

# One Year in Washington Opens up a Whole New World of Possibility

*Jennifer Pearl*

Like most sectors, the federal government needs good mathematicians. Mathematicians and statisticians are in high demand in Washington—now more than ever.

I speak from experience: I am a mathematician who heads the AAAS Science & Technology Policy Fellowships (STPF) program and was a fellow myself. Mathematicians like us understand the difference between causation and correlation, and we bring a skeptic's mindset to the table, which helps ensure a sound basis for policy decisions.

The STPF program is the perfect opportunity for mathematicians to be on the front line of vital issues that impact society with fellowship assignments in federal agencies, on Capitol Hill, and in the judicial branch. Fellows are outstanding mathematicians, statisticians, scientists, and engineers at any career stage—from newly minted PhDs to seasoned professionals—who learn first-hand about policymaking while contributing their STEM mindset to American government.

The yearlong fellowship runs annually from September through August with a class of more than 250 fellows who represent a broad range of backgrounds and disciplines. AMS is among more than 30 partner scientific societies that sponsor fellowship placements in Congress. AAAS sponsors numerous placements in more than 18 executive branch agencies each year. Engaging with policymakers, adminis-

trators, and thought leaders, fellows make valuable contacts and broaden their career paths. The goals of the program are two-fold: (1) to provide hands-on professional development to fellows that shows them how policy works and how their scientific (mathematical) training can be used in the federal sector, and (2) to provide more analytical/scientific expertise to the government.

Across the federal government, fellows work on many issues and contribute in numerous ways. It is almost impossible to outline a typical fellowship experience. Karen Saxe, AMS Associate Executive Director, was a 2013–2014 AMS Congressional Fellow. She interviewed several fellows who served in the executive branch, highlighting how their math backgrounds were instrumental to their fellowships. Read about mathematicians from the STPF 2017–18 class—Tyler Kloefkorn (National Science Foundation), Kyle Novak (US Agency for International Development), Jessica M. Libertini (Department of Defense), and Chris Leary (US Agency for International Development)—at <https://bit.ly/2C9Yrej>.

Policy fellows with the STPF program, running strong since 1973, benefit greatly from the considerable expertise of its staff. These AAAS staff understand the needs of host offices, solicit position descriptions from agencies, find placements for fellows, and help manage fellows' relationships with their host offices. Applicants develop a personal statement describing their interests, and then finalists go through a matching process where placements are determined by mutual agreement between the fellow, agency host, and AAAS staff.

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The fellowship was an eye-opening pivot point in my career. It's one of the few things that will allow you to fully grasp and enter into the wide breadth of work that is done at the federal level.

After the fellowship, fellows become members of a strong corps of 3,000+ alumni who are policy-savvy STEM leaders in academia, government, industry, and the non-profit arena. STPF alumni with a mathematics background have leveraged their fellowship experience in many ways. Margaret Callahan, an applied mathematician, served as an AMS Congressional Fellow and is now an executive branch fellow at the Department of State. In an article in the January 2019 *Notices*, she stated, "Before starting the fellowship, in part because of the current political climate, many people expressed skepticism about the experience I was likely to have and what I would be able to realistically contribute. However, through this experience—in particular, in working with some of the smartest, most dedicated and hardworking people in my Senate office—I have become, if anything, less cynical about the work that is done on Capitol Hill. Most people I have met here are motivated by an honest desire to serve their country and to improve peoples' lives. The experience has been humbling and inspiring and I have learned more than I ever dared hope."

Other STPF mathematician alumni include Karoline Pershell, who directs strategy and evaluation at a tech company and is Executive Director of the Association for Women in Mathematics; Carla Cotwright-Williams, who is a scientist at the US Department of Defense; and Edgar Fuller, who recently took a position at the Florida International University as the associate director of the STEM Transformation Institute. Another STPF alumnus is D. J. Patil, a mathematician who went on to positions in academics and in industry and was appointed the nation's first-ever chief data scientist in 2015.

I can't think of another career move that you can make that parallels the depth and breadth of benefits you can gain from one short year as a AAAS policy fellow. Interested in jumpstarting your career? Want to contribute to the making of good policy? Learn more about STPF fellowships at <https://bit.ly/2Ahkop9>. Watch a video series on how to apply at <https://bit.ly/2LDB9zs>.



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