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, 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 Feÿ*
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, networks, science, technology and innovation, 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   "Interdisciplinarity and Reception"
        C-EENRG, *University of Cambridge*, Nov 21

2022   "Interdisciplinarity and Reception"
        Center for the Science of Science and Innovation, *Northwestern University*, Sep 15

2022   "Interdisciplinarity and Reception"
        Knowledge Lab Seminar, *University of Chicago*, Sep 12

2022   "Interdisciplinarity and Reception"
        Workshop on Original Policy Research (WOPR), *Georgia Institute of Technology*, Apr 1.

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

$3,000   Scholar in Residence | Chateau du Feÿ | 2023

$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 Lecture, "Causal Inference and Interventions in Networks", Complex Systems Physics Seminar (Kirill Polovnikov), *Skolkovo Institute of Science and Technology*, Nov 10

2022   Scientific Computing Bootcamp, School of Public Policy, *Georgia Institute of Technology*

2019   Co-Instructor for iGEM (International Genetically Engineered Machines Competition) Team, *The Ohio State University*

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)

Society of Young Network Scientists (SYNS)

Current to January 2023