Mathematical Sciences Research Institute

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## Proposal Guidelines for Critical Issues in Mathematics Education (CIME) Workshops

The CIME workshop series addresses critical issues in mathematics education today. Workshops are designed to engage mathematicians from research-focused and teaching-focused institutions, mathematics education researchers, K-12 teachers, and other interested stakeholders. The workshops provide the following opportunities for participants:

- Learn about a critical issue and efforts to address it.
- Engage in cross-community conversations and collaborative work on the issue.
- Consider social justice implications and how the issue affects students in the bottom quartile.
- Build relationships with and respect for members of other professional communities.

Central to the planning of a CIME workshop are three key elements.

1. Title that identifies a critical issue in mathematics education
2. Set of guiding questions
3. Organizing committee

The questions should synthesize different stakeholders' perspectives in a way that more helpfully structures mutual work on the critical issue than do the framings commonplace in the separate communities or the public discourse.

MSRI's Educational Advisory Committee (EAC), which reviews proposals, will consult with proposers regarding a title, set of guiding questions, and potential organizing committee. These form the foundation for the website announcement and structure the workshop agenda. The guiding questions should synthesize different stakeholders' perspectives. They should be developed to support mutual work in a way that starts from a synthesis of the formulations developed by individual communities.

The questions formed are an important contribution for two reasons. First, during the workshop, participants often find themselves discussing and appropriating both the specific language and the framing of the core questions. Second, the questions are seen as a valuable takeaway of workshops, helping people approach critical issues in new ways and providing them with language for engaging with others.

Proposals should discuss the timeliness of the topic, its rationale, and initial ideas for a conference design. They should include a draft title, set of guiding questions, and slate of potential members for the organizing committee. The EAC will help with additional perspectives and broaden the framing of a focused topic.

## Evaluation Criteria for CIME Workshops

The EAC uses five criteria to evaluate proposals for CIME workshops.

1. Is a timely critical issue for mathematics education identified?
2. Is the issue identified in a way that synthesizes different stakeholders' perspectives and facilitates productive, mutual work?

Has the issue been considered across different institutional contexts and from the vantage of different stakeholders? Does the framing require a collective response, imagining roles for everyone and valuing their contributions?
3. Will the topic as identified be of interest across CIME's target communities?

Does it substantially affect, and warrant the focused attention of, a broad portion of the professional communities that MSRI represents? Is it expressed using language that will be meaningful and engaging for different stakeholders?
4. Have potential social justice ramifications been duly considered and included? Has the issue been considered, as viewed from marginalized communities, and have these concerns been incorporated into the framing of the problem? Has impact on marginalized communities been thought through and have members of these communities been included in conceptualizing the issue and planning ways to address it?
5. Will the design of the program facilitate deeper understanding and fruitful cross-community collaboration?

Does the program design coherently present a broad and insightful analysis of the issue, a cogent articulation of problems currently faced, a sampling of the best ideas for how to intervene on the problem, and creative ways for participants to get to know each other and work together? Does the organizing committee represent well the stakeholder communities, with persons of good knowledge, judgment, and administrative skills? Do the proposed presenters represent broad and deep expert knowledge of the issue, and also the most innovative thinking about the improvement of practice and policy?

As submitted, proposals do not need to fully satisfy criteria 2-5, but the EAC will decide based on its perceptions of how readily proposals might be developed to satisfy the criteria. If the EAC views the proposal as viable, it will work with proposers to further develop the topic. Once established, the organizing committee will continue to develop the topic consistent with the criteria above.

## Background on CIME Workshops

The CIME workshops frame critical issues in ways that combine the perspectives of mathematicians, mathematics education researchers, K-12 teachers, and the broader public. Two-and-a-half-day meetings, typically in early spring, provide rare opportunities for stakeholders to expand awareness and look for opportunities for common action. Drawing 100 or more participants, activities are designed to support cross-community engagement, with a mix of plenary sessions, panels, discussions, small-group work sessions, and time for informal conversation. You can read about past workshops on the MSRI website.

Given the agenda for CIME conferences, participation across key communities is vital. It may be helpful to keep four groups in mind: (i) mathematicians, with doctorates in mathematics, working in mathematics departments; (ii) education researchers, teacher educators, or professional developers; (iii) K-12 teachers and other K-12 professionals; and (iv) individuals invested in students and communities most marginalized in mathematics. It is important to have representation of these communities on the organizing committee and among presenters. Special attention should be given to involving mathematicians from diverse colleges and universities (including community colleges and minority-serving institutions). MSRI is particularly committed to increasing the participation of racial and ethnic groups underrepresented in mathematics, younger professionals, and women as organizers and participants.

The organizing committee will plan the program and solicit speakers and key participants. All official letters of invitation are issued by MSRI. Using the guiding questions and considering diverse stakeholders and institutional settings, organizers typically create a logical structure with sessions and speakers chosen to frame the issue and engage participants in taking it up. This distinctive design of CIME workshops means that organizers may need to confer extensively with potential speakers early in the process, helping them understand the audience and requesting that they present their own work, but in a way that contributes to the broader framing and collective work of the workshop.

Proposals are accepted any time of the year, but are most expediently considered when submitted by January 31, just prior to the annual CIME workshop.

