



LETTERS TO THE EDITOR

Open Letter

We are writing to express our concern about the future of the profession and the career paths of early-career mathematical scientists. Our focus is on the impact of COVID on the careers of researchers with children and those who find themselves as caregivers (most often women). Additionally, with conferences cancelled and chances for in-person interaction severely diminished, almost no new collaborations have been started. Existing ones have often been halted. Time and space slated for research have been blended with people's personal time and space. The mathematical sciences thrive on the continuing influx of new ideas and the pandemic has slowed this flow to a small drip. In addition, the shift of teaching and research to remote settings, typically at home, has increased the burden of balancing work and life obligations, and this stress has been felt acutely by our colleagues who are also caregivers to children and aging relatives. Our goal in this letter is to help ensure the good health of the profession by suggesting ideas that could alleviate some of the damaging effects of the pandemic on those in our field who are most vulnerable. We would like this letter also to contribute to a future where mathematicians currently employed in temporary positions, and future job applicants, will have a chance to flourish and participate in the growth of the discipline.

We believe that the following measures, some already under implementation, can be especially helpful in addressing this crisis:

- Investment by universities, colleges, and funding agencies in extending, on a case-by-case basis, the contracts of colleagues in temporary positions to offset the loss of productivity and job opportunities during the crisis.
- Efforts by promotion committees to extend the promotion and tenure clock for all junior faculty without the need for these faculty to disclose situations in their home life that may have caused a slowdown in their research, struggles in their transition to remote teaching, or lapses in their fulfillment of service obligations.
- Rebalancing by universities and colleges of teaching and service obligations to allow more time for research. On a temporary basis, departments can rethink the manner in which teaching duties are met and committee assignments are done.

*We invite readers to submit letters to the editor at notices-letters@ams.org.

- Inviting (but not requiring) candidates applying for academic positions, promotions, or grants to document the impact of COVID on their research, teaching, service, and mentoring. To maximize the effectiveness of this recommendation, we suggest that it extend over several years to address the likely long-term impact of the pandemic.
- Awareness by hiring and promotion committees that, in terms of publication records, the gaps caused by the current situation might become most apparent two years after the end of the pandemic. Taking into account arXiv postings and professional invitations rather than only focusing on publications can be considered.

We encourage departments to share ideas about additional constructive measures by posting to the following website: <https://www.msri.org/covid19advocacy>.

We and our colleagues have not experienced the crisis equally. In academia, untenured faculty, women, and caregivers have been disproportionately affected. We are especially concerned that we may disproportionately lose talented women mathematicians and mathematicians from groups historically underrepresented in the field during and following this crisis.

The mathematical sciences have made progress in recruiting junior women over the last few years; losing them now would be devastating. We strive to make similar progress with individuals from traditionally underrepresented groups. We hope that academic institutions and granting agencies can work together toward the common goal to save an endangered generation of mathematical scientists. They represent the future of the profession.

References

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- The Experiences of Postdoctoral Women during the COVID-19 Pandemic, <https://www.nationalacademies.org/event/11-17-2020/the-experiences-of-postdoctoral-women-during-the-covid-19-pandemic#s1-three-columns-a4a54dd8-768c-4ce2-8672-cc247015e7af>
- ASPIRE, The National Alliance for Inclusive & Diverse STEM Faculty, https://www.umass.edu/sbs/sites/default/files/assets/Supporting%20Faculty%20and%20their%20Careers%20During%20and%20After%20Covid_Final.pdf

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Just Mathematics Collective statement on the NSA

I am writing to draw attention to the ongoing campaign by the Just Mathematics Collective (JMC) on the relationship between mathematicians and intelligence agencies; the JMC statement can be found here: https://www.justmathematicscollective.net/nsa_statement.html.

This is relevant to the AMS because one goal of the JMC's campaign is to clarify the relationship between the AMS and the NSA (and associated research institutes, etc.).

Many of the statement's signatories have written to the AMS President with questions about that relationship. Apparently the response was a form letter rather than a public statement; the JMC has made it available here: https://www.justmathematicscollective.net/response_from_AMS.pdf.

The response raises additional questions:

1. According to the response, "The AMS invites any potential employer of mathematicians to engage with our community." I doubt that's literally true—it's easy to imagine scenarios where the AMS would probably refuse a relationship with an employer. (Which of the NSA's international counterparts advertise in the *AMS Notices*? What if a hate group wanted to hire data scientists to help maximise the reach of their online propaganda; would the AMS "invite them to engage"?) I suspect (and hope) that this sentence is not intended literally.

Decisions about which employers the AMS is willing to associate have unavoidable moral and political dimensions.

Is it literally true that the AMS is willing to "engage with" any employer of mathematicians? If not, what criteria

influence whether the AMS engages with a given employer? How were these decided?

2. As mentioned in the response and in some of the JMC statement's footnotes, the AMS/NSA relationship has become attenuated since about 2016. I am interested in whether these changes were motivated by public discussion (for example, the "Mathematicians Discuss the Snowden Revelations" series that ran in the *Notices*), or whether those changes simply reflect the NSA's priorities.

In the event that the NSA, say, asked the AMS to resume handling evaluation of grant proposals, how would the AMS respond?

3. The JMC statement mentions discussions that occurred in the late 1980s about military funding of mathematics research (the 1987 *Notices* letter by William Thurston and the 1987 *Cryptolog* report cited in the statement make for especially interesting reading). I was recently told of a motion passed by referendum of AMS members in 1988; part of the text of the motion is a call to "direct their efforts toward increasing the fraction of non-military funding for mathematics research as well as towards increasing total research support."

Is this still Society policy? If so, how has it been implemented?

The AMS should articulate an explicit stance on the ethics of mathematical collaboration with intelligence agencies; the current situation seems to be that the AMS supports such work, but does not seem to want to acknowledge the ethical issues inherent in such collaboration (as evidenced by, say, the AMS Committee on the Profession declining to issue a statement on the subject, as mentioned in the President's response to the JMC campaign).

Finally, I would encourage colleagues to read and carefully consider the JMC statement, which presents a deeper critique of the NSA than I remember seeing in most of the discussion/media coverage following the Snowden revelations. It argues convincingly that the relationship between mathematics and the security state is not compatible with the goal of mathematics as a humane endeavour by a healthy and inclusive community.

Of particular note is that, at least in my reading, the intent is not to cast aspersions on individual mathematicians who, say, accept military or intelligence agency funding. The intent is rather to stimulate the collective action needed to move toward a situation where nobody is forced to make serious ethical compromises out of professional necessity. In other words, the statement is in the same spirit as Thurston's comment on the above-mentioned referendum: "There are many people, both students and faculty, who whether or not they like the idea of military funding, have no other recourse. ... This is why we need to address the issues as a group: alone we are powerless."

*Kind regards,
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