

ASSOCIATION FOR WOMEN IN MATHEMATICS MENTOR NETWORK 2019 ANNUAL REPORT

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1. HISTORY OF THE MENTOR NETWORK

The goal of the Association for Women in Mathematics (AWM) Mentor Network is to match mentors, both men and women, with girls and women who are interested in mathematics or are pursuing careers in mathematics. The network links mentors with a variety of groups: faculty at all ranks, post docs, graduate students, undergraduates, high school and middle school students, teachers and research scientists. Matching is based on common interests in careers in academics or industry, math education, balance of career and personal life, or general mathematical interests. Communication between mentor pairs is primarily via email, but in some cases some personal contact has been possible.

The AWM Mentor Network was established in 2001 by Rachel Kuske (University of British Columbia) together with the AWM, following the 2001 IMA conference Connecting Women in Mathematical Sciences to Industry. This conference showed the need for more opportunities available to women for networking and career guidance from those with experience and expertise. That need continues, perhaps now more than ever as increasing numbers of girls and women follow mathematical studies and careers. Mentees are from a broad range of levels, primarily undergrads and grads, and mentors are from academia, industry, and government. Most mentor requests are geared towards educational and career interests, with grad students and recent Ph.D. requests often closely connected with a research area. From 2001 to 2007, all mentor pairs were matched by the Mentor Network Coordinator, Rachel Kuske. In January 2013 Rachel Kuske was recognized for her exceptional voluntary service to the AWM as one of the recipients of the inaugural AWM Service Award. In 2007, the Mentor Network Coordinating Committee was formed. It was originally chaired by Malgorzata Klosek (National Institutes of Health) who functioned as Mentor Network Coordinator. For the latter part of 2008, Rachel Kuske resumed her role as Mentor Network Coordinator. The committee was restructured in late 2008 to distribute the workload more evenly amongst the volunteers.

2. HOW THE MENTOR NETWORK FUNCTIONS

The initiation of a mentor pair begins primarily through the AWM Mentor Network website, <http://www.awm-math.org/mentornetwork.html>, which handles both requests for mentors and mentor volunteers. In both cases individuals fill out the electronic mentor request or volunteer form, selecting from a variety of interests and priorities in their mentor match. Both the mentor and mentee forms were revised by the Mentor Network Committee this past year. Both forms have three free form parts, 1) Mathematical areas of interest 2) Matching preferences and 3) Other comments, questions, or suggestions, which often plays a key role in finding the right match. Once a request is made, the Mentor Network administrative assistant, Kayla Toy (junior math major at the University of San Francisco), searches the database to find a mentor who closely matches the

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mentee's requests. She then selects two or three mentor candidates to present to the Mentor Network Coordinator for that particular month. Each committee member serves as the Mentor Network Coordinator on a rotating basis for two months per year. Once the Coordinator makes a suggested match, the administrative assistant reaches out to both parties to make the match. At this time she also sends both parties the guidelines of the Network. If for some reason, a match does not work out, the administrative assistant notifies the Mentor Network Coordinator, and an alternate suggestion is made.

The number of mentor matches in the database has ranged between 150 - 230 at any given time over the last few years. Average time of contact in a mentor pair is somewhere between 6 months and 1 year. Some longer term matches last several years, with some exceptional cases even resulting in research collaboration. Shorter term matches have lasted approximately one term, focusing on advice for career or on-going education. Some mentors advise more than one mentee at a time. The Network provides additional support to mentors and mentees with special requests and has also facilitated some cooperation between mentor pairs.

3. IMPACT OF THE MENTOR NETWORK

Each committee member serves as Mentor Network Coordinator on a rotating basis for 2 months per year. Rachel Kuske serves as an advisor to the Network. Currently the committee is as follows.

Emille Lawrence, University of San Francisco (chair)	8/1/19-7/31/22
Genetha Gray, Intel	8/1/14 - 7/31/20
Jessie Hamm, Winthrop University	8/1/17 - 7/31/20
Michelle Dunn, Data Science Company	8/1/18-7/31/21
Jessica O'Shaughnessy, Shenandoah University	8/1/17-7/31/20
Omayra Ortega, Sonoma State University	8/1/16-7/31/21
Rachel Kuske (advisor), University of British Columbia	

We have the following information regarding the matches made in 2019.

- (1) Number of Matches Made in 2019:
- (2) Number of Mentor Requests Made:
- (3) Number of Active Mentors in the Database: 187

4. FEEDBACK FROM MENTORS

In September of 2019, the chair of the Network, Emille Lawrence, along with the assistance of the administrative assistant, Kayla Toy, made a survey for Network mentors in order to acquire feedback on the efficacy of the matching process and the Network, in general. Survey questions included:

- How often do you communicate with your mentee?
- Has your relationship with your mentee been valuable to you both?
- Do you have any suggestions for the Network to better your experience?

We sent the survey to all 98 mentors currently listed in our database. Of those, we received 30 responses. Here is a summary of the results from the survey.

- 57% of respondents said they were currently matched with a mentee or mentees. The others were not.
- 79% of 19 respondents said that the mentee matched with them was a good fit; 21% said that it was not a good fit.

- 14% of 21 respondents said they communicate 2 or more times per month with their mentee; 29% said they communicate about once per month; 19% said they communicate a few times per year
- 18 people gave free response answers when asked if the relationship has been valuable. Most everyone said yes. There was one person who asked for clearer guidelines and expectations to be spelled out.
- There was two concrete suggestions:
 - (1) mentors/mentees should be paired somehow based on what question(s) mentees have and what type of advice they seek. Right now, we match based on area of expertise (this is a question on our questionnaire).
 - (2) the network could email the matched pairs once every 4 or so months to remind each other of the match/encourage contact. I suppose the pair could also use this as an opportunity to speak up as to whether or not the match is working out or if they prefer to find someone else.

The Network is actively working towards implementing these suggestions.

5. SUPPORT FOR THE MENTOR NETWORK

The key to the success of the AWM Mentor Network has been largely due to the personalized and volunteer aspects of the program. Much of the effort is provided by the many volunteer mentors, together with the activities of the AWM Mentor Network Committee in setting up mentor-mentee pairs. The Mentor Network is designed to be as low-maintenance as possible. Currently, the most expensive aspect is the support of the Administrative Assistant. Her work concentrates on database updates and a variety of supporting activities: follow-up checks on mentees' commitment to the guidelines, regular surveys providing feedback on the members' experiences and preferences, and assistance with advertising. Current funding for the Administrative Assistant is provided by the following U.S. and Canadian Mathematics Institutes:

American Institute of Mathematics (AIM)
Institute for Advanced Study (IAS), School of Mathematics
Institute for Mathematics and Its Applications (IMA)
Mathematical Sciences Research Institute (MSRI)
Pacific Institute for the Mathematical Sciences (PIMS)

As mentioned above we are eager to increase our reach to mentors and mentees, thus upholding our mission to encourage women and girls to study and pursue active careers in the mathematical sciences. If your organization would like to financially support any of these new initiatives, we welcome your agency and thank you in advance. The committee is also continually receptive to ideas regarding new ways further our reach or to better serve our community. Suggestions, comments, or kudos can be sent to the Mentor Network Chair, Emille Lawrence, at the email address below.

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