

Statement on Diversity and Inclusion

Dominic Veconi

David Hilbert famously stated that “Mathematics knows no races or geographic boundaries; for mathematics, the world is one country.” Despite this idealistic vision of mathematics, our society is far from reaching the vision of mathematical equity Hilbert proclaimed. According to the 2018 AMS Departmental Profile Report [1], women make up 30% of full-time graduate students in mathematics in the United States, and 23% of tenured faculty. Meanwhile, underrepresented minorities make up 14% of full-time graduate students. Acknowledging my privilege as a white cis man, I strongly believe that I share in the responsibility of fostering a diverse and inclusive environment for students and faculty. Throughout my mathematical career, I have committed myself to facilitating a positive and welcoming environment for the graduate students, research faculty, and staff in both my department and the university. I have also engaged in initiatives designed to promote academic excellence in STEM among underrepresented minorities at both Penn State University and the Abdus Salam International Centre for Theoretical Physics (ICTP).

From the Fall of 2017 to the Spring of 2021 during my graduate career at Penn State, I was an active member of the Committees for Climate and Diversity both at the level of my department and the level of the Penn State Eberly College of Science. In this role, I helped facilitate and promote events and initiatives that improve the professional climate of the College of Science. These included social events, such as game nights for both the Department and the College of Science, as well as Town Hall events to gather input from my fellow graduate students on how the College of Science can improve its professional environment.

Additionally, these committees gave me the opportunity to assist with the admissions process in the Millennium Scholars Program at Penn State. This program offers financial support for high-achieving STEM students who exhibit strong leadership potential and promote diversity in their fields. It has been an honor to help introduce these students to life at Penn State and participate in the application selection process by leading group interviews with the applicants.

My membership in the Committees for Climate and Diversity eventually led me to help establish two new initiatives within the Penn State Department of Mathematics. The first was in 2018, when I worked with two other graduate students to create our department’s First-Year Graduate Student Mentoring Program. Modeled after similar programs in the Chemistry and Statistics Departments, this program matches incoming first-year math graduate students with graduate student peer mentors in our department. These mentors help the first-year students adjust to graduate school by offering advice and resources on teaching and academic support, as well as providing guidance on integrating into the Penn State community outside of the department. This initiative has been tremendously successful in helping new students acclimate to life at Penn State and making crucial social connections during their graduate careers.

The second initiative I helped establish in our department is the Math Department Graduate Student Association (GSA). The GSA was borne in January of 2020 out of a need in our department to have a more effective line of communication between our department’s administration and the graduate students as a collective. This began with the first annual

Math Department Town Hall. I was the moderator of the event, and collected questions from graduate students to ask a panel of administrative faculty in our department. The questions ranged from graduate teaching responsibilities to combating sexual harassment in the department. Following this event, I became one of the founding members of the GSA and the first President of the organization. The GSA now oversees the first-year mentoring program, organizes professional development events, helps facilitate communication between the graduate students and the mathematics administration, and promotes an inclusive environment in our department.

As proud as I am of what the GSA and mentoring programs in the Penn State Math Department have accomplished, I am keenly aware that my own work in promoting diversity and equity is never over. As Dr. Ibram X. Kendi reminds us, being an antiracist is a process, a decision one must make every day—not a single event or sequence of events [2]. This applies also to feminism and LGBTQIA+ allyship. I have participated in both bystander intervention and Safe Spaces trainings at Penn State, and continue to seek out opportunities to learn how to be a more effective ally and promote an equitable academic and professional environment.

My commitment to equity and inclusion extends to the classroom as well. Recently I have begun considering how to incorporate ideas from the Association of American Colleges and Universities' *High-Impact Practices* (HIPs) into the courses I teach [3]. These include active learning techniques in class, collaborative working environments, and opportunities for revision of written assessments. Best practices such as these have been shown to benefit all students, and especially students from underrepresented backgrounds who historically have had less access to higher education. One of my long-term goals is to continue refining these practices in my own classes and create an equitable classroom environment that challenges and encourages students from all backgrounds.

Most recently, I have had the privilege of serving as the tutor for both the ICTP diploma program and the International Mathematics Master (IMM) program. The primary objective of both programs is to give recent college graduates from developing countries the experience and training needed to succeed in graduate-level educational opportunities in Europe, the United Kingdom, and the United States. Part of the mission of ICTP overall is to promote scientific research excellence in developing countries, and one way that we do this is to give students from these countries the opportunity to pursue advanced mathematics education around the world and hopefully bring it back to their home countries. Serving in both of these programs has given me the chance to work with students from a tremendous breadth of backgrounds, and this perspective will inform the ways I teach and interact with students and colleagues in the future.

Through my initiative in establishing the First-Year Mentoring Program and the GSA in the PSU Math Department, my contributions to the Committees for Climate and Diversity in both my department and the Eberly College of Science, and my ongoing work supporting access to quality mathematical education globally at ICTP, I have worked hard to serve my international community and create a welcoming and equitable environment at both Penn State and ICTP. Yet I am still learning the best ways to promote diversity and inclusion in my community and my classrooms. I look forward to implementing educational best practices in my future courses, and hope to continue promoting equity and inclusion in both my university department and the mathematical community as a whole.

References

- [1] A. Golbeck, T. Barr, C. Rose. Fall 2018 Departmental Profile Report. *AMS Notices: Mathematics and Statistical Sciences Annual Survey*.
- [2] I. Kendi, *How to Be an Antiracist*. New York: One World, 2019.
- [3] G. Kuh. *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter*. Association of American Colleges and Universities, 2008.