Mathematics, interpreted broadly, includes not just fundamental and applied math and statistics but also increasingly aspects of computer science and data science. How do we support students who haven’t been exposed to quantitative reasoning in their K-12 education or family experiences to find their inner mathematicians, enabling them to make mathematics a part of their lives? How do we give students the confidence to discover and embrace their quantitative talents?

I approach these questions as a mathematician with an unconventional background: my mother, though brilliant in most respects, could not add fractions. Yet, for some strange reason, I was doing math problems in my head as far back as I can remember – certainly before attending school. I became very excited when I heard my next-door neighbors discussing ideas that sounded like the problems in my head; specifically, they were talking about projective geometry, which seemed like a magical world to me. I feel tremendously lucky to have found people who encouraged me to think like a mathematician. And yet, when I went off to college, I had no intention of doing mathematics. I thought it was a wonderful pastime, but I needed “a real profession.”

I eventually did become a mathematical physicist and was a tenured associate professor of mathematics at UCLA. I am constantly haunted by the realization that many people never have the chance to develop this beautiful part of themselves or the opportunity to make it central to their careers and their lives.

I continued to take a winding path because I loved the connection between math and other areas. I left UCLA for Microsoft and co-founded the theory group at Microsoft Research, which was the birthplace of some wonderful mathematics. These developments included Oded Schramm’s Stochastic Loewner Equation and subsequent breakthroughs in conformal invariance, as well as the invention and development of graphons around 2004 by Christian Borgs, Laci Lovasz, Vera Sos, Kati Vesztergombi, and me, and subsequent breakthroughs in graph theory, combinatorics, and machine learning.

I realized in the late 1990s that many mathematically talented young grad students were going into theoretical computer science, which was developing at that time in its use of increasingly sophisticated and beautiful mathematics. I went on to found Microsoft Research Labs in New England, New York City, and Montreal and a group in Herzliya, Israel, with phenomenal mathematics and mathematicians. Over 23 years at Microsoft, I mentored hundreds of graduate student interns and post-docs, and many of them are now distinguished faculty members at top institutions.

Recently, I returned to academia to make sure that others can have these opportunities. In January 2020, I joined UC Berkeley as the associate provost of the Division of Computing, Data Science, and Society (CDSS), and dean of the School of Information, as well as professor of Electrical Engineering and Computer Sciences (EECS), Information, Mathematics, and Statistics. CDSS, which comprises EECS, Statistics, the School of Information, and centers in Computational Biology and Computational Precision Health, is on its way to becoming the first new college at UC Berkeley in over half a century.
Our research agenda\(^1\) at CDSS focuses on both the fundamentals of computing, probability and statistics, information, and data science, and the connection to other disciplines on campus and beyond. We are committed to working together with other academics and people in the field to address some of the most urgent societal problems in biomedicine and health, climate and sustainability, and human welfare and social justice.

Computing, Data Science, and Society at UC Berkeley has three aspirations: educating a cross-section of society, enabling ground-breaking research, and making profound social impacts. We began this journey with an educational program in data science for undergraduates, and our educational mission remains central to all that we do. The data science major includes computing, statistics, human context and ethics, and a disciplinary emphasis (with over 25 from which to choose). After starting the data science major only three years ago, we graduated 740 students in the spring of 2021, making data science by far the fastest growing major in UC Berkeley’s history. The major attracts a cross-section of students, with a broad range of socioeconomic backgrounds and ethnic, racial, and gender identities. Fifty percent of our majors are women.

Most of our students are what we call “discoverers” – people who enter Berkeley with other passions and goals who discover their aptitude and ability for data science. They realize that, with this quantitative framing, and a deep understanding of the possible biases that a naïve quantitative framing could exacerbate, they are able to achieve their educational goals and so much more. I like to think they have discovered and empowered their inner mathematician, the one who constructed new worlds for me as far back as I can remember.

I’m inspired by work at my university and others to welcome diverse students, which increases social mobility and broadens perspective. We are working to find the resources to provide access to every student who wants this education, including increasing opportunities for non-traditional students and those transferring to Berkeley from community colleges. I am deeply committed to empowering every student to find and nurture their inner mathematician.

\(^1\)Jennifer Chayes, Data Science and Computing at UC Berkeley, *Harvard Data Science Review* (2021), issue no. 3.2, DOI: [10.1162/99608492.12c8533a](https://hdsr.mitpress.mit.edu/pub/wzhgxmmc/release/3)