

Mathematical Autobiography

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I was born and raised in Parkersburg, WV. I consider myself lucky for my upbringing, because my parents always attempted to let me try my own things, and find out what I enjoyed, even if it caused problems in the short term. An early example of this was with my first computer. I was 6, and it was on MS-DOS. I started messing around with it, and found a list of commands that looked interesting, so I started to try them all. I ended up with a brick of a computer, needing to reinstall DOS. At this time, software was expensive, as it is now, but they still just bought me the software and let me figure out how to get it back up and running. It gave me the confidence in myself to push myself into challenging situations, and clean up any explosions later.

Even at an early age, my main interests were just taking things apart, figuring out how they worked, and then moving on. This I believe was the foundation of my math career, as even now, my favorite part about mathematics is that I can find a problem that needs solved, work on it until I find a way to solve it, then move on to something else. My interests have always been varied, although mostly in the sciences, and I love that mathematics gives me the chance to work on them all.

For my academic experience, I started off getting my BS in Physics from West Virginia University. I thought physics was what I wanted to do for a career, because I loved the idea of having so much to figure out. I also took classes in mathematics (enjoyed combinatorics quite a bit), biology (lots of genetics classes), and computer science (algorithm classes). Physics is still something I am incredibly interested in, and I find the line between theoretical physics and applied math is very blurry. I went from WVU to Cleveland, thinking that I wanted to do research in medical physics. I realized once I started that this wasn't the field for me, because there seemed to be less actual research, and more working with regulatory commissions. I started private tutoring, and realized that teaching was the perfect spot for me. I went from there to Marshall University's math department, realizing that I preferred math so that I couldn't be pigeonholed into one field, and I started

my research. I was lucky enough to find a professor who would work with me on what I was interested in, and taught me things that he was interested in. I ended up doing a thesis on Radial Basis Functions in Numerical Relativity, and realized the problems that dimension could cause, when I tried to even go to 2D in my research, it was far more than my desktop could handle.

I'm interested in participating in this project because it fits with all of the things that I'm interested in mathematically with one project. I'm also interested in working in a research group, as I believe that more learning can be done working in groups rather than working alone. I believe that being exposed to everyone's point of view will expand my horizons, which is always a good thing.

My previous courses in mathematics include Modern Algebra, Numerical Linear Algebra, Numerical Differential Equations, Advanced Calculus, and Statistics. I have also had physics courses in Classical and Quantum Mechanics, Electricity and Magnetism, and Relativity. I am currently taking courses in Differential Equations and Real Analysis.

According to the VARK, I'm dominantly read-write. I would agree with this, as I have trouble sitting for long periods of time in any situation, so I take short breaks and do work in bursts mostly.