# Robert Ward

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## Education

**Ph.D.**     **Georgia Institute of Technology**, Public Policy, 2019⤳Present

*Committee:* John P. Walsh, Cassidy R. Sugimoto, Marc Santolini,
Alex Oettl, Gordon Kingsley
*Major:* Science and Technology Policy
*Minor:* Computer Science

**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⤳23**     **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 of Science, 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**. *Interdisciplinary Research and its Reception*

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

∋     **Robert Ward** and Marc Santolini. *Endogeneous 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

| $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 for Travel 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, 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, iGEM (International Genetically Engineered Machines Competition) 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 Group

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, Hacking for Defense

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)