

# DIVERSITY STATEMENT

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A diverse student population has different needs, faces distinct challenges, and confronts different fears in their journey to academic success. In my statement, I describe my motivation and efforts in mitigating these challenges, as well as my future plans dedicated to improving the recruitment and retention of diverse students in all stages of the academic pipeline.

**MY BACKGROUND IN INDIA.** I come from an average middle-class family in rural India. Of my closest relatives, very few went to college, no one has a degree in a STEM field, and no one has a doctorate. Growing up, there was a distinct lack of higher academic resources; I remember taking public transportation to the nearest university two hours away to get photocopies of library books. I was lucky to have parents who tried their best to provide me with the most decent schooling they could afford and I attribute my academic success to their encouragement and support; as well as to the guidance of the mentors I found along the way through various math competitions and summer camps. My personal experience plays a crucial role in my familiarity with the problems faced by low-income communities and students with disadvantaged backgrounds and has helped me build a toolkit for mentoring others who face similar challenges.

**EFFORTS IN OUTREACH, MENTORSHIP, AND SERVICE.** My first experience with a diverse student body was as a member of the cultural committee and as an editor of a monthly art magazine at the Indian Statistical Institute, my undergraduate institution. Catering to the needs of people from all the different parts of India, with different languages, cultures, and customs, was a demanding but heavily rewarding experience. At the same time, I presented in student seminars at nearby high schools and mentored students in the *Indian National Mathematics Olympiad* training camps. Through these, I felt satisfied to have contributed productively to the younger generation of mathematicians, opening fresh minds to a new world full of exciting ideas.

Later as a grad student and as a professor, I have continued to regularly give invited talks in student seminars and organize weekly *Problem Solving Seminars* (at Bowdoin and Wooster), where, by exploring nonstandard arguments and strategies in a more ‘fun’ setting, I have tried to make mathematical contents more accessible to a general audience. At my last institution, I had the unique opportunity of supervising the *Career Exploration Program* of a high school student. I believe my efforts have helped demystify what math education entails and helped encourage a portion of the student body to pursue higher-level math courses.

I am fortunate to possess several formative experiences of mentoring groups of academically talented incoming first-year students at UChicago through the *Chicago Academic Achievement Program*, and later in the *Bowdoin Science Experience*, most of whom were first-generation college students from underrepresented or low-income communities. Apart from the regular orientation with coursework, I helped them with navigating and managing new expectations, integrating more actively with the college culture, and exploring ways of utilizing various campus resources. I also helped them learn mathematical writing and coached them in improving their presentation skills in front of their peers.

I had been an active member of the *Association for Women in Mathematics* for four years as a graduate student. During that time, I co-organized several colloquia and seminars inviting women speakers; conducted climate surveys that highlighted issues of conscious and unconscious bias in the department; led study sessions and social events specifically geared towards participation from women and minorities. At Bowdoin College, I was one of the organizers of a weekly *Study Group for BIPOC students* in Math, CS, and Physics that invited underrepresented students to meet in an informal setting and helped them build a support network in college. At College of Wooster, I worked with two international students to develop *Guides for incoming students in STEM* at Wooster (with support from a GLCA Internationalization grant) and helped design the departmental mission statement regarding DEI issues (to be included in course syllabi). As part of the *BIPOC Employee Caucus* at Wooster, I have also actively participated in promoting antiracist agenda with the college administration – helping diversity hiring search committees, attending town hall meetings to discuss concerns raised by AAPI students, and endorsing students who have spoken up against instances of racism, bias, discrimination and systemic inequality on campus. All of these experiences have shaped how I approach DEI issues in both my scholarship and in the classroom.

**SUPPORTING DIVERSITY IN CLASSROOM.** Throughout my career as a professor or a graduate student, I was fortunate to find supportive environments that encouraged diversity among the student demographic. Having found

myself in front of a large student body with distinct backgrounds and expectations, it was important for me to set an inclusive tone from the first day of class. Introducing myself informally through an online forum helped break down the barrier of intimidation faced by a lot of students early in the semester and created a welcoming environment where they felt more comfortable sharing their goals and experiences with fellow students and me in a less-demanding setting. By incorporating daily group work and collaborative projects in the syllabi, I have tried to build rapport among student communities that appreciate each other's strengths, are receptive to new perspectives, and are confident in contributing to discussions. To ensure a civil and constructive environment during team activities, I kept a close watch to discourage any classroom incivility or micro-aggression (e.g., repeated use of incorrect pronouns), and ensured that students actively recast any negative criticisms for their peers. Throughout the semester, I also made sure to invite students to move around and work with different partners to avoid any stagnant social dynamic and encouraged them to take advantage of my office hours so that I could engage with every one of them on a personal basis and understand their needs.

Every person learns at a different pace, so it is also important to me that each student is treated as an individual, that multiple perspectives, experiences, and identities are valued and promoted, and that each one of them is allowed reasonable academic freedom to pursue the study material at their own pace. This has led me to create multiple ways of delivering content – visually via slide presentations, graphically via math software and web applets, and practically via projects and video examples that highlight applications of abstract ideas. Other efforts include spending extra time with students with disabilities or English language learners (and helping them connect with the appropriate resources on campus), creating examples in-class notes and worksheets that are more heterogeneous in nature, that relate to the personal experiences of students, and using online LMS such as Moodle to organize the syllabi and give a concrete structure to courses. In recent years, I have switched completely to alternate grading systems that are more equitable in nature, emphasize more formative assessments, and reward persistence and growth. Finally, it has meant being mindful of my language and rhetoric in the classroom so that it portrays my spirit of open-mindedness and goodwill.

**SELF IMPROVEMENT AND FUTURE GOALS.** Seeking opportunities to learn from others with different viewpoints, I have attended regular professional development seminars and workshops through the *STEM Faculty Learning Community* at Wooster, through *Center for Learning and Teaching* at Bowdoin, the *Five Colleges of Ohio* consortium, and *Chicago Center for Teaching*. I have participated in DEI workshops from the college and learned about *Antiracist*, *Anti-bias*, and *Culturally Responsive Practices* using case studies, and how to handle *Classroom Incivilities* using scripts. Equally important, collecting regular *anonymous student feedback* (open throughout, but specifically requested at mid and end-semester) has helped me keep track of the classroom climate and continually improve myself based on students' suggestions.

Under-representation of groups such as women, ethnic minorities, LGBTQ communities, and people with disabilities in Mathematical Sciences remains one of the most challenging and critical problems facing us as a field. Building upon my current experience, I have many specific ideas that I wish to incorporate to help fight this issue. For example, these include creating summer programs for incoming freshmen for a successful transition to college life, outreach programs such as Math Circles for K-12 students, professional networking support for student communities with disadvantaged backgrounds, etc. I hope my desire and responsibility as an educator to actively support the diverse environment of STEM fields resonates with my institution's commitment to DEI, as I continue and expand my inclusion efforts, both in my personal and professional life.