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
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

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–	*CRI Paris/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, Science, Technology and Innovation 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

Computational social science; organization theory; networks; natural language processing, machine learning; science, technology and innovation

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

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

1.   "Interdisciplinarity and Reception"

2.   "Knowledge Integration in Dispersed Teams"
      with Christopher Esposito and Fengli Xu

3.   "iGEM: A Model System for the Science of Science and Innovation"
      with Marc Santolini, Megan J. Palmer, Leo Blondel, Rathin Jerayam, Abhijeet Krishna and Albert-Laszlo Barabasi.

4.   "Peer Effects on Team Innovation"
      with Marc Santolini, Rathin Jeyaram, Megan J. Palmer and Albert-Laszlo Barabasi.

5.   "The Endogeneous Division of Labor"
      with Marc Santolini

6.   "Science in Motion"
      with Alec McGail and Aaron Mendon-Plasek

7.   "Novel Science, Stratification and the Burden of Evidence"
      with Seokkyun Woo and Cassidy R. Sugimoto

Conference Activity

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*.

Sessions Organized

2022   Workshop on the Organization of Science. Oct 25th. 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 (CRI/LPI Paris), Liubov Tupikina (Bell Labs) and Juniper Lovato (Vermont Complex Systems Center). Jun 30th *Virtual*. interactiondatalab.com/netopen21

Seminar Talks

2022   Center for the Science of Science and Innovation, *Northwestern University*, September 15

2022   Knowledge Lab Seminar, *University of Chicago*, September 12

2022   "Disciplinary Integration and Scholarly Reception"
Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*, April 1.

2021   "Networks, Knowledge and Search Speed: Evidence from Covid-19 Drug Development"
Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*, April 9

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

$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

Georgia Institute of Technology

2022   Instructor for Computing Bootcamp, School of Public Policy

The Ohio State University

2019   Instructor for iGEM (International Genetically Engineered Machines Competition) Team

Service

Journal Peer Review

2019–   Research Policy
2019   IEEE TEM

General

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

Consulting

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)

Association for Public Policy Analysis and Management (APPAM)

Society of Young Network Scientists (SYNS)