

DIVERSITY STATEMENT

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A diverse student population have different needs, face distinct challenges, and confront 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 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 from rural India. Of my closest relatives, very few went to college, no one has a degree in STEM field, and no one has a doctorate degree. 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.

SUPPORTING DIVERSITY IN CLASSROOM. Both as a visiting assistant professor at Bowdoin College and as a graduate student at University of Chicago, I was fortunate to find a supportive environment 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. By providing introduction index cards to the students and by building rapport among them through collaborative projects, I have tried to build small communities that appreciate each others strengths, are receptive of new perspectives, and are confident in contributing to discussions. Throughout the semester, I made sure to invite students to move around and work with different partners to avoid stagnant social dynamics, and encouraged them to take advantage of my office hours so that I could engage with every one of them on a personal basis.

Every person learns at a different pace, so it is also important to me that students are allowed academic freedom to pursue the study material more equitably. This has meant creating different ways of delivering content -- visually via slide presentations, graphically via math software and web applets, and practically via online video examples that highlight application of the abstract ideas. It has also included spending extra times with students with disabilities, creating class notes and worksheets that are more heterogeneous in nature, that relate to the personal experiences of students, and using course management systems such as Blackboard to organize and give concrete structure to courses. Finally, it has meant being mindful of my language and rhetoric so that it portrays my spirit of open-mindedness and goodwill.

EFFORTS IN OUTREACH AND MENTORSHIP. 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

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 taught in high school seminars and trained 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 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 currently co-organize a *Problem Solving Seminar* at Bowdoin college, where we explore nonstandard mathematical strategies in a more ‘fun’ setting. I believe my efforts have helped demystify what math education entails and helped encourage a portion of student body to pursue higher level math courses.

I am fortunate to possess the unique experience of teaching a group of academically talented incoming first-year students at UChicago through the *Chicago Academic Achievement Program* (CAAP), many of whom were first-generation college students or from low-income communities. Apart from the regular coursework, I helped them integrate more actively with the larger college culture, and explore 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 and co-organized colloquia, study sessions, and social events specifically geared towards participation from women and minorities. Over the last year, I have been part of a weekly *Study Group for students of color* in Math, CS and Physics that welcomes underrepresented students in an informal setting and helps them build a support network in college.

SELF IMPROVEMENT. Seeking opportunities to learn from others with different viewpoints, I have attended weekly teaching seminars at my current department, several pedagogical seminars (at *Bowdoin College*) and workshops (organized by *Chicago Center for Teaching*), and have participated in the *Teaching Triangle* programs that involved reciprocal classroom visits with faculty from other departments. In a complimentary direction, I conduct *anonymous student surveys* every three-to-five weeks and try to continually improve myself based on their suggestion.

PLANS FOR THE FUTURE. Under-representation of groups such as women, ethnic minorities, LGBTQ communities, and people with disabilities in Mathematical Sciences is 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 successful transition to the college life, outreach programs such as Math Circles for K-12 students, professional networking support for student communities with disadvantaged backgrounds etc. I hope to get opportunities where I can actively support the diverse environment of STEM fields as I continue and expand my inclusion efforts, both in my personal and professional life.