

Robert Ward

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Education

- Ph.D. Public Policy, *Georgia Institute of Technology*, 2019–present
 Advised by Cassidy R. Sugimoto and John P. Walsh
 Visitor at *Université Paris Cité*, May-Aug and Oct-Dec 2022
 Visitor at *Stanford University*, Oct 2022
- M.S. Computer Science, *Georgia Institute of Technology*, 2021–present
- M.P.A. John Glenn College of Public Affairs, *The Ohio State University*, 2019
- B.S. Molecular Genetics, *The Ohio State University*, 2017

Positions

- 2023 *Chateau du Fej*
 Scholar in Residence
- 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, School of Public Policy
- 2022 *Georgia Institute of Technology*
 Graduate Research Assistant
 Cassidy R. Sugimoto, School of Public Policy
- 2019– *LPI (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

Interests

Organizations (*Self-Organization, Controllability, Innovation, Learning*), Social and Information Networks, Science of Science, Computational Methods.

Publications

In Print

- 2022 Chakresh Singh, Emma Barme, Robert Ward, Liubova Tupikina and Marc Santolini. “Quantifying the rise and fall of scientific fields”, *PLoS ONE*. 10.1371/journal.pone.0270131
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*. 10.1080/09537325.2021.1972965
- 2021 Jan Youtie, Robert Ward, Philip Shapira, Alan Porter, Nils Newman. “Corporate engagement with nanotechnology through research publications”, *Journal of Nanoparticle Research*. 10.1007/s11051-021-05195-4
- 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: A methodology of intelligent bibliometrics and empirical insights”, *Quantitative Science Studies*. 10.1162/qss_a_00100

In Progress

- “iGEM: A Model System for Team Science and Innovation”
with Marc Santolini, Megan J. Palmer, Leo Blondel, Rathin Jerayam, Abhijeet Krishna and Albert-Laszlo Barabasi.
- “Interdisciplinarity and Reception”
- “Unintended Consequences in Network Interventions”
with Marc Santolini and Rathin Jeyaram.
- “Endogeneous Division of Labor in Teams”
with Marc Santolini
- “Knowledge Integration in Dispersed Teams”
with Christopher Esposito, Tara Sowrirajan and Fengli Xu
- “Novel Science, Status and the Burden of Evidence”
with Seokkyun Woo and Cassidy R. Sugimoto

Conferences

Presentations

Presenting author *italicized*, if other.

- 2022 Robert Ward “Disciplinary Integration and Evaluation”. 1st International Conference on the Science of Science and Innovation (ICSSI). Washington DC. Jun 6-9.
- 2022 Robert Ward, Jan Youtie, Philip Shapira. “Networks, Knowledge and Search Speed: Evidence from Covid-19 Drug Development”. Association for Public Policy and Management (APPAM) Fall Research Conference. Mar 27-29. *Virtual*
- 2022 *Chakresh Kumar Singh*, Emma Barme, Robert Ward, Liubov Tupikina and Marc Santolini. “Quantifying the exploration vs exploitation of scientific fields using the arXiv field-tags co-occurrence network”. NetSci-X 2022. Porto, Portugal. Feb 8-11.
- 2021 Robert Ward, Gaurav Verma, Seokkyun Woo. “The Paradox of Integration: Interdisciplinary Research and Disciplinary Evaluation” 6th Summer School on Data and Algorithms for Science, Technology & Innovation Studies. Aristotle University of Thessaloniki-KU Leuven, Sep 22-24, *Virtual*.
- 2020 Robert Ward, Jan Youtie, Philip Shapira. “The Search for Clinical Solutions.” 10th Global TechMining Conference. Nov 11–13 *Virtual*.

Workshops and Sessions Organized

- 2022 Workshop on the Organization of Science. Oct 25. Learning Planet Institute, 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 *Virtual*. interactiondatalab.com/netopen21

Invited Talks

- 2022 C-EENRG, *University of Cambridge*; Center for the Science of Science and Innovation, *Northwestern University*; Knowledge Lab, *University of Chicago*; Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*.
- 2021 Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*

Workshops and Summer Schools

- 2022 Atlanta Academy on Science and Innovation Policy, School of Public Policy, Georgia Institute of Technology. March 21-25, 2022, Atlanta, GA.
- 2021 Society of Young Network Scientists (SYNS) Networks 2021 Pre-Conference Workshop. Jun 26 *Virtual*.
- 2021 Science of Science Summer School, iSchool, Syracuse University. Jul 26-Aug 8 *Virtual*.

Grants and Awards

\$3,000	Residency Chateau du Feÿ 2023
\$3,956	Travel Support Georgia Institute of Technology, School of Public Policy 2022
\$6,000	iGEM Team Interaction Study Google and University of Vermont: Open Source Complex Ecosystems and Networks (OCEAN) Program 2022
€6,000	"Quantitative assessment of open collaborations in science and engineering" Subaward from French National Research Agency (ANR): AAPG2021 PI: Marc Santolini 2022-24
\$2,000	S4 Fellowship Joint with Alec McGail and Aaron Mendon-Plasek Subaward from from NSF #1933675 for the project "Science in Motion" 2021-22
€1,000	Travel Grant to attend "Summer School on Data and Algorithms for Science, Technology & Innovation Studies" Google / KU Leuven 2021 — Declined due to COVID-19
\$22,000	President's Fellowship Georgia Institute of Technology 2019-23

Teaching

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

Service

Journal Peer Review

2019–	Research Policy
2019	IEEE TEM

General

2020	Contributor to <i>OpenCovid19</i> , Just One Giant Lab (JOGL)
2019	Member of Judging Committee, International Genetically Engineered Machine Competition (iGEM)

Consulting and Other Projects

Georgia Tech STIP

2021-22	Mass Customizable and On-demand Integrated Circuits Georgia Tech project with PIs: Michael Filler and Eric Vogel
2020-21	Technology Forecasting for US Army Research Lab

- 2020 Corporate Entry into Nanotechnology for NSF Subcommittee on Nanoscale Science, Engineering and Technology (NSET)
- 2020-22 Social Network Analysis for Southeastern Nanotechnology Infrastructure Corridor (SENIC) Georgia Tech / NSF
- 2019 Scientific Impacts of the Georgia Sea Grant for UGA Marine Extension and Georgia Sea Grant
- 2019 Social Network Analysis for Georgia Tech Center for Space Technology and Research (CSTEP)

Battelle Center for Science, Engineering and Public Policy

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

Professional Affiliations

American Association for the Advancement of Science (AAAS)

Society of Young Network Scientists (SYNS)

Current to January 2023