



The AMS Graduate Student Blog, by and for math graduate students, includes puzzles and a variety of interesting columns, such as this one from January 2018. blogs.ams.org/mathgradblog.

Towards Embracing Diverse Mathematical Communities

by Vanessa Rivera-Quinones

As graduate students, we interact with a wide variety of people: local communities, students, peers, and professors. Within these interactions, there is great diversity: different backgrounds, experiences, and cultures. I believe this is something that makes our mathematical community vibrant if we choose to embrace it.

However, through our training as mathematicians, are we asking ourselves: How are we contributing to this diversity? How do we create environments that embrace the identities of those who “do” mathematics? Are we making mathematics accessible and inclusive? These are questions that I ask myself, but would be interested in making them part of a larger narrative.

When I started thinking about these topics I found myself overwhelmed with the knowledge that this affects the lives of many on a daily basis. This is part of their personal story and in many ways an unavoidable part of their journey to become mathematicians. It affects my students who look into who does mathematics and may not see someone who they can relate to. It affects my peers and professors who may be the first “blank” or the only or the few “blank” in their classrooms, at a conference, or departments.

Then the question became, what do I do? I searched high and low for a magical answer and found that...it’s complicated. But, I think there are certainly small things we can do to open up the conversation as individuals and as a community. Here are a few things I’ve found useful, and I hope that this list helps others who wish to start discussing some of these questions:

1. Create spaces for conversation.

A. It may look like small coffee chats with peers, one or two conversations with faculty, or participating in conferences that facilitate these conversations. For example, the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) is a great one! Others that come to mind are Latinxs in the Mathematical Sciences, Field of Dreams Conference, and Blackwell-Tapia Conference.

B. As part of our AWM student chapter, we have created a Teaching and Diversity Seminar where we bring speakers to tackle some of these questions. We look in neighboring departments and we look for passionate individuals within our fields. One of our speakers this semester, Dr. Rochelle Gutierrez, has a piece on this blog I encourage you to read. Other great speakers we’ve engaged with as part of our TA (teaching assistant) training include Aditya Adiredja and Esther Enright.

2. Learn, keep learning, and challenge your assumptions.

Join a reading group, attend talks about these topics, or follow blogs by diverse mathematicians. Some of my favorites are Francis Su’s article, “Mathematics for Human Flourishing” and Piper Harron’s blog, *The Liberated Mathematician*. We may never have all the answers but we can become more aware that our roles as mathematicians extend beyond our discipline. Sometimes this looks like being mindful of our biases or empathizing with the experiences that are not similar to our own. It could mean

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being a voice and it could mean passing the [mic] to let other voices be heard.

3. Be honest, listen, and take care.

Embrace and share your stories as part of what makes you a mathematician. The challenges and triumphs. This is difficult if you find yourself in an environment that doesn't embrace the identities you bring to your mathematics. Having open and honest conversations require listening to others with no judgment and accepting that their experiences have a place in our community. Some will be uplifting and others not so much. But it is important to create a space to share both. These conversations may be challenging so always seek to take care of yourself as well.

Mathematics is a beautiful field that blossoms with our own unique perspectives and experiences. Let's work towards opening those conversations, let's challenge our assumptions and foster the growth of a more diverse mathematical community...together.

Photo Credit

Photo of Vanessa Rivera-Quinones courtesy of Department of Mathematics, University of Illinois at Urbana-Champaign.

ABOUT THE AUTHOR

Vanessa Rivera-Quinones is a fifth-year PhD student in mathematics who enjoys teaching, learning applications of math in different disciplines, and making math accessible to everyone. Her research interests involve using mathematical models to understand how interactions among hosts, parasites, and the environment shape the spread of disease. A graduate of the University of Puerto Rico at Río Piedras, she also enjoys taking pictures, painting, and bowling. Her email address is riveraq2@illinois.edu.



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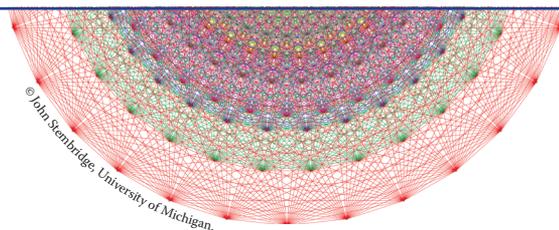
Faces of Women in Mathematics

Women mathematicians from around the world give their names and say "I am a mathematician" in 14-minute film prepared by Eugenie Hunsicker, chair of the London Mathematical Society's Women in Mathematics Committee, and her sister Irina Linke, a cinematographer. A request for selfie film clips yielded 146 clips of 243 women mathematicians from 36 countries. Hunsicker said, "I want that the next time people hear about Nigeria, Nepal, or the Philippines, they think, 'Oh, yeah, that is the place with all of those fantastic women mathematicians!'"

Check out the 2-minute trailer at:

<https://vimeo.com/260633621>.

—From Hunsicker and Linke's press release "*Faces of Women in Mathematics* film released for International Women's Day"



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