A WORD FROM…

David Jerison, AMS Vice President

Photo is courtesy of David Jerison.

I am writing to discuss with you how our community should adapt as it grows and spreads beyond my own ability to grasp. I believe that we live in a golden age of mathematics. There are more mathematicians than ever, and rather than running out of research problems to solve or getting permanently stuck in most of them, we keep finding new connections; the outside world keeps demanding more of us.

At the same time, it has become harder for young mathematicians to progress in their careers. Given the projected number of tenure track positions relative to the number of PhDs, we can expect this trend to persist. Other issues, such as how we deliver education, professional training, access, and fairness, and how we learn about mathematics outside of our own specialties, always need the attention of the AMS. I will be concentrating on the career issue.

One virtue of the environment for mathematicians in the US is how disorganized it is. In other countries, whole cohorts of mathematicians can have their schooling and careers determined by a government initiative or the absence thereof. The US job market is too incoherent for that. There is, however, such a thing as too much chaos. The AMS has tempered some of the piecemeal aspects of the academic job market with `MathJobs.Org`. I wish there were such a system for graduate school applications. Perhaps we can cooperate to create one out of the existing AMS `MathPrograms.Org` site, where universities have begun listing programs at all levels. [See sidebar on facing page.]

While academic career services remain central to the AMS, the Society needs to develop new mechanisms and resources for the expanding mathematical job market outside academia. It can use assistance and suggestions from job seekers and employers. The April *Notices* featured several essays about jobs outside of academia in the new Early Career section that I recommend to everyone. We could use dozens more like them. I also call your attention to the blogs at the AMS site `https://blogs.ams.org`, which include discussions of academic careers.

We should be comparing notes on how each institution is dealing with the current job territory. In my department at MIT, some current graduate students have taken the initiative to advise their peers on how to get job interviews. We have invited alumni(ae) back to explain their experiences. What is happening in your department?

I am optimistic that as more mathematicians of all types work in industrial settings, those career paths will become easier to pursue. I also think that we as teachers will find it easier to explain the relevance of many mathematical ideas. Moreover, I expect that with this sociological change, even so-called pure mathematicians will be swept up in new streams of research and new perspectives on old questions.

In *The Music Man*, the stage is set with the lament that it's "different than it was" and the rejoinder "No it ain't, no it ain't, but you gotta know the territory." In my view it is, indeed, different now, and we have to learn to navigate the new territory collectively.

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MathPrograms.Org

- `MathPrograms.Org` is a website for collecting applications to mathematical programs serving populations that range from high school students through graduate students to senior researchers. Sponsored by the AMS in cooperation with the Duke University Department of Mathematics, it is a clone of `MathJobs.Org`, and many of its features will be familiar to users of that system.

- `MathPrograms.Org` allows programs to collect all application materials at a single site. Applicants can upload any documents specified by the program and answer any set of questions the program chooses to ask. Letter-writers can upload confidential letters of recommendation, which applicants can mark for inclusion in their applications to a particular program. Each program designates the individuals who can access the applications for the purpose of reading and rating them, and confidential EEO information can be collected and made available to designated individuals. Responses to applicants can also be made through the system.

- `MathPrograms.Org` is convenient for applicants, who register once and then can apply to any program on the site, and for letter-writers, who need upload each letter only once, no matter how many applications it is used for. Readers can access all application materials at a single site, and application documents and data can be downloaded.

- There are currently 63 groups or programs using `MathPrograms.Org`, including REUs, grant programs, institutes, and honors of various kinds. Some institutions use the system for graduate admissions, since its features are well suited to that task. In 2019-2020 the fee will be $310 for one program and $590 for up to seven programs. With the university's cooperation, it is possible to upload information from `MathPrograms.Org` to university application systems.

For more information about `MathPrograms.Org`, contact Kim Kuda in the AMS Professional Programs Department at `mathprograms@ams.org` or 800-321-4267, ext. 4096.