

# Daniel E. Rigobon

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## CONTACT INFORMATION

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## EDUCATION

### **Princeton University, Princeton, NJ**

Candidate for Ph.D. in ORFE, 2018-Present

- Relevant Coursework: Probability in High Dimensions, Stochastic Calculus, PDE Methods for Financial Mathematics.
- Research Interests: Network Identification, Dynamical Networked Systems, Network Control and Optimization, Systemic Risk.
- Cumulative GPA: 3.97

### **Massachusetts Institute of Technology, Cambridge, MA**

B.S. Mechanical Engineering, June 2018

- Minors in Economics, Statistics
- Thesis: *Models of Entrainment of Human Walking*
- Cumulative GPA: 4.8

### **Weston High School, Weston, MA**

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## EDUCATION EXPERIENCE

### **Princeton University**

TA for ORF526 (Probability Theory)	Fall 2019, 2021
TA for ORF387 (Networks)	Spring 2020, 2022
TA for ORF455 (Energy and Commodity Markets)	Fall 2020
TA for ORF473 (Fintech and Data Driven Innovation)	Spring 2021
Senior Thesis Writing Group	Fall 2019 - Spring 2022

### **Garden State Youth Correctional Facility**

Teacher for COMP102 (Computer Literacy)	Fall 2021
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## RESEARCH EXPERIENCE

### **Princeton University**

Ph.D. Student	2018 - Present
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- Studying the optimization of network structures to drive consensus-forming.
- Studying models of systemic risk propagation in financial networks.
- Proposing a novel Network Identification project to estimate networked systems.

### **Fields Institute: Focus Program on Systemic Recovery**

PhD Participant	April 2021
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- Designed a webscraping pipeline to detect business entry and exits in Canada using Google Places API.
- Highlighted the tradeoff between efficiency and resilience of socioeconomic systems through Macroeconomic Agent-Based Models.
- Presented results at Fields' Symposium for Systemic Recovery.

### **State Street Associates**

Portfolio Risk and Research Intern	Summer 2020
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- Studied the relationship between centrality of global financial institutions and volatility.
- Communicated findings to clients through monthly newsletters and short research summaries.
- Contributed to new group mentorship and sponsorship programs in State Street's Global Markets Division.

### MIT Media Lab

Research Assistant in 'Human Dynamics' 2017 - 2018

- Analyzed network game data in Python to study effects of social influence.
- Participated in the 'Fragile Families Challenge' of predicting out-of-sample outcomes from social science data using machine learning and data science methods.
- Trained Convolutional Neural Nets on Satellite Imagery to improve targeting of conditional cash transfer programs in Mexico City.

### Newman Biomechanics Laboratory

Undergraduate Research Assistant 2016 - 2018

- Developed an energy-based controller to replicate experimental entrainment behavior in human walking.
- Submitted findings for publication and presentation at ASME DSCC 2017.

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### HONORS AND AWARDS

President's Fellowship, Princeton University; 2018

John C. and Elizabeth J. Chato Award, MIT; 2018

Member of Pi Tau Sigma, MIT; 2017-2018

AMP Inc. Award, MIT; 2016

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### WORKING PAPERS

T. Duprey, D.E. Rigobon, et al.; *Business Closures and (Re) Openings in Real Time Using Google Places*; Bank of Canada; 2022.

M. Rácz, D.E. Rigobon; *Towards Consensus: Reducing Polarization by Rewiring Social Networks*; arXiv:2206.08996 ; 2022.

### PEER-REVIEWED PUBLICATIONS

D. Rigobon, T. Duprey, A. Kotlicki, P. Schnattinger, S. Baharian, T. R. Hurd; *Business Closures and (Re) Openings in Real-Time Using Google Places: Proof of Concept*; Journal of Risk and Financial Management; 2022.

B. Jiang, D. Rigobon, R. Rigobon; *From "Just in Time" to "Just in Case": Simple Models of Global Supply Chains and Aggregate Shocks*; IMF Economic Review; 2021.

M. Salganik et al.; *Measuring the Predictability of Life Outcomes with a Scientific Mass Collaboration*; Proceedings of the National Academy of Sciences; 2020.

D. Rigobon, E. Jahani, Y. Suhara, K. AlGhoneim, A. Alghunaim, A. Pentland, A. Almaatouq; *Winning Models for GPA, Grit, and Layoff in the Fragile Families Challenge*; Socius: Sociological Research for a Dynamic World; 2019.

D. Rigobon; *Models of Entrainment of Human Walking*; MIT Thesis; 2018.

D. Rigobon, J. Lee, N. Hogan; *Effect of Stochastic Parameter Variation on Entrainment Behavior of a Stable Ankle-Actuated Walking Model*; MIT Undergraduate Research Journal; 2017.

D. Rigobon, J. Ochoa, N. Hogan; *Entrainment of Ankle-Actuated Walking Model to Periodic Perturbations via Leading Leg Angle Control*; ASME Dynamics Systems and Controls Conference; 2017.

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PRESENTATIONS *Towards Consensus: Reducing Polarization by Rewiring Social Networks*, PICSciE Graduate Colloquium. (April 2022)

*Entrainment of Ankle-Actuated Mechanical Walker*, ASME DSCC. (October 2017)

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PROGRAMMING  
LANGUAGES Fluent in: Python, R, L<sup>A</sup>T<sub>E</sub>X, MATLAB, HTML, CSS  
Familiar with: Java, JavaScript, C++

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REFERENCES **Prof. Miklós Racz**, Assistant Professor, ORFE, Princeton University, [mracz@princeton.edu](mailto:mracz@princeton.edu)

**Prof. Ronnie Sircar**, Eugene Higgins Professor, ORFE, Princeton University, [sircar@princeton.edu](mailto:sircar@princeton.edu)

**Prof. Mykhaylo Shkolnikov**, Associate Professor, ORFE, Princeton University, [mykhaylo@princeton.edu](mailto:mykhaylo@princeton.edu)

**Prof. Alex Pentland**, Toshiba Professor of Media Arts and Sciences, MIT, [sandy@media.mit.edu](mailto:sandy@media.mit.edu)

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LANGUAGES AND  
HOBBIES Fluent in Spanish and English; Proficient in French.  
Interested in Ceramics, Music, Cooking, and Reading.