Markov Processes with Random Initial Conditions. 2017. *INFORMS Annual Meeting*. Houston, TX.
- J. Romanski**, S. Amin, and P. Jaillet. Exponential Convergence Rates for Stochastically Ordered Markov Processes with Random Initial Conditions. 2017. *Stochastic Processes and their Applications (SPA)*, Moscow, Russia.
- J. Romanski** and P. Van Hentenryck. Optimizing Infrastructure Enhancements for Evacuation Planning. 2016. *Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16)*, Phoenix, AZ.

TALKS

Attracting Random Walks. Northeast Probability Seminar, held at the Courant Institute, NYU (2018).

AWARDS AND HONORS

- 2018 Microsoft Research PhD Fellowship
- Rohn Truell Prize for Undergraduate Excellence, Brown University Division of Applied Mathematics (2016)
- Winner, Brown University Computer Science Symposium (2016)
- Associate member of Sigma Xi Scientific Research Honor Society (2016)
- Honorable mention in the Mathematical Contest in Modeling (2016)
- Phi Beta Kappa honor society (2015)
- Shoman Scholarship, Brown University, for international students with the highest GPAs (2015)

COMMUNITY SERVICE AND LEADERSHIP

- Co-organized the 2019 LIDS Student Conference
- LIDS Social Committee (2017-2018)
- President, MIT chapter of INFORMS (2016-2017)
- Participant, INFORMS Student Leadership Conference (2017)
- Program coordinator for STEMS, a math and science tutoring program based at Brown University and operating at a local high school (2015-2016)
- In-class and after school math tutor for STEMS (2013-2016)
- Peer advisor at Brown University (2014-2016)

Technical skills: Java, C#, Python, MATLAB, Gurobi, LaTeX