

Quintin Kreth

Ph.D. Candidate
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EDUCATION

- Georgia Institute of Technology**, School of Public Policy Est. Spring 2024
Ph.D. Candidate in Public Policy
- Dissertation title: Understanding Faculty Research Productivity at Striving Research Universities
 - Committee chair: Dr. Juan Rogers
 - Specializations: Science & technology policy, higher education policy, and research methods
- University of Oregon** 2014
B.S. Mathematics &
B.S. Planning, Public Policy, and Management (PPPM)

PUBLICATIONS

Journal Articles:

1. Ruthotto, I., **Kreth, Q.**, & Melkers, J. (2021). Entering or Advancing in the IT Labor Market: The Role of an Online Graduate Degree in Computer Science. *The Internet and Higher Education*. <https://doi.org/10.1016/j.iheduc.2021.100820>
2. Ruthotto, I., **Kreth, Q.**, Stevens, J., Trively, C., & Melkers, J. (2020). Lurking and participation in the virtual classroom: The effects of gender, race, and age among graduate students in computer science. *Computers & Education*. <https://doi.org/10.1016/j.compedu.2020.103854>
3. **Kreth, Q.**, Spirou, M. E., Budenstein, S., & Melkers, J. (2019). How Prior Experience and Self-Efficacy Shape Graduate Student Perceptions of an Online Learning Environment in Computing. *Computer Science Education*, 29(4). <https://doi.org/10.1080/08993408.2019.1601459>

Reviewed Conference Proceedings:

1. **Kreth, Q.**, Schiff, D. S., Lee, J., Zegura, E., & Borenstein, J. (2022, August), *Social responsibility attitudes among undergraduate computer science students: an empirical analysis*. Proceedings paper presented at 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. <https://peer.asee.org/41369>

Book Chapters:

1. Melkers, J., Woolley, R., & **Kreth, Q.** (2023). Research Funding and Careers: Individual and Contextual Factors. In Lepori, B., Jongbloed, B., & Hicks, D. (Eds.). *Handbook of Public Research Funding*. Edward Elgar Publishing. <https://doi.org/10.31235/osf.io/emyb3>
2. **Kreth, Q.**, Schiff, D.S., Lee, J., Borenstein, J., & Zegura, E. Social Responsibility and Ethics in STEM Education: The State of the Field. (2023). In Hildt, E., Laas, K., Miller, C., & Brey E. (Eds.). *Building Inclusive Ethical Cultures in STEM*. Springer.

Working papers:

1. With Melkers, J. & Vingre, A. Science Planning in State Governments: New Developments.

Reports and Program Evaluations:

1. Borenstein, J., **Kreth, Q.**, Lee, J., Schiff, D., & Zegura, E. (2022). *Measuring Personal and Professional Responsibility Attitudes Among Georgia Tech Undergraduates*. Atlanta, GA: Georgia Institute of Technology.
2. Melkers, J., **Kreth, Q.**, Singhanian, R., & Wall, J. (2019). *External Evaluation: The Kentucky EPSCoR Project: Powering the Bioeconomy for a Sustainable Future: Annual Evaluation Report: Year 5*. Atlanta, GA: Kentucky NSF EPSCoR.
3. Melkers, J. & **Kreth, Q.** (2018). *External Evaluation: The Kentucky EPSCoR Project: Powering the Bioeconomy for a Sustainable Future: Annual Evaluation Report: Year 4*. Atlanta, GA: Kentucky NSF EPSCoR.
4. DeMillo, R., Ferri, B., Baker, N., Cozzens, S., Herazy, J., Hoeting, M., Isbell, C., Jacobs, L., Potts, C., Clough, W., Selingo, J., Anderson, P., Barchers, C., Barke, R., Bishop, C., Blum, T., Bramblett, S., Butera, R., Coyle, E., Cummins, M., Curtis, J., DeStefano, L., Forest, C., Gazi, Y., Goel, A., Harmon, S., Henry, A., Holloway, S., Jenkins, B., Kim, J., Kingsley, G., **Kreth, Q.**, Le Doux, J., Lefton, L., Ludovice, P., Nair-Reichert, U., Newstetter, W., Overby, E., Reallf, M. L., Rizwan, M., Schatz, M., Sivakumar, R., Spencer, C., Wang, B., Webster, D., Weinsheimer, J., & Zegura, E. (2018). *Deliberate Innovation, Lifetime Education: Final Report of the Commission on Creating the Next in Education*. Atlanta, GA: Georgia Institute of Technology Provost's Office.
5. Melkers, J., **Kreth, Q.**, Spirou, M. E., & Budenstein, S. (2017). *External Evaluation: Georgia Institute of Technology Online Master of Science in Computer Science Program: Outcomes of Online Graduate Education for Women*. Atlanta, GA: Georgia Institute of Technology College of Computing.
6. Melkers, J. & **Kreth, Q.** (2017). *External Evaluation: The Kentucky EPSCoR Project: Powering the Bioeconomy for a Sustainable Future: Annual Evaluation Report: Year 3*. Atlanta, GA: Kentucky NSF EPSCoR.
7. Melkers, J., **Kreth, Q.**, & St. Clair, R. (2016). *External Evaluation: The Kentucky EPSCoR Project: Powering the Bioeconomy for a Sustainable Future: Annual Evaluation Report: Year 2*. Atlanta, GA: Kentucky NSF EPSCoR.

PRESENTATIONS

Oral presentations:

Kreth, Q., Schiff, D., Lee, J., Borenstein, J., & Zegura, E. (2022, June). *Social responsibility attitudes among undergraduate computer science students: an empirical analysis*. Proceedings paper presented at the 2022 American Society for Engineering Education Annual Conference and Exposition, Minneapolis, MN, USA.

Kreth, Q., Schiff, D., Lee, J., Borenstein, J., & Zegura, E. (2022, June). *Examining Professional Social Responsibility Development among Computer Science Undergraduates Using the Generalized Professional Responsibility Assessment*. Presented at the Embedded EthICS @ Harvard Ethical Issues in AI and Computing Conference, Cambridge, MA, USA.

Kreth, Q., Ruthotto, I., Stevens J., & Melkers, J. (2018, November). *Career Advancement and Change Through an Online Graduate Degree in Computing*. Paper presented at the 2018 Association for Public Policy Analysis and Management (APPAM) Fall Research Conference, Washington, DC, USA.

Kreth, Q., Ruthotto, I., Stevens J., & Melkers, J. (2018, October). *Career Change or Advancement Through an Online Graduate Degree in Computing*. Paper presented as part of the Georgia Tech School of Public Policy Workshop on Original Policy Research (WOPR) paper series, Atlanta, GA, USA.

Kreth, Q., Vingre, A., Wells, C., White, S., Shah, N., & Melkers, J. (2017, October). *Science Planning in State Governments: Policy Priorities and New Developments*. Paper presented at the Korean Advanced Institute of Science and Technology/Georgia Tech School of Public Policy Joint Early-Career Research Symposium, Atlanta, GA, USA.

Kreth, Q., Vingre, A., Wells, C., White, S., Shah, N., & Melkers, J. (2016, October). *Science Planning in State Governments: New Developments*. Invited presentation at the annual meeting of the Research, Technology, and Development Evaluation Topic Interest Group of the American Evaluation Association, Atlanta, GA, USA.

Kreth, Q. (2016, September). *Institution and Gender in Mathematics Research Funding*. Paper presented as part of the Georgia Tech School of Public Policy Workshop on Original Policy Research (WOPR) paper series, Atlanta, GA, USA.

Poster presentations:

Kreth, Q., Vingre, A., Wells, C., White, S., Shah, N., & Melkers, J. (2017, October). *Science Planning in State Governments: New Developments*. Poster presented at the biannual Atlanta Conference on Science and Technology Policy, Atlanta, GA, USA.

RESEARCH INTERESTS

Research productivity and competitiveness; sub-elite research institutions and researchers; higher education policy; STEM workforce and education; Sociology of Science; regional government

RESEARCH EXPERIENCE

Research Assistant, Georgia Institute of Technology

2021-2022

With Dr. Jason Borenstein, Dr. Ellen Zegura, Dr. Jeonghyun (Jonna) Lee, and Dr. Daniel Schiff. NSF-funded project (Award # 1635554) on the development of social responsibility and professional ethics among undergraduate STEM students. Statistical analysis, survey analysis, writing, and presentations.

Research Assistant, Georgia Institute of Technology 2015-2021
With Dr. Julia Melkers and Dr. Anete Vingre. Study of US state-level science and technology policy documents. Worked with international visiting scholar on project to apply big-data methods to the study of strategic plans and other policy documents, leading a team of four BS students. Used textual analysis/tech mining/data mining software to examine state-level science policy documents for content, metrics, strategies, and themes.

Research Assistant, Georgia Institute of Technology 2015-2019
With Dr. Julia Melkers. External evaluation of Kentucky NSF Established Program to Stimulate Competitive Research (EPSCoR) project. Performed four years of evaluations and authored reports as primary/sole GRA on project. Led team of one MS and two BS students in 2018-2019. Research methods included bibliometrics and citation analysis, original survey design, qualitative data analysis, quantitative data analysis, semi-structured interviews, and social network analysis.

Research Assistant, Georgia Institute of Technology 2017-2019
With Dr. Julia Melkers, Dr. Isabel Ruthotto, and Mary Eve Spirou. External evaluation of the Georgia Tech Online Master of Science in Computer Science (OMSCS) degree program and related research. Led team of one MS and one BS student. Research methods included complex survey data analysis, regression analysis, and qualitative methods.

Research Assistant, Georgia Institute of Technology 2017-2018
With Dr. Julia Melkers, Dr. Eric Welch, and Dr. Fengxiu Zhang. Internal NSF contract to develop new operational definition of “research competitiveness,” the core concept underlying the NSF EPSCoR and NIH IMBRE programs. Worked with NSF staff, program directors, and private consultants on a major literature review, concept map, and operationalization of concepts.

Research Assistant, Georgia Institute of Technology 2015
With Dr. Julia Melkers and Dr. Gordon Kingsley. External evaluation of the Vertically Integrated Projects (VIP) Consortium. Supported by the Helmsley Charitable Trust.

TEACHING INTERESTS

Research Design, Quantitative Methods, Qualitative Methods, Science and Technology Policy, American Politics, State and Local Government, Leadership, Senior Design/Project.

TEACHING EXPERIENCE

Lecturer, Georgia Institute of Technology Summer 2023
Course: Political Science 1101: Government of the United States
Solo taught, developed an original syllabus, and developed original assignments for an introductory, general-education course in American government and politics.

Graduate Teaching Assistant, Georgia Institute of Technology Spring 2023
Course: Public Policy 8211: Microeconomic Theory
Instructor: Dr. Alan Marco

- Graduate Teaching Assistant**, Georgia Institute of Technology Fall 2022
Course: Public Policy 6116: Microeconomic Theory (MS-level)
 Instructor: Dr. Alan Marco
- Graduate Teaching Assistant**, Georgia Institute of Technology Summer 2021
Course: Political Science 2101: State and Local Government (Online)
 Instructor: Dr. Clifford Lipscomb
- Graduate Teaching Assistant**, Georgia Institute of Technology Summer 2021
Course: Public Policy 4226: Business and Government (Online)
 Instructor: Dr. Clifford Lipscomb
- Co-Instructor**, Georgia Institute of Technology Spring 2021
Course: Public Policy 6112: Research Design in Policy Science (Online)
 Instructor: Dr. Clifford Lipscomb
 Co-developed the syllabus, designed and delivered online lectures, graded assignments, developed assignments, and mentored student research projects for an MS-level course in social-science research design.
- Graduate Teaching Assistant**, Georgia Institute of Technology Fall 2020
Course: Public Policy 3120: Statistical Analysis in Public Policy (Online)
 Instructor: Dr. Clifford Lipscomb
- Graduate Teaching Assistant**, Georgia Institute of Technology Summer 2020
Course: Political Science 2101: State and Local Government (Online)
 Instructor: Dr. Clifford Lipscomb
- Graduate Teaching Assistant**, Georgia Institute of Technology Spring 2020
Course: Public Policy 8211: Microeconomic Theory
 Instructor: Dr. Alan Marco
- Co-Instructor**, Georgia Institute of Technology Fall 2019
Course: Public Policy 3120: Statistical Analysis in Public Policy
 Co-Instructor: Dr. Juan Rogers
 Split lecturing duties and developed course materials for an introductory course in statistical analysis and R.
- Graduate Teaching Assistant**, Georgia Institute of Technology Spring 2019
Course: Public Policy 8211: Microeconomic Theory
 Instructor: Dr. Alan Marco
- Graduate Teaching Assistant**, Georgia Institute of Technology Fall 2015
Course: Political Science 1101: Introduction to American Politics
 Instructor: Dr. Julia Melkers
 Served as the sole TA for a 150-student course. Co-developed a new, semester-length group policy research assignment, producing student films, posters, and policy briefs.

LEADERSHIP AND PROFESSIONAL SERVICE

Society Memberships:

The Association for Public Policy and Management (APPAM) & the American Society for Engineering Education (ASEE)

Professional Service:

Reviewer for ASEE Engineering and Public Policy Division and ASEE Liberal Education/Engineering and Society Division

Volunteer Coordinator, Atlanta Conference on Science and Technology Policy 2015

University Service:

Academic Chair, GT Public Policy Graduate Student Association 2019-2020
School of Public Policy Graduate Committee non-voting member

Trustee, Georgia Tech Athletic Association 2017-2018

Graduate Representative, GT Commission on Creating the Next in Education 2016-2018
Represented graduate students in a 2-year Provost's initiative to examine the state of higher education and vision how Georgia Tech's role would evolve over the next 25 years.

Graduate Representative, GT Strategic Plan Advisory Group 2016-2018
Served on an internal, competitive funding review panel allocating \$1 million/year to support the initiatives of the Georgia Tech Strategic Plan.

Executive Vice President, Georgia Tech Graduate SGA 2016-2017
Lead the allocation process for \$4 million to campus departments and student organizations.

Public Policy Senator, Georgia Tech Graduate SGA 2015-2016

Other Service:

Delegate for Oregon At-large, Democratic National Convention 2020

Chair, Democratic Party of Oregon Rural Caucus 2013-2015

Delegate for Oregon's 4th CD, Democratic National Convention 2012

HONORS AND AWARDS

ASEE Professional Interest Council 1 Best Paper Award (\$1000) 2022
Top-five paper out of 1,752 presented at the 2022 ASEE annual conference (Kreth, Schiff, Lee, Zegura, and Borenstein, 2022)

ASEE Engineering Ethics Division Best Paper Award (\$200) 2022
For (Kreth, Schiff, Lee, Zegura, and Borenstein, 2022)

Chih Foundation Graduate Student Research Award (\$2500) 2020

Top paper in Engineering, Computer Science, or Health Sciences by a GT Ph.D. student
(Kreth, Spirou, Budenstein, and Melkers, 2019)

Student Scholar Travel Award , NSF SciSIP & SSTI (\$1600)	2016
Eagle Scout , BSA Troop 244, Monroe, OR	2011

OTHER EDUCATION AND TRAINING

Inter-University Consortium for Political and Social Research (ICPSR), 4 weeks, summer 2017, Ann Arbor, MI. Intensive, residential quantitative methods workshop and seminar for Ph.D. students and faculty.

NSF Science of Science and Innovation Policy (SciSIP) Colloquium on Science and Innovation Policy Research and Practice, 3 days, November 2016, Columbus, OH. Technology-based economic development research seminar for doctoral students attached to the State Science and Technology Institute (SSTI) Annual Conference.

Ford Institute Leadership Program, 60 hours of instruction, 2010-2011, Alpine, Bend, Monroe, and Roseburg, OR. Catalytic leadership and social capital training course for rural community leaders.

SKILLS AND SOFTWARE PROFICIENCIES

Statistical software proficiencies: R, SPSS, & Stata

Other software proficiencies: LaTeX, NVivo, Pajek, Microsoft Office, R Bibliometrix, Qualtrics, Sawtooth Lighthouse Studio, TeXworks, VantagePoint, & UCINET

Languages: Spanish (limited)

REFERENCES

Juan Rogers, Ph.D.

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Georgia Institute of Technology
Atlanta, GA
Email: jdrogers@gatech.edu

Diana Hicks, Ph.D.

Professor
School of Public Policy
Georgia Institute of Technology
Atlanta, GA
Email: dhicks@gatech.edu

Gordon Kingsley, Ph.D.

Associate Professor

School of Public Policy
Georgia Institute of Technology
Atlanta, GA
Email: gkingsley@gatech.edu

Julia Melkers, Ph.D.

Professor and Director, Center for Organization Research & Design (CORD)
School of Public Affairs
Arizona State University
Phoenix, AZ
Email: julia.melkers@asu.edu

Cassidy Sugimoto, Ph.D.

Professor and Chair
School of Public Policy
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Atlanta, GA
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