Robert Ward

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Education

Ph.D.   **Georgia Institute of Technology**, Public Policy, 2019 – present
Dissertation: Essays on the Organization of Science and Innovation
Committee: John P. Walsh (chair), Cassidy R. Sugimoto, Marc Santolini, Alex Oettl, Gordon Kingsley

M.S.   **Georgia Institute of Technology**, Computer Science, 2021 – present

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 -   **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

Research Interests

Organizations (*Self-Organization, Controllability, Innovation, Learning*), Social and Information Networks, 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. 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.* Quantitative Science Studies. 10.1162/qss_a_00100

In Production

‡Authors in alphabetical order.

—   **Robert Ward**. *Interdisciplinarity and Reception*

—   **Robert Ward**, Rathin Jeyaram and Marc Santolini. *Unintended Consequences in Network Interventions*

—   **Robert Ward** and Marc Santolini. *Endogenous Division of Labor*

—   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*

—   ‡ Christopher Esposito, **Robert Ward**, Fengli Xu *Integration in Dispersed Teams*

—   **Robert Ward**, Seokkyun Woo and Cassidy Sugimoto *Novel Science, Status and the Burden of Evidence*

Talks

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

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 (Online).

2021   Science of Science Summer School, iSchool, Syracuse University.
        Jul 26-Aug 8 (Online)

Funding and Awards

—   *Outstanding Ph.D. Student*, School of Public Policy, Georgia Institute of Technology, 2023

$2,480   *The Endogenous Division of Labor*, SODA Grant, Georgia Institute of Technology, Ivan Allen College of Liberal Arts, 2023

$3,000   *Residency*, Chateau du Feÿ, 2023

$3,956   *Travel*, School of Public Policy, Georgia Institute of Technology, 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* with Alec McGail and Aaron Mendon-Plase, Subaward from NSF #1933675, 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 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 (iGEM) Team, *The Ohio State University*

Service

Organizer

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.* Hacking for Defense project with the 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)