

# Fostering Inclusive Communities:

## Reasons why YOU should organize a Mathematics Research Community

*Katharine A. Ott*

We are all accustomed to seeing some variation of the following statement on a conference announcement:

*“Graduate students, postdocs, and persons from under-represented groups are especially encouraged to apply.”*

Most of us have fallen into at least one of these categories, whether for a short period of time or in perpetuity. We’ve been especially encouraged to apply, but have we always felt especially encouraged to belong? I do not mean to say that the sentiment is ill-intentioned, but I think we can agree that this one sentence is not enough to make a meaningful change in the inclusivity of mathematics. I write today to put the spotlight on a program that is helping early career mathematicians establish a sense of belonging through fostering research communities: the Mathematics Research Communities (MRC) program of the AMS.

In existence since 2008, the MRC program serves those who have recently finished their doctorates, as well as graduate students who are close to finishing. It has over 1,300 alumni spread over 40 research cohorts. I am one of those alumni, and a past co-organizer of a program, so I can speak to particular ways the MRC has helped me to feel a sense of belonging. As a participant in 2009, I met a cohort of harmonic analysts who would be my “conference squad” from that day forward. What a relief to see not just familiar faces at a conference, but also to be welcomed by a group of colleagues who you know and trust. As a co-organizer in 2014 I similarly established lasting connections with mathematicians. These colleagues are not so early-career anymore, which has opened even more avenues for us to network: I have been invited to speak in their special sessions, and they have become resources for talking about post-early career issues such as family

and maternity leave, tenure dossiers, and re-entering the job market.

It is the signature of the MRC program that lasting communities are forged during the week-long summer conferences and sustained by collaborations and conference participation throughout the following year. As Rebecca Everett, participant in the 2018 program *Agent-Based Modeling in Biological and Social Systems* writes, “I think the camp-like atmosphere of the MRC contributed to the community feeling. There is something about being in the woods sitting around a fire that helps you bond with those around you. Especially when there are s’mores!” While the impact of s’mores should not be discounted, there is another reason why MRC’s are so successful at creating communities of early-career researchers: the organizers.

Organizers are instrumental to the MRC program and, in particular, to creating the inclusive communities discussed above. They bring to the table the mathematical content of the program. The very act of sharing one’s research problems with early career researchers is an incredibly welcoming and inclusive action. Organizers also provide invaluable professional development (generally through panel discussions). Some of the topics covered in recent programs are how to choose a journal, how to referee a paper, and how to apply for external funding. These aspects of academic life are all too often left unmentioned in graduate programs, which can lead to new researchers feeling unprepared, and in turn, unwelcome.

In short, organizing an MRC is very impactful work, and it is work that you can (and should) do! If you are unfamiliar with the MRC program, more details including the application process are at [www.ams.org/programs/research-communities/mrc](http://www.ams.org/programs/research-communities/mrc). If the arguments presented above have not yet convinced you to organize an MRC program, read on to hear some common excuses and a rebuttal to those excuses.

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## Some reasons NOT to organize an MRC, and a counterargument

**“I’m not senior enough.”** Each MRC program (there are typically three or four per year) is organized by a group of 3–5 mathematicians. A successful formula is to have a variety of experience within the organizing team. Junior mathematicians can have key contributions on several fronts, including professional development. Professional development is a main component of the MRC model. Formally, the professional development often takes the form of one or two panel discussions in the evenings during the program. Mathematicians at the level of Assistant Professor are invaluable to these conversations because they are so close to the process of finishing the dissertation, applying for postdocs and jobs, and navigating the early career years. Combining the on-the-ground experience of junior researchers with that of senior organizers, who likely have experience on hiring committees, refereeing journals, and evaluating grant proposals, is a fantastic combination. From a research standpoint, the process of planning the mathematical content of an MRC can elucidate research questions and give you a wider perspective on your research field, all while recruiting new talent to work on problems in the field.

**“I don’t work with graduate students, or I’m not at a PhD granting institution.”** The MRC would like to see representation from a wide variety of positions in academia and even outside of academia. Mathematicians working at research institutions, regional universities, and small colleges are encouraged to apply. Indeed, an important role of the organizing team is to prepare junior researchers to enter the profession. We are all well aware of how few tenure track positions are available at research institutions, as well as the fact that many participants will have alternative career paths in mind.

For organizers who do not regularly interact with postdocs or graduate students, the MRC is a unique way to connect with these groups. For anyone at an undergraduate institution like myself, the MRC could be thought of as a REGP (Research Experience with Graduate Students and Postdocs). Other benefits that are attractive to organizers are support to travel to the Joint Mathematics Meetings the year following the MRC, as well access to additional travel money for small gatherings of MRC alumni to further research projects (“micro-conferences”).

**“My research area isn’t suited for this format.”** Researchers in any area of pure and applied mathematics are welcome to apply to the MRC program. Worried that your field requires too much background knowledge? Lillian Pierce, member of the organizing team of the 2018 program *Harmonic Analysis: New Developments on Oscillatory Integrals* writes, “We were initially skeptical of how the MRC format would work on a highly technical topic—could participants really grapple with the problems without having a long series of lectures beforehand? But in fact the MRC was very successful, and has stuck with me as an image of a good way to get young researchers going in challenging territory.”

**“I don’t have the time or energy.”** The AMS provides a great deal of support for organizing an MRC. They will take care of advertising, the online application process, reimbursements, and all of the day-to-day operations (think coffee breaks, technology set-up, photocopying, etc.) That means that organizers are able to focus on the mathematics of the program. Now, it is true that this aspect of organization is intense. “It is a lot of work,” explains David Penneys, a participant in 2014 and organizer of the 2018 program *Quantum Symmetries: Subfactors and Fusion Categories*, “You have to really think about the problems that you’re going to do before you get there. You have to have a few really well-thought out projects in your back pocket.” But, isn’t this the kind of work that as mathematicians we like to do?

**“There are plenty of conferences in my field already. How is this any different?”** There are three obvious ways in which an MRC program differs from a typical research conference: talks are generally limited to a few (or none), all participants are early career mathematicians, and there is a significant professional development component. If your aim is to disseminate an overview of the latest progress in your field to other experts, a conventional conference may be the way to go. If you are interested in training junior researchers, and if you can imagine the benefits in the long term of fostering a healthy research community in your field of expertise, then an MRC program is the perfect venue.

If this article has piqued your interest, there is plenty of time to gather a group of organizers and prepare to submit a proposal for summer 2021. The proposal deadline for organizers will be in August 2019. The MRC Advisory Board and AMS staff will offer suggestions in advance of the proposal deadline for those who send inquiries. Proposals for the 2020 Mathematics Research Communities are currently under review, and the 2019 programs are accepting applications for participants until February 15, 2019.

### Photo Credit

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### Invitation for 2019 MRC Applications:

The AMS invites applicants for the 2019 MRCs. The eligible group includes those who are within two years of completing a PhD to those who’ve earned a PhD within the past five years. Find more information about each conference and how to apply on the MRC 2019 webpage: [www.ams.org/programs/research-communities/mrc](http://www.ams.org/programs/research-communities/mrc). The application deadline is **February 15, 2019**.