Activities of the Office of Government Relations

Karen Saxe

This quarterly column offers information on different facets of the American Mathematical Society Office of Government Relations (OGR) portfolio and activities. Read on to find out more about fellowship opportunities that we offer and about OGR-organized events at the 2020 Denver Joint Mathematics Meetings.

DC-Based Fellowships Offered by the AMS

The AMS hosts four types of fellowships each year to engage the math community with science policy and communicating science. Fellowships are shorter and longer term, for students, as well as mathematical scientists at any stage of their careers. Descriptions of each, including upcoming deadlines, appear below.

All four are associated with programs organized by the American Association for the Advancement of Science (AAAS). The AAAS programs host scientists and engineers across a wide range of disciplines; the AMS sponsors and hosts mathematical scientists to participate in these programs. In addition to paying to support the fellows, the AMS DC staff maintain contact with the fellows throughout the duration of the respective fellowships.

The first two are part of the much larger Science and Technology Fellowships program run by the AAAS.¹ Since

1973 this program has connected science with policy, fostering a network of science and engineering leaders who understand government and policymaking and are prepared to develop and execute solutions to address societal challenges. The AAAS places about three hundred PhD scientists—including mathematicians—each year through this program, with roughly thirty placed in legislative offices and the rest at various executive branch agencies. These fellowships are one year (though often extendable) and align with the academic year (begin at the beginning of September each year); as such, they provide a great opportunity for academic mathematicians who would like to spend a year in DC. You can read about the experiences (in Congress and at a variety of federal agencies) of the mathematicians who spent 2017–18 as AAAS S & T Fellows in a blog that I wrote about them.²

- *Congressional Fellowship for PhD mathematical scientists.*³ Each year, the AMS sponsors one Congressional Fellow, who spends a year working on the staff of a Congress member or on a congressional committee. The 2019–

Karen Saxe is associate executive director of the AMS and director of the Office of Government Relations. Her email address is kxs@ams.org.

¹<https://www.aaas.org/programs/science-technology-policy-fellowships>

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²<https://blogs.ams.org/capitalcurrents/2018/02/21/mathematicians-are-at-work-in-the-federal-government-you-too>

³<https://www.ams.org/programs/ams-fellowships/ams-aaas/ams-aaas-congressional-fellowship>

2020 fellow is Lucia Simonelli. Dr. Simonelli completed her PhD in 2016 at the University of Maryland under the direction of Professor Giovanni Forni and prior to this fellowship was a Postdoctoral Fellow at the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy. The program includes an orientation on congressional and executive branch operations and a year-long seminar series on issues involving science, technology, and public policy. It provides a unique public policy-learning experience, demonstrates the value of science-government interaction, and brings a technical background and external perspective to the congressional decision-making process. This is an opportunity open to mathematicians at all career stages—from brand new PhD to retired. The next application deadline is February 15, 2020.

- *Science & Technology Policy Fellowships for PhD data scientists.*⁴ With support from the Alfred P. Sloan Foundation, the AMS, together with several other disciplinary societies, is sponsoring three fellows per year who will focus their work in data science and related areas such as machine learning, data visualization, and causal inference to meet legislative and policymaking challenges. The current three are
 - Will Adler, PhD in computational neuroscience and most recently a computational research specialist at the Princeton Gerrymandering Project at Princeton University;
 - Kyle Novak, PhD in mathematics and most recently working at the US Agency for International Development (USAID) in Washington, DC; and
 - Jiayang Sun, PhD in statistics and a professor in the Department of Population and Quantitative Health Sciences at Case Western Reserve University.

The next application deadline is February 1, 2020.

The remaining two fellowship opportunities are for students. These are also in partnership with the AAAS, and the fellows become part of a cohort that includes students from a wide range of scientific disciplines.

- *Mass Media Fellowship for undergraduate and graduate students.*⁵ Fellows receive a weekly stipend and travel expenses to work for ten weeks during the summer months as reporters, researchers, and production assistants in media organizations. The program is available to college or university students (in their senior year or in any year of graduate school) in the natural, physical, health, engineering, computer or social sciences, or mathematics with outstanding written and oral communication skills and a strong interest in learning about the media. The AMS sponsors one student each summer. Organized by the AAAS, this program aims

to improve public understanding of science and technology by placing advanced science, mathematics, and engineering students in newsrooms nationwide. The program has supported almost six hundred fellows. The 2019 Mass Media Fellow—mathematics PhD student at Stanford University Leila Sloman—worked at *Scientific American*; recent placements of mathematicians include at the *Raleigh News & Observer*, Voice of America, and NOVA. The deadline for the summer 2020 program is January 1, 2020.

- *Catalyzing Advocacy in Science and Engineering Fellowship for graduate students.*⁶ The AMS sponsors two students to participate in the Catalyzing Advocacy in Science and Engineering (CASE) workshop, organized by the AAAS. The CASE workshop introduces STEM students to the federal policymaking process and empowers them to become advocates for basic research throughout their careers. Selected students participate in a three-and-a-half day workshop in Washington, DC, learning about the structure and organization of Congress, the federal budget and appropriations processes, and tools for effective science communication and civic engagement. The AMS covers all workshop and travel costs. The AMS sponsored its first CASE Fellows in 2019: Sumun Iyer (Cornell University) and Sangsan Warakkagun (Boston College). Of the experience, Sumun wrote:

This experience gave me a much deeper idea of what science policy work is like. It was eye opening to see the kinds of questions that policymakers are interested in and the kinds of data and arguments they find meaningful. It was also interesting to get a sense of the culture in Congress, advocacy groups, and executive agencies and especially the differences in culture between politics and academia....it's really exciting to connect with other STEM graduate students who are passionate about policy....This workshop pushed me outside my graduate student comfort zone—but definitely in a good way!

The deadline to be an AMS-sponsored 2020 CASE Fellow will be early in 2020; check the website for details.

Office of Government Relations Activities at the Joint Mathematics Meetings

At every Joint Mathematics Meetings, the OGR hosts four events. In Denver in January 2020:

1. The full-day Chairs Workshop⁷ takes place on Tuesday, the day before the official start of the JMM. This year it will take place on January 14. The 2020 program will focus on four areas:

⁴<https://www.ams.org/programs/ams-fellowships/SandTPolicyFellowships>

⁵<https://www.ams.org/programs/ams-fellowships/media-fellow/massmediafellow>

⁶<https://www.ams.org/government/dc-case-fellowship>

⁷Read more and register at: <https://www.ams.org/chairsworkshop2020>

- a. *Modernizing Mathematics and Mathematicians*: How can departments evolve to adapt new technologies, develop new curricula, and address the changing needs of our junior faculty and students?
- b. *Evaluating Teaching*: How can we engage in more holistic evaluation of teaching, including teaching activities outside the classroom?
- c. *Difficult Conversations*: How do we address, for example, difficult colleagues and (perceived or real) cases of sexual misconduct?
- d. *The "Entrepreneurial" Mathematics Department*: How can departments work together and with other departments, local industry, and professional societies to benefit from collective projects to improve education offered?⁸

The sessions are interactive and designed to stimulate and include discussion amongst participants. It is open to current chairs, other departmental leaders (graduate or undergraduate program directors, etc.), and those who may become leaders in the near future. Please join us! Registration closes December 18, 2019.

2. We offer an information session on the fellowships described above. A lively Q & A period follows a panel on the Congressional Fellowship. If you want to find out about any of the DC-based fellowships, please join us; the Q & A period is about all these fellowships. Typically, there are several past and present fellows on hand to answer questions. This will take place on Friday, January 17, 4:30 pm–6:30 pm.
3. The AMS Committee on Science Policy will hold its panel discussion "A Call to Action—Grassroots Advocacy for Our Profession" on Friday, January 17, 2:30 pm–4:00 pm.
4. The AMS Committee on Education will hold its panel discussion "Next Steps: Mathematics Departments and the Explosive Growth of Computational and Quantitative Offerings in Higher Education" on Thursday, January 16, 1:00 pm–2:30 pm.

I hope to see you at some, or even all, of these events!

The AMS Office of Government Relations writes a bi-weekly blog: <https://blogs.ams.org/capitalcurrents>.

Posts include timely information on activities in Congress that affect mathematicians and the broader science community, historical tidbits on federal science policy, and opportunities for engaging with Congress and other policymakers.

Karen Saxe

Credits

Author photo is courtesy of Macalester College/David Turner.

⁸Descriptions of the four sessions, bios of the leaders, and registration form are found at <http://www.ams.org/profession/leaders/workshops/chairsworkshop>.

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