Teaching was the original reason I decided to do a PhD in mathematics. In high school I was not an excellent math student by any stretch, but in university math started to click and I wanted to share that feeling with other students. I felt I had some sort of perspective how to explain math so that the highschool me would have understood. I began working as a teaching assistant for math courses during my second year as an undergraduate, and have endeavoured to improve as a teacher over the last decade. Over the years I have come to appreciate the research side of mathematics just as much, however teaching still remains a central part of my career. Indeed, I would say the most satisfying part of discovering and understanding new mathematical connections is passing the newfound intuition onto others.

In the past I have been a teaching assistant for real and complex analysis, differential equations, number theory, combinatorics, and a few other courses. In addition, I had occasion to give lectures in some of these courses. No matter the subject, I think my approach to teaching is the same. The way I go about teaching mathematics comes from following intuition. As a researcher I have a collection of simple principles I can use to attack problems. By applying these principles I can gain a heuristic understanding of a problem and then look for a rigorous proof of the result I am after. This is the way I like to encourage students to think about what they are learning as well. Moreover, I think this is something I can bring to a classroom that a textbook cannot. For a while, one can get on by memorizing a few tricks and simple manipulations, but in the end one needs intuition to go beyond the definitions of a subject and their basic consequences. With intuition there is little need to memorize precise details definitions and theorems because these details are natural. This makes mathematics more engaging as well - it presents math as field that requires playing with creative examples and trying different angles to find success.

One course I was particularly involved in during my graduate studies was first year algebra for undergraduate math specialists. I was a TA for this course, which partly serves as an introduction to rigour and proof, for two consecutive years. The work involved grading weekly assignments and midterms, as well as managing a wiki one year and a web forum another year. I also ran a two hour tutoring session each week during which we would discuss concepts and related problems in linear algebra. During this tutorial session I would try convince students to think about the problems we were trying to solve beyond symbolic manipulation. If we could figure out why something we were trying to prove was true, or why some definition was important,

then we could start to prove a whole number of things. This teaching strategy really seemed to resonate with my students, to the extent that students from other sections requested to move to mine. It was my hope that these sessions would be not only good for learning linear algebra, but also good for learning how to be a mathematician.