

# April Burrage

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## Education

Ph.D. Economics, University of Massachusetts Amherst, expected 2024

Committee: Ina Ganguli (Chair), Michael Ash, Wenting Ma

M.A., Economics, Roosevelt University

B.S., Marketing, North Carolina A&T State University, Summa Cum Laude

## Fields

Economics of Innovation, Entrepreneurship, Labor Economics

## Job Market Paper

### **Innovation Policies, Diversity, and Small High-Tech Firms: Evidence from State R&D Tax Credits and Interest in Federal Grants**

**Abstract:** Can state-level innovation policies boost underrepresented groups' interest in federal grants? This paper investigates the impact of state R&D tax credits on small high-tech firms' engagement with federal innovation initiatives. Utilizing state business registration records and the System for Award Management (SAM) database, I provide novel empirical evidence of state-level policy effects on firms' interest in federal grants. Through the implementation of a staggered difference-in-difference research design, I find that state R&D tax credits reduce firms' interest in federal grants, particularly among women-owned and minority-owned firms. These findings underscore the potential for targeted policy interventions to foster innovation participation and diversity, contributing to discussions on the impact of innovation policy by race and gender.

## Publications

### *Refereed Publications*

**"Inclusive Pathways To Invention: Racial And Ethnic Diversity Among Collegiate Student Inventors In a National Prize Competition"** with Janell Ciemiecki, Stephanie Couch, and Ina Ganguli, *Technology and Innovation*, March 2023.

**Abstract:** We present insights from 2,000 U.S. student inventors vying for a prestigious national prize. This unique dataset reveals gender, race, and ethnicity dynamics along the "pathway to invention." Notably, 14% of applicants are underrepresented minority (URM) students, a narrower gap than patenting disparities. URM inventors' focus varies by gender and race intersection: URM men favor consumer inventions, URM women align with non-URM peers in healthcare inventions. URM men often hail from business, URM women from biological sciences. More URM applicants originate from public research universities. Further research could explore how diverse universities support URM students as inventors, fostering their innovation journey.

### *Working Papers*

**"Measuring Racial and Ethnic Representation in 21st Century High Technology Self-employment"** with Rachel Atkins, *Revise and Resubmit, Journal of Economics and Management Strategy*

**Abstract:** Both scholarly and popular sources highlight the lack of diversity in the tech workforce, yet disparities in tech entrepreneurship remain underexplored. Factors influencing tech workforce homogeneity may impact entrepreneurship similarly. Conversely, adverse tech job conditions for underrepresented groups could drive entrepreneurship. This pioneering study assesses racial and ethnic representation among US tech entrepreneurs in the 21st century. A novel metric gauges this representation, accounting for industry selection. Black, Hispanic, and Asian workers exhibit lower self-employment in tech, persisting over time despite controlling for education and immigration. This research prompts further investigation into mechanisms perpetuating racial inequality in tech entrepreneurship.

**"Disciplinary and Institutional Diversity of Federally Funded Academic Research on Climate Solutions in the United States"** with Tim Carter and Anna Goldstein, *Revise and Resubmit, Environmental Research Letters*

**Abstract:** To address climate change mitigation's technological demands, academic research must span diverse climate solutions. Our study examines US federal funding for academic research on climate solutions (ARCS), revealing \$1.42 billion allocated in 2019-2020. Engineering and natural sciences dominate, with 85% of grants to R1 institutions, leaving Tribal, Historically Black Colleges, and Hispanic Serving Institutions with under 9%. Disparities partly result from lacking interdisciplinary policies. We discuss implications and strategies for achieving an equitable energy transition via ARCS, aligning with societal needs and future goals.

**"Gender Diversity in Academic Entrepreneurship: Social Impact Motives and the NSF I-Corps Program"** with Ina Ganguli and Nilanjana Dasgupta, *Under Review*

**Abstract:** This study examines gender disparities in the social impact and commercial motivations of academic entrepreneurship using the national NSF I-Corps program. Data from one I-Corps site reveals women prioritize social intentions, exceeding men. Nationally, analyzing 1,267 NSF I-Corps grants (2012-2019), we find women PIs emphasize social impact in proposals, while all PIs maintain equal commercial focus. In recruitment emails, women favor messages highlighting social impact, men remain consistent. This underscores women's

attraction to socially-oriented entrepreneurship. Strengthening interventions emphasizing social impact could foster gender diversity in national entrepreneurial engagement.

### *Research in Progress*

**"Cultivating Future Inventors: The Lemelson-MIT Student Prize"** with Ina Ganguli and Stephanie Couch.

**"Race and Technology Entrepreneurship: A Critical Literature Review"** with Rachel Atkins and Alicia Sheares.

### *Other Publications*

**"The Future of Academic Research on Climate Solutions"** with Tim Carter and Anna Goldstein, *Second Nature Report*.

## **Research Experience**

Research Affiliate at The Center for Critical Race and Digital Studies (2020 - 2023)

New York University

Research Supervisor: Dr. Rachel Atkins

Research Assistant at The Lemelson-MIT Center (2020 - 2021)

Massachusetts Institute of Technology

Research Supervisor: Dr. Ina Ganguli

Research Assistant at UMASS National Science Foundation I-Corps (2019 - 2020)

University of Massachusetts Amherst

Research Supervisor: Dr. Ina Ganguli

## **Teaching Experience**

Public Finance - Fall 2023

Teaching Assistant - NBER Innovation Research Boot Camp, July 2023

Introduction to Macroeconomics, Fall 2018 - Spring 2020, Fall 2022

American Economic Summer Program Advanced Econometrics, Summer 2020

## Work Experience

Cars.com, Inside Digital Media Representative, 2016 - 2018

Marketed technology advertising solutions to automotive dealerships

2017 Top 5 representative in department

Provided customer service, advertising consultation, and market trend insights to retain and engage clients

JMB Insurance Agency, Account Manager, 2014 - 2015

Managed 60 small commercial business property & casualty insurance portfolios

Leveraged online insurance rating systems to develop quotes for prospects and clients daily

Arthur J. Gallagher & Company, Account Executive, Management Liability Practice, 2013 - 2014

Placed insurance coverage for IPO of \$2 billion revenue tech company

Managed \$1.5 million of insurance premium for private middle market and Fortune 1000 corporations

Offered technical support to sales producers, analyzing client risk and negotiating insurance coverage

## Fellowships, Grants, Honors, and Awards

**2023:** University of Massachusetts Amherst Three Minute Thesis Finalist, NSF Research Trainee Fellow

**2022:** NBER Innovation Research Boot Camp Participant, NSF Research Trainee Fellow

**2021:** Second Nature Research Fellow, NBER Entrepreneurship Boot Camp Participant, Institute for Research on Poverty Dissertation Workshop

**2018:** Research Enhancement and Leadership Fellow at UMASS Amherst

## Conference Presentations

**2023:** Academy of Management, Western Economic Association Conference, The Workshop on Racial Equity in Technology Entrepreneurship, American Economic Association Summer Mentoring Pipeline Conference, Stratification Economics Workshop, Eastern Economics Association

**2022:** Southern Economic Association Conference, American Economic Association Summer Mentoring Pipeline Conference, UMass Energy Transition Symposium, Workshop on Entrepreneurial Finance and Innovation Student Workshop, The Workshop on Racial Equity in Technology Entrepreneurship

**2021:** Institute of Diversity Sciences, The Virtual Workshop on Racial Equity in Tech Entrepreneurship

**2020:** Stanford Graduate School of Business Rising Scholars Conference, Boston University Women in Economics Workshop

**2019:** International Association of Feminist Economics

## Professional Service

**Creator:** Economics Student Paper Workshop at University of Massachusetts Amherst

**Mentor:** Research Experience for Undergraduates Summer Program at University of Massachusetts Amherst

**Referee:** Eastern Economic Journal, The Review of Social Economy, Frontiers

## Skills

**Programming:** R (Advanced), Python (Proficient)

**Software & Tools:** STATA (Advanced), L<sup>A</sup>T<sub>E</sub>X (Advanced), Excel (Advanced)

## Membership/Affiliations

Academy of Management, American Economic Association, National Economic Association, The PhD Project

## References

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### Michael Ash

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### Rachel Atkins

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Last updated: September 21, 2023