Teaching is a stimulating and essential aspect of being a professor. It can be rewarding and can be frustrating. In either case, it is one of the most important services we provide. To many outside the academy, it is seen as the key thing, if not the only thing, that we do.

The goal of teaching is deceptively simple: *to assist students in learning.* However, it is rarely sufficient simply to tell students what they need to know. Instead, they must come to understand the material through problem solving, study, and thought, assisted at key steps along the way by input from teachers and peers. Providing students with information via lectures, homework, and reading material is only the first step of the process. The second, and usually more crucial, step is to open a two-way conversation in which we can learn from each student the nature of his or her own comprehension. We must become students of students' thoughts in order to teach them well. Learning to see a subject from the their perspectives, to understand it and misunderstand it as they do, is the first step toward guiding students to comprehend it!

New technologies present exciting opportunities for communication and provide new ways to close this feedback loop. In recent semesters, for each class I create a forum on Piazza for the exchange of questions and answers with and among the students. I distribute homework assignments on the forum so that students must look at it weekly. The great advantage of this system is that questions and answers are presented in a public format that can be referenced by other students. Furthermore students can answer others' questions, providing me with another view of their perspective on the class. (Piazza works particularly well for mathematics because it has native support of LaTeX for including formatted equations.)

A central aspect of teaching as a professor is taking part in directing the future of University education. It behooves us to re-examine the curriculum and pedagogy regularly so as to adapt it to the needs of current students. It has been my pleasure to serve on three separate committees for curriculum reform within the math department:

(1) In 2009-2010, an ad-hoc committee for developing an "Advanced Track" undergraduate program.
(2) In 2012-2013, the undergraduate studies committee during the development of MTH 299 "Transitions," a course to assist our regular track majors with the transition to upper division classes. During spring and summer 2013, I developed and then taught the pilot version of MTH 299.
(3) In 2014-2016 the graduate studies committee during a restructuring of our graduate program

By any measure, the advanced track program we developed five years ago has been quite successful. We have recruited great students and helped them to learn a good deal of mathematics. Some of them have gone on to top graduate schools in mathematics like Stanford, Minnesota, Washington and Wisconsin. I have played my part in this, teaching the core analysis course for the program in three separate academic years and developing an extensive series of lecture notes that go far beyond the standard textbook material. The restructuring of our graduate program is in progress, but our goals are clear: to move students through the program more efficiently and to create an up to date program that will allow us to recruit the excellent students of today.

Teaching and research at the University exist in a symbiotic relationship, one informing the other. While there are certain tasks that are clearly research and others that are clearly teaching, there are also tasks that are harder to classify. Most working mathematicians switch between the roles of teacher and student every day. Often, we must learn existing mathematics, as yet unfamiliar to us, before we can create new mathematics in our research. Before we can work on applied problems, we must learn about other disciplines. We must learn from each student the best way to help *that student* learn mathematics. We must teach our graduate students and collaborators what we know before we can discover new mathematics together. We must educate those in other fields about the answers that mathematics can, and cannot, provide. And, of course, we must teach university students the mathematical skills that they need to succeed in their careers.

Due to this symbiosis, I have found that teaching and research are both enhanced when I engage with people outside of mathematics. One of my most rewarding research projects is a collaboration with two Entomologists, Prof. and his graduate student . Progress on this extremely successful project has been possible because of our willingness to take turns "playing school," as I have studied to learn enough biology and they have studied to learn enough mathematics for us to work together. In the process, I have learned a great deal about how the mathematics relevant to our research, in this case the theory of random walks and mathematical brownian motion, is perceived and comprehended by other scientists. Being forced to present these advanced topics in terms that can be comprehended without a graduate level education in mathematics laid the foundation for a productive research collaboration, but also forced a clarification of my own thoughts in a way that will inform the way I communicate with students in the future.