

Organizing an MRC Summer Conference American Mathematical Society

2025 Proposal Guidelines

The Mathematics Research Communities (MRC) Advisory Board of the American Mathematical Society (AMS) invites proposals to organize MRC summer conferences focused in all areas of the mathematical sciences and their application. These conferences form the centerpiece of the MRC program, which provides participants a range of activities to develop and supporting their collaborative research and professional development. The Advisory Board and Program Directors welcome proposals covering pure and applied mathematics, interdisciplinary domains, and especially mathematically-oriented topics of relevance in business, entrepreneurship, government, industry, or nonprofit (“BEGIN”).

Parameters

- **Program goal:** to offer early-career mathematicians—two years pre- to five years post-PhD—a rich array of opportunities to engage in collaborative research, build a network focused in an active research domain, and receive mentoring and career guidance from leaders in that area.

Summer conference

- Each topical conference runs during one of two or three weeks during the summer. Typically in late May to early June - *Dates to be determined*.
- For each topical conference, the program provides travel and subsistence support for either 20 or 40 participants.
- A 20-person conference involves at least 2 and at most 3 organizers; a 40-person conference involves at least 2 and at most 5 organizers. The program provides travel support and an honorarium for each organizer.
- During the summer conference, participants work with one another and the organizers on open research problems, engage in professional development activities, and have opportunities to enjoy various outdoor activities at the conference site.

Proposal Content

The proposal should be no more than six pages, and should address the following:

- **Personnel:** List the organizers along with their institutional/company/agency affiliation and contact information. As an ensemble, an organizer team ideally embodies

connectivity in a research area, experience mentoring PhD students, diversity (experiential, demographic, institutional type, etc.), and enthusiasm to help mathematically-oriented early-career professionals engage in collaborative research. Addressing what each organizer brings to the team will be key. If the number of personnel listed is out of line with the guidance here, then the proposal will not advance.

- **Scientific Content:** Outline both the scientific background and topic of the proposal, as well as the topic's timeliness. Discuss the sort of academic or experiential preparation participants will need in order to benefit from and contribute to the program. Describe the activities and sample problems with which you anticipate engaging the participants. The advisory board and program directors recognize that the domain of the proposed MRC—whether it is pure or applied mathematics, interdisciplinary, or BEGIN-problem focused—will influence the form and substance of what they plan for the week.
- **Participants:** Participation in the MRC program is the result of a competitive application process and the participants should be able to benefit from and contribute to the summer conference and other activities. These individuals are selected from an applicant pool that, we hope, is diverse along such lines as gender, race, ethnicity, geography and institutional/organizational type. The AMS welcomes everyone interested in mathematics to join in its efforts to build a community that is diverse, respectful, accessible, and inclusive. Indicate where some of these potential applicants might be and how they can be made aware of the opportunity and welcomed to apply. Keep in mind that a condition of the NSF grant supporting the program is that most (at least 85%) participants must be US-based (affiliated with a US institution, laboratory or company, or a US citizen based abroad), and that up to 15% of grant-supported participants may be international.
- **Objectives:** What will the participants take away from the conference? How will the participants' outcomes at the summer conference fit with the overarching goals of the program? How does the topic of the summer conference complement the collection of past offerings?
- **Participant Preparation:** Between the time participants accept admission into the MRC program (in early March) through the beginning of the workshop (in June), organizers utilize an online collaboration platform provided by the AMS to enable preparations for their workshop. Describe some of the activities (i.e. assigned readings, online lectures, group formation, etc.) that you anticipate would prepare the participants to make the best use of the summer workshop. The MRC format provides five full days (Monday – Friday, morning through afternoon, with meal and coffee breaks, and two evening time slots) for mathematical and professional development activities, as well as a fallow Wednesday afternoon. Within this framework, describe how you anticipate engaging participants in collaborative research.
- **Professional Development:** The goal of this part of the program is to provide useful guidance to the participants regarding the wider professional arena into which their careers are leading. For those taking an academic route, questions regarding job searches, interviews, research, teaching, and work-life balance may be germane. For those considering, or simply wanting to know more about a BEGIN route, topics related to working in highly-interdisciplinary teams, dealing with intellectual property, producing and executing research and development plans, acquiring management skills, and grappling with ethical questions might be part of the activities. Activities related to professional development might include presentations, panels, mini-workshops, or other formats.
- **Scale and Participant Recruitment:** Do the organizers have a preference for a 20-participant or 40-participant conference? In either case, discuss how many potential applicants there may be and present any ideas you have for raising awareness and recruiting a robust, diverse applicant pool.

- **Other:** Include other relevant information that you feel may not fit into the categories above.

The Advisory Board will evaluate the proposals considering the following questions:

- How will the goals of the MRC program be achieved?
- Is the topic appropriate for such a program (broad enough to attract a diversity of participants, yet focused enough to allow for productive collaborations)?
- Is there a sufficient number of potential participants with the right background and interest to warrant offering the summer workshop?
- Will appropriate mentorship and follow-up be provided?

Send expressions of interest and all inquiries by September 15, 2023, to Sarah Bryant, Director of Programs, at mrc2025@ams.org. Proposals should be submitted via email.

Complete proposals received by November 30, 2023 will receive full consideration. The programs directors and the MRC Advisory Board aim for the development of a complete conference program by the end of February, 2024.