David E Speyer: Biography

I was born in 1980 and lived in New Britain, Connecticut for my whole childhood. My parents, Ann and Ken Speyer, encouraged me to read and explore in mathematics, science, history, religion and whatever else grabbed my interest. Mathematics had a special appeal because it was a field where I felt that achievements could be judged purely objectively, without a penalty for my youth.

I went to middle school at Talcott Mountain Academy, a small school that believed in hiring teachers that knew and loved mathematics and science. They focused on letting us explore and experiment, taking walks in the woods to learn to identify stages of forest growth, learning to work with chemicals and chemical apparatus and wiring circuit boards. My math teacher, Mr. Frazier, was always playing with a new computation or puzzle and would pull me aside to share new challenges with me.

In high school, I became drawn involved in the Math Olympiad Program (MOP), eventually becoming first alternate to the US team in 1998. MOP trained me to solve competition problems, but it also gave me experience persevering on difficult problems, trained me in how to write about mathematics and gave me access to a network of professional mathematicians that is still of use to me today. It was through another student at MOP that I came to learn about k-equitable colorings, the subject of my first paper.

I went to Harvard University for my undergraduate degree, where I was able to work with many of the best mathematics undergraduates in the country and take a wide variety of courses, mathematical and not. I also became very involved in campus theater productions and worked on many shows as a carpenter, set designer or technical director. I spent my summers working at the PROgram in Mathematics for Young Scientists (PROMYS), a residential program that aims to have high school students rediscover and prove the results of classical number theory through carefully designed problem sets. My senior year, I was able to do research under Professor Propp, where I first became aware of and interested in cluster algebras. I graduated with a degree in mathematics in 2002.

In the autumn of 2002, I began my graduate studies at the University of California, Berkeley. My thesis, written under the guidance of Professor Bernd Sturmfels, attempts to set up the foundations of tropical geometry. Tropical geometry studies algebraic varieties by looking at their points over nonarchimedean fields and thus reduces algebraic problems to problems of polyhedral geometry. In addition to Professor Strumfels constant help, I also befitted greatly from conversations with Professor Knutson and many other faculty and fellow graduate students.