

**THE SPECIAL INTEREST GROUP OF THE MATHEMATICAL ASSOCIATION OF
AMERICA ON RESEARCH IN UNDERGRADUATE MATHEMATICS EDUCATION
(SIGMAA ON RUME)**

POSITION STATEMENT ON MENTORING

Prepared in January 2018 by the Committee of Equity and Mentoring

Purpose and Rationale

This document articulates the Position Statement on Mentoring from the SIGMAA on RUME, and is a companion to the Position Statement on Equity. The Statement on Mentoring is intended to foster development of a more robust, inclusive, and equitable discipline and professional community. This document conceptualizes mentoring within the RUME community in relation to our research, teaching, and service, and highlights productive perspectives to guide work within the organization in attending to issues of mentoring. It begins with an overarching guiding principle of inclusivity.

The SIGMAA on RUME commits to the principle of inclusivity, which recognizes the unique needs and contributions of learners and scholars. We respect each person's right to express and present themselves - relative to religion, culture, ethnic background, sexual orientation, gender identity, physical ability, and mental ability - while engaging within the RUME community. In particular, the SIGMAA on RUME takes the position that mentoring should be positive and affirming, without discriminatory behaviors or power-relationship violations such as sexual harassment. We see this commitment as central to the purpose of the organization. As our charter articulates:

SIGMAA on RUME is formed for the purpose of encouraging quality research in undergraduate mathematics education (RUME) and its application in teaching practices. SIGMAA on RUME provides organizational support for researchers conducting RUME and to those interested in using the results of RUME. It also provides organizational support for the dissemination of the results of this research.

It is the position of the SIGMAA on RUME that a key characteristic of “quality research in undergraduate mathematics education” and “organizational support for researchers” is driven by the goal of inclusion. Specifically, the organization aims to ensure our members equitable access to the conference and professional resources, and continue to understand and discover innovative ways to ensure access and success for all students in undergraduate mathematics. A primary goal of this statement is to ensure that the organization serves this purpose to the highest degree both as a discipline and as a research community.

An important step towards inclusivity involves identifying and removing barriers for full participation in the community by members of marginalized groups. These groups include but are not limited to: people of color, women, people living in poverty, people with disabilities (hidden or otherwise), individuals who identify as LGBTQ+, and individuals who identify as part of a religious minority. We recognize that inclusion also extends to scholars and educators from underrepresented types of institutions. In practice, the organization aims to prioritize voices and concerns of members from these groups. Conference evaluation is one mechanism to gather concerns and feedback. More broadly, the community and its leadership will be intentional in recruiting and inviting scholars who might otherwise be excluded or marginalized to fully

participate in the community and in leadership. This Statement on Mentoring highlights existing structures informed by the work of a previous committee charged with a focus on mentoring initiatives in RUME and identifies recommendations for expanding this work moving forward.

Statement on Mentoring

RUME is committed to nurturing scholars as they navigate through their own individual career trajectories, including the research, teaching, and service components of these careers. We adopt Bibkel and Rosenthal's (2011) definition of mentoring as, "a scaffold for sharing expertise in the service of lifelong learning that could otherwise only be attained from direct experience." Mentoring in the RUME community entails providing mentorship around multiple aspects of members' professional roles that is appropriate for the types of institutions and contexts in which they hold appointments. Variation in members' institutional contexts carries variation in members' responsibilities and access to local supports within their institutions. We highlight the importance of mentoring new researchers in the RUME community, as this is the primary means by which our field and community grows and evolves. We particularly highlight the importance of mentoring for graduate students (especially those at programs without RUME faculty), recently graduated mathematics education researchers, mathematics education researchers preparing for tenure and/or promotion, and mathematicians interested in contributing to mathematics education research.

The SIGMAA on RUME takes as a goal that all members of the RUME community will consistently report that they have access to high-quality and consistent mentorship that meets their needs related to each of research, teaching, and service. This mentorship should likely come from a variety of sources and individuals to increase the diversity of perspectives and types of relationships. The SIGMAA charges itself to revisit and update this statement every five years¹, or more frequently, in order to ensure the vibrancy and relevance of the position statement.

Previous Committee: A previous committee (circa 2009) identified the following areas for growth related to mentoring within RUME: mentoring with research, mentoring with tenure and promotion, making RUME more visible and more accessible (to mathematicians and non-RUME mathematics educators), and a greater incorporation of graduate students into RUME community structures. We are pleased with the amount of growth in these areas; below we highlight ways in which our community has begun to address these goals through mentoring initiatives and other structures.

Existing Structures: Our community's commitment to mentoring is currently enacted through formal and informal activities, many of which developed out of the previous committee's call to action. Such mentoring activities include:

- Research working groups that meet prior to the annual conference; many of these working groups continue to meet regularly throughout the year to provide research partnerships and collaborations among isolated researchers
- The creation of the *International Journal for Research in Undergraduate Mathematics Education*
- A number of regional RUME conferences held throughout the year, including OK RUME in Oklahoma and Northeast RUME

¹ The most recent draft of this statement was written in January of 2018

- Advising lunches during the RUME conference, where senior members of RUME host informal conversations surrounding topics of interest for RUME, such as applying for jobs or grants and submitting journal articles
- Planned activities at the annual conference that provide avenues for informal community building (e.g., graduate student receptions, group dinner arrangements, social gatherings)
- MPWR (Mentoring and Partnerships for Women in RUME), a one-day seminar and mentoring network which supports women within RUME
- Ongoing research groups, such as the Proof, Calculus, and College Mathematics Instructor Development Research Groups

These efforts are meant to supplement other professional development opportunities, like the AMTE's STaR Program, or the MAA's Project NExT. We value those other opportunities in their effort to provide formal mentoring (related to research, teaching, and service) as well as help new scholars develop support networks. We hope that the RUME community can continue to expand and grow these mentoring opportunities.

Charges for action: We see the previous list of activities as a starting point for supporting the development of an inclusive community. To advance our efforts to provide effective and sustainable mentoring, we advocate the creation of additional formal and informal space and time at the annual conference for mentoring activities. We charge the executive and planning committees and a future committee focused on mentoring to:

- Continue to think about the structure of the conference, specifically ways in which the structure supports/inhibits mentoring activities. We value both the working group time prior to the conference and the existing formal and informal structures within the conference. However, 2017 survey responses from RUME community indicate that there is currently not sufficient time for mentoring and networking activities. We recognize the challenge of adding informal networking time in an already packed conference schedule and structure. We charge the executive and planning committees to prioritize this time during conference planning, and to be creative and flexible in working to accomplish these goals.
- Begin to consider ways of embedding conversations about mentoring related to research and research ethics (e.g. as it relates to data collection, analysis, publishing, etc.) into existing and new structures for mentorship.
- Work with leaders of existing mentoring groups (e.g. MPWR, Ongoing Research Groups) to identify supportive aspects within those structures and how those supports can be made (more) available in the broader RUME community.

While the SIGMAA on RUME cannot promise that all members receive high-quality mentoring, we do offer a description of the skills and attributes of high-quality mentoring and charge the membership and subsequent committees with developing ways to help members find mentors and mentoring opportunities with these qualities to support them in their professional growth.. The qualities of mentoring that we believe to be critical include (adapted from Blixen, et al., 2007):

1. Supporting the professional development of the mentee
2. Advising and guiding the mentee
3. Providing structure and support for the mentoring activities
4. Teaching subject-specific knowledge

5. Sharing of information relevant to the profession and the mentee's professional growth
6. Promoting networking with those able to further the mentee's professional growth
7. Offering constructive criticism and feedback

Salient in the above qualities is an assumption that the mentor-mentee relationship will be one that is positive and affirming, where the mentee's voice and perspective is valued. That is, while a mentor-mentee relationship is one that includes a power-imbalance, the mentor should be aware of and attempt to minimize language and actions that could silence or otherwise alienate the mentee. Additionally, the mentor should create an environment where the mentee can feel empowered to speak up and advocate for themselves in the mentor-mentee relationship.

Concluding Remarks

We put forth this position statement to explicitly state the commitment of the RUME community to inclusively support the professional development of all members in their practice - as researchers, teachers, and community members. The SIGMAA commits itself to regular practices and the building of intentional spaces and opportunities to promote and support mentoring for our members. This should take multiple forms and include a focus on multiple parts of the professional learning trajectory. We charge the community to continue working towards the creation of an inclusive environment and discipline including via the strategic use of mentoring efforts.

Guiding References

- Bickel, J., & Rosenthal, S. L. (2011). Difficult issues in mentoring: Recommendations on making the "undiscussable" discussable. *Academic Medicine*, 86(10), 1229-1234.
- Blixen, C. E., Papp, K. K., Hull, A. L., Rudick, R. A., & Bramstedt, K. A. (2007). Developing a mentorship program for clinical researchers. *Journal of Continuing Education in the Health Professions*, 27(2), 86-93.