

The Institute for Research on Innovation and Science (IRIS) is a national data resource dedicated to providing credible data and rigorous findings about the value of the research enterprise to inform effective policy-making, support outreach, aid in research management, and expand the state of knowledge. This university-led consortium is currently housed at the University of Michigan's Institute for Social Research.

# IRIS News

Winter 2019

IRIS INSTITUTE FOR RESEARCH ON INNOVATION & SCIENCE

## We're 4 Years Old!

As of January 1, 2019, IRIS celebrated its 4th birthday! Where has the time gone? It seems we only just hired a technical director to wrestle with data and now we are up to 10 staff members, 3 junior faculty, 1 postdoc, numerous students, an executive director....and counting! The growth has been really exciting and we have an outstanding team. Here's some of what we've accomplished:



- Expanded regular reporting to three data products: the IRIS Spending Report, the Employee Profile Report, and the Vendor Profile Report.
- Developing specialized reports to explore scientific and career outcomes related to the impact of training programs such as the Clinical and Translational Science Award (CTSA) and high performance computing infrastructure investments like XSEDE. These new reports will be available soon!
- Nearing completion on a pilot project with the Census Bureau and two member universities to explore student outcomes data.
- Released the first research dataset in 2017, with new data released annually.
- ~80 approved researchers accessing the IRIS Virtual Data Enclave.

When we opened the doors on January 1, 2015 we had no members but the first year saw dramatic growth with 17 members by the end of the year. Currently, the UMETRICS dataset includes data from 35 universities with more coming on board.

Here's the current membership list, plus a member map. We'd like to welcome several new members to the IRIS family: **Johns Hopkins University, Texas A&M University,** and the **University of Utah.**

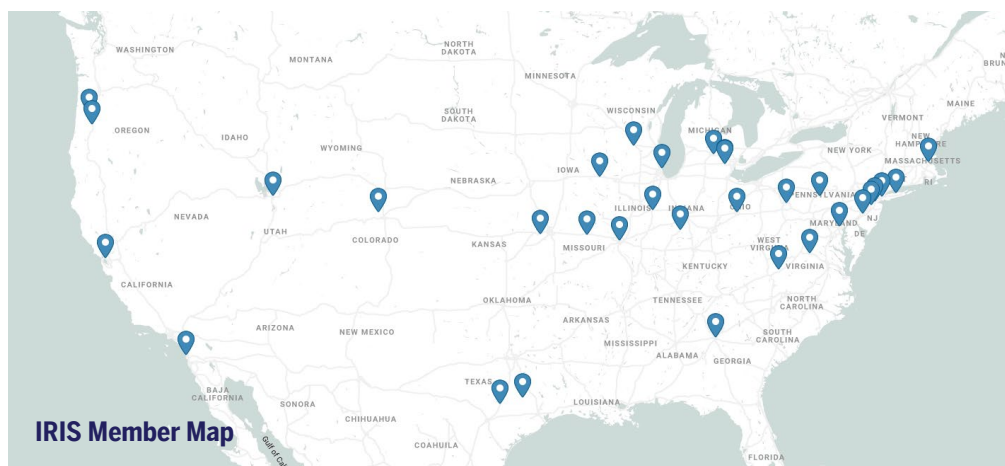
Be sure to visit our website to find out more about the benefits and details of IRIS membership. See [iris.isr.umich.edu](http://iris.isr.umich.edu).

Also check out Jason Owen-Smith's new book, **Research Universities and the Public Good**, which is now available. It offers a unique view of how universities work, what their purpose is, and why they are important. In a political climate that is skeptical of hard-to-measure outcomes, public funding for research universities is under threat. But if we scale back support for these institutions, we also cut off a key source of value creation in our economy and society.

IRIS helps measure and demonstrate these contributions our member institutions make to their regions and the economy. We look forward to another great year and are excited to help you tell your story!

### IRIS Membership, Jan 1, 2019

- Boston University
- Emory University
- Indiana University
- Johns Hopkins University
- Michigan State University
- New York University
- Northwestern University
- Ohio State University
- Oregon State University
- Pennsylvania State University
- Princeton University
- Rutgers University – New Brunswick
- Stony Brook University
- University of California – San Diego
- Texas A&M University
- University of Colorado, Boulder
- University of Illinois – Urbana Champaign
- University of Iowa
- University of Kansas
- University of Michigan
- University of Missouri
- University of Oregon
- University of Pennsylvania
- University of Pittsburgh
- University of Texas-Austin
- University of Utah
- University of Virginia
- University of Wisconsin – Madison
- Virginia Polytechnic Institute and State University
- Washington University – St. Louis



IRIS Member Map

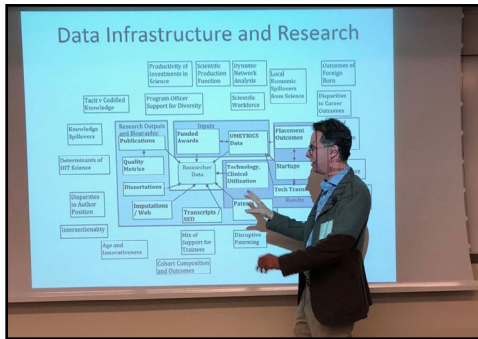


INSTITUTE FOR RESEARCH ON INNOVATION & SCIENCE



# Data Summit

The 2018 IRIS Data Summit took place on October 15-16 at the Institute for Social Research in Ann Arbor. Attendance was strong with 60 individuals from 25 universities and organizations present, engaged in productive and rich discussion. Featured speakers included Bruce Weinberg of The Ohio State University,



**Bruce Weinberg , The Ohio State University**

who presented information on research with IRIS UMETRICS data and Julia Lane of New York University and the Office of Management and Budget, who discussed the federal government's data strategy.

IRIS highlighted several exciting new projects and reports at the meeting, including an enhanced Vendor Profile Report using Orbis data, an update on the CTSA project, and a new project examining outcomes related to the XSEDE/high performance computing initiative.

**Save the date!** The newly expanded IRIS Summit will take place on **September 24-27**. We're planning to add sessions relevant to policymakers as well as to researchers. Look for more information coming soon!

# Spending Report New Look

In December, IRIS sent out new spending reports for member universities based on the October 2018 data submission. These reports mark the first report release in the IRIS Member Portal since the recent redesign. The Development Team at IRIS has been busy this year adding new features and updating the Portal to a fresh, more user-friendly interface.



## What's next?

More reports are on the way! Look for Employee and the Vendor Profile reports soon.

# Researcher Spotlight: Valerie Bostwick

Valerie Bostwick is a Postdoctoral Researcher in the Department of Economics at The Ohio State University whose research focuses on the economics of education, with a particular interest in policy-relevant issues affecting post-secondary students. Bostwick, who has been working with IRIS UMETRICS data since beginning her post-

doctoral position with IRIS co-PI Bruce Weinberg, says that the data "provides a very interesting window into the huge black box within STEM graduate education that is the research/lab experience". In a recent NBER working paper, for example, she examined all 2,541 students who enrolled in 33 graduate programs at six Ohio public universities between 2005 and 2016 and



**"My recent research on the impact of gender composition on STEM doctoral persistence has obvious implications for fellow academics and economists. Economics has one of the lower enrollment rates of female doctoral students among STEM disciplines, so it is especially important that we make a conscious effort to foster a female-friendly environment within our universities and departments. We can also endeavor to encourage female undergraduates who we teach and/or mentor to consider pursuing STEM doctoral studies."**

linked transcript records to IRIS UMETRICS data, providing the ability to show when and if graduate students dropped out. Titled **"Nevertheless She Persisted? Gender Peer Effects in Doctoral STEM Programs,"** the paper presents findings that "women in cohorts with no female peers are 11.9 percentage points less likely to graduate within 6 years of initial enrollment than men" and "10 percentage points more likely to drop out in the first year" of doctoral studies in STEM fields. The paper has received a lot of coverage, including being featured on the front page of the NBER website and also by Science. Asked what excites her most about the opportunities for research with IRIS, Bostwick noted "the prospect of connecting IRIS data to more transcript-style data (as we were able to do for Ohio in this paper). Having enrollment and demographic data linked to UMETRICS for the broad set of universities in IRIS would be incredibly valuable for studying the graduate student experience and the impact of research experience among undergraduates."

**CITATION:**  
 Bostwick, V., & Weinberg, B. (2018). *Nevertheless She Persisted? Gender Peer Effects in Doctoral STEM Programs* (No. w25028). Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w25028>

# Exploring IRIS Impact

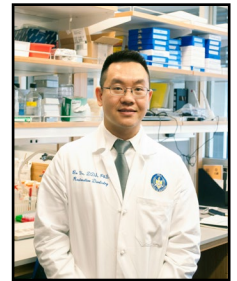


## UMETRICS

IRIS reports are used by our members to demonstrate impact and value of research with a variety of stakeholders. For example, the University of Virginia recently shared its IRIS reports with Representative Gerry Connolly of Virginia's 11th Congressional District. Similarly, at the University of Michigan the director of U-M's Institute for Social Research shared IRIS reports with staffers from Michigan's 4th Congressional District, who wanted to better understand the impact of research spending in their district.

## Clinical and Translational Science Award

UMETRICS data can support low burden, sustainable, and systematic examination of the scientific and career outcomes of researchers supported by CTSA resources in this pilot project. IRIS is now working with 10 CTSA hubs in the third phase of the pilot to define a meaningful counterfactual against which to benchmark career development, movement to independent research, and team science metrics. IRIS researchers are preparing a manuscript for publication on the second phase of the pilot and have given multiple national presentations on this work.



## XSEDE

A pilot IRIS report will provide an analysis of the scientific effects of the access to high performance computing resources. IRIS is working with XSEDE leadership at the University of Illinois at Urbana-Champaign to develop a set of metrics that will help demonstrate the impact of funding for high performance computing allocations across the country.

## Student Outcomes

This is an educational pilot project with the U.S. Census Bureau and two IRIS universities to link student outcomes information to Census data. Of immense value to universities, exploring such data can help institutions better understand outcomes associated with various majors and programs, including linking to earnings and geographic dispersion information.



## Federal Advisory Committee Act (FACA)

IRIS is producing an impact report focusing on university researchers' public service to Federal Advisory Committees in this pilot project. Through their *pro bono* work in federal service, university experts can offer valuable insights for informing policy based on expertise they develop through research. By linking the federal service data to UMETRICS and other data sources, IRIS is able to measure the value of university expertise influencing policy within the context of research. IRIS researchers are currently preparing a manuscript for publication and have given several presentations on this work.



# IRIS Researcher Funding

IRIS seeks to enable fundamental research on the results of public and private investments that support discovery, innovation, and education on the campuses of U.S. universities. Launched in 2017 with generous support from the Alfred P. Sloan Foundation, the IRIS Researcher Awards provide funding to investigators at multiple career stages who are interested in using the IRIS UMETRICS research dataset. We announced a first cohort of award recipients in January 2018, and all six of the inaugural award recipients, representing the University of Pennsylvania, University of Wisconsin-Madison, George Washington University, North Carolina State University, and Michigan State University joined IRIS staff and fellow IRIS researchers at a three-day Data Camp hosted by IRIS in March 2018. Sessions at Data Camp were a mix of trainings provided by IRIS staff and invited talks by researchers, who highlighted work that has been published recently or is currently underway with the IRIS dataset.

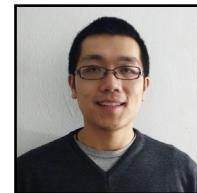
In June, a second call for proposals went out, again seeking applicants from a broad range of academic fields to utilize the IRIS UMETRICS dataset. We are pleased to announce and introduce the two new research teams receiving funding through this award for 2019-2020.

We at IRIS are excited to provide these awards to support new research with the IRIS data and look forward to the resulting work. Our award recipient bios and project abstracts are available on the IRIS website here: <https://iris.isr.umich.edu/research-grants-awardees/>.

## 2019 IRIS Researcher Awards Recipients

**Dr. Ran Xu**, a Postdoctoral Research Associate in the Grado Department of Industrial and System Engineering at the Virginia

Tech University, was awarded the Early Career Award for his project “How Funding Facilitates Interdisciplinary Research for Early Career Scientists: Evidence from Neuroscience Research.” Dr. Xu plans to use IRIS UMETRICS data to investigate both the types of funding and the other mechanisms through which interdisciplinary dissertations are supported, using neuroscience as a particular case study.



**Dr. Kevin Kniffin**, Assistant Professor of Management and Organizations at the Dyson School of Applied Economics and Management in the S. C. Johnson College of Business at Cornell University was awarded the Established Researcher Award for his project “Antecedents and Consequences of Sponsored Teaming among STEM Doctoral Graduates.” Dr. Kniffin will be using IRIS UMETRICS data to support his research on team structure and productivity.



## Announcements

- **Webinar: The Role of Universities in Economic Development:** Wednesday, Jan 30, 2019, 3-4 pm EST  
For more information see [iris.isr.umich.edu/about/events](https://iris.isr.umich.edu/about/events)
- **Research Data Release:** April 1, 2019
- **Data Submission Deadline:** April 15, 2019
- **Save the date–IRIS Summit:** September 24-27, 2019

### ABOUT OUR DATA RELEASE:

IRIS develops and curates a unique dataset for research with administrative data from IRIS member universities and links to federal awards, patents, and publications.



Our next data release, including 31 universities, is coming in April 2019!



### GET INVOLVED

Want to become a member? Visit [iris.isr.umich.edu/membership](https://iris.isr.umich.edu/membership) or contact us at 734.615.0015 / IRIS-info@umich.edu

### LEARN MORE

The IRIS Impact Report is available at [iris.isr.umich.edu/about](https://iris.isr.umich.edu/about). It includes an overview of the progress and current state of IRIS, research using IRIS UMETRICS data, a financial report, and more.



Join us!  
Wednesday,  
January 30,  
2019  
3-4 pm EST

IRIS INSTITUTE FOR RESEARCH ON INNOVATION & SCIENCE

**Webinar** The Role of Universities in Economic Development



Institute for Research on Innovation & Science  
University of Michigan Institute for Social Research Survey Research Center  
330 Packard St, 2354 ISR-Perry, Ann Arbor, MI, 48106-2910  
(734) 615-0015 • IRIS-contact@umich.edu • [iris.isr.umich.edu](https://iris.isr.umich.edu) • [@IRIS\\_UMETRICS](https://twitter.com/IRIS_UMETRICS)



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