

Robert Ward

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Education

- Ph.D. *Georgia Institute of Technology*, School of Public Policy, *expected 2024*
Dissertation: Essays on the Organization of Science and Innovation
Committee: John P. Walsh (chair), Cassidy R. Sugimoto, Marc Santolini,
Alex Oettl, and Gordon Kingsley
- M.S. *Georgia Institute of Technology*, Computer Science, 2021 –
- M.P.A. *The Ohio State University*, John Glenn College of Public Affairs, 2019
- B.S. *The Ohio State University*, Molecular Genetics, 2017

Positions

- 2022 - *Stanford University*
Visiting Student Researcher
Megan Palmer and Drew Endy, Department of Bioengineering
- 2022 - *Georgia Institute of Technology*
Graduate Research Assistant
John P. Walsh and Cassidy Sugimoto, School of Public Policy
- 2019 - *Learning Planet Institute (INSERM-Université Paris Cité)*
Visiting Student Researcher
Marc Santolini, Interaction Data Lab
- 2019 - 22 *Georgia Institute of Technology*
Graduate Research Assistant
Jan Youtie and Philip Shapira, School of Public Policy
- 2018 - 19 *The Ohio State University*
Graduate Research Associate
Battelle Center for Science, Engineering, and Public Policy
- 2014 - 16 *The Ohio State University*
Undergraduate Research Assistant
Jay B. Hollick, Department of Molecular Genetics

Research Interests

Organizations (*Formal and Informal Structure, Self-Organization, Controllability, Innovation*);
Social and Information Networks; Science of Science and Innovation; Computation (*Machine Learning, Natural Language Processing, Simulation*).

Papers

In Print

- 2022 Chakresh Singh, Emma Barme, **Robert Ward**, Liubova Tupikina and Marc Santolini. *Quantifying the rise and fall of scientific fields*. PLoS ONE.
Press coverage in *Le Monde*
- 2021 Jan Youtie, **Robert Ward**, Philip Shapira, R. Sandra Schillo & E. Louise Earl. *Exploring new approaches to understanding innovation ecosystems*. Technology Analysis & Strategic Management.
- 2021 Jan Youtie, **Robert Ward**, Philip Shapira, Alan Porter, Nils Newman. *Corporate engagement with nanotechnology through research publications*. Journal of Nanoparticle Research.
- 2021 Zhang, Yi, Mengjia Wu, Zhengyin Hu, **Robert Ward**, Xue Zhang, Alan Porter *Profiling and predicting the problem-solving patterns in China's research systems*. Quantitative Science Studies. 10.1162/qss_a_00100

In Production

‡Equal contributions.

- i. **Robert Ward**. *Interdisciplinarity and Reception* (preparing for submission)
- ii. Marc Santolini, Megan J. Palmer, Leo Blondel, **Robert Ward**, Rathin Jerayam, Abhijeet Krishna and Albert-Laszlo Barabasi. *iGEM: A Model System for Team Science and Innovation* (preparing for submission)
- iii. **Robert Ward** and Marc Santolini. *Design of Network Interventions* (analysis)
- iv. **Robert Ward**, Rathin Jeyaram and Marc Santolini. *Peer and Structural Effects on Innovation* (analysis)
- v. ‡ **Robert Ward**, Christopher Esposito, Jamshid Sourati, Fengli Xu, James Evans *Collaboration and Integration* (data preparation)
- vi. **Robert Ward** and Marc Santolini. *Endogenous Division of Labor in Teams* (data collection)
- vi. **Robert Ward**, Seokkyun Woo and Cassidy Sugimoto *Novel Science, Status and the Burden of Evidence* — (data collection)
- vii. **Robert Ward** *Recruitment in the Presence of Peer Effects* (design)

Talks

- 2023 Invited Talk, Knowledge Lab Seminar, *University of Chicago*
- 2022 Invited Talk, C-EENRG, *University of Cambridge*
- 2022 Invited Talk, Center for the Science of Science and Innovation, *Northwestern University*
- 2022 Invited Talk, Knowledge Lab Seminar, *University of Chicago*

- 2022 *1st International Conference on the Science of Science and Innovation (ICSSI).*
Jun 6-9, National Academies of Sciences, Washington DC
- 2022 Invited Talk, Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*
- 2022 *Association for Public Policy and Management (APPAM) Fall Research Conference.*
Mar 27-29 (Online).
- 2021 Invited Talk, Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*
- 2021 *6th Summer School on Data and Algorithms for Science, Technology & Innovation Studies.* Aristotle University of Thessaloniki-KU Leuven, Sep 22-24 (Online)
- 2020 *10th Global TechMining Conference.* Nov 11–13, Atlanta, Georgia.

Workshops and Summer Schools

- 2023 *Santa Fe Institute*, Graduate Workshop on Computational Social Science, June 18-30
- 2022 Atlanta Academy on Science and Innovation Policy, School of Public Policy, *Georgia Institute of Technology*. March 21-25.
- 2021 Society of Young Network Scientists (SYNS) Networks 2021 Pre-Conference Workshop. Jun 26 (Online).
- 2021 Science of Science Summer School, iSchool, *Syracuse University*.
Jul 26-Aug 8 (Online)

Funding and Awards

- 2023 Outstanding Doctoral Student Award
School of Public Policy, Georgia Institute of Technology
- 2023 Travel (\$2,875)
School of Public Policy, Georgia Institute of Technology
- 2023 The Endogenous Division of Labor (\$2,480)
Ivan Allen College SODA Grant, Georgia Institute of Technology
- 2022 Travel (\$3,956)
School of Public Policy, Georgia Institute of Technology
- 2022 iGEM Team Interaction Study (\$6,000)
Google and University of Vermont OCEAN Program
- 2022-24 Quantitative assessment of open collaborations in science and engineering (€6,000)
Subaward from French National Research Agency AAPG2021. PI: Marc Santolini
- 2021-22 S4 Fellowship (\$2,000)
Shared with Alec McGail and Aaron Mendon-Plasek.
- 2021 Travel (€1,000)
To attend Summer School on Data and Algorithms for Science, Technology & Innovation Studies, Google / KU Leuven, Declined due to COVID-19

2019-23 President's Fellowship (\$22,000)
Georgia Institute of Technology

Teaching

- 2022 Guest Lecture on Causal Inference and Interventions in Networks, Network Science / Complex Systems Physics Seminar, *Skolkovo Institute of Science and Technology*, Nov 10 (Online).
- 2022 Instructor for Computing Bootcamp, School of Public Policy, *Georgia Institute of Technology*
- 2019 Co-Instructor for International Genetically Engineered Machines Competition Team, *The Ohio State University*

Service

Organizer

- 2023 Volunteer Coordinator *Atlanta Conference on Science and Innovation Policy* May 27. Georgia Institute of Technology, Atlanta, Georgia.
- 2022 *Workshop on the Organization of Science*. Oct 25. LPI, Paris, France.
- 2021 *NetOpen21: Modeling open innovation communities with network science*. Satellite at Networks 2021: A Joint Sunbelt and NetSci Conference. Co-organizer with Marc Santolini, Liubov Tupikina and Juniper Lovato. Jun 30 (Online).
interactiondatalab.com/netopen21

Reviewer

- 2019 - Research Policy
- 2019 IEEE Transactions in Engineering Management

Consulting and Other Projects

Georgia Institute of Technology STIP

- 2021 - 22 *Mass Customizable and On-demand Integrated Circuits*. PIs: Michael Filler and Eric Vogel
- 2020 - 21 *Technology Forecasting*. United States Army Research Lab
- 2020 *Corporate Entry into Nanotechnology*. NSF Subcommittee on Nanoscale Science, Engineering and Technology (NSET)
- 2020 - 22 *Social Network Analysis*. Southeastern Nanotechnology Infrastructure Corridor (SENIC) Georgia Tech / NSF

- 2019 *Scientific Impacts of the Georgia Sea Grant*. University of Georgia Marine Extension and Georgia Sea Grant
- 2019 *Social Network Analysis*. Georgia Institute of Technology Center for Space Technology and Research (CSTEP).

The Ohio State University, Battelle Center for Science Technology and Public Policy

- 2019 *Improving the Cybersecurity and Cost Effectiveness of USAF Industrial Control Systems*. United States Air Force Installation Contracting Agency (AFICA/KA).

Professional Affiliations

American Association for the Advancement of Science (AAAS)
Society of Young Network Scientists (SYNS)