TEACHING STATEMENT
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In Fall 2012, I ran into Martin Velez, a new graduate student in the Department of Computer Science, UC Davis. Martin took my ECS20 course (Discrete Mathematics for Computer Science) in Fall 2008 and then ECS120 (Introduction to Theory of Computation) in Spring 2009 when he was an undergraduate student at UC Davis. Much to my pleasure, he told me that my classes greatly inspired his decision to go to graduate school.

Martin is just one of several students who saw me at random places years after taking my classes. They all remembered my name and told me how much they loved my classes. In Spring 2009, I received the award for the best Teaching Assistant by the Computer Science Club at UC Davis. It seems that students have really enjoyed my classes—even with most of them being scheduled at 8am, the worst slot that one can get.

I embrace the pedagogic philosophy that learning should be and can be fun. My teaching style is largely influenced by Professor Martin Henz at National University of Singapore, and Professor Phillip Rogaway at UC Davis. They truly master how to pique students’ curiosity by intriguing, well-chosen examples and questions. When I took their classes, I felt a passion so great that I almost jumped up and down with excitement. Now, as a teacher, I want to instill my passion to students, entertaining a hope that someday they will dance in my class as well.

While one important goal is still to help students get the course material and ace the exams, I believe one should go beyond that, because students will soon forget whatever they learn. What I aim for is to let my students absorb the material at such a level that, later, they know how to re-discover it. In other words, I want my students to learn, not to be taught. To achieve that ambitious end, I always show students the real picture of how one discovers solutions, which is far different from concise and rigorous proofs in textbooks. I demonstrate how one uses plausible reasoning and intuition to form a blueprint of a proof, which may involve a lot of trial-and-error, and how to refine it into a polished, rigorous proof. Instead of planting my solutions into students’ heads, I feed them with open-ended questions to let them try their own intuition. Sometimes they surprise me by giving a different, beautiful solution that I haven’t thought of. While I like to entertain the top students and constantly give challenges to motivate them, I target the majority of the class. Therefore, I usually start with easy examples to gauge the level of the class, and keep raising the bar as long as most students can follow.

Giving feedback on homework assignments is another channel to communicate with students. Instead of simply grading, I write down several comments on students’ papers, describing in detail why their approach is wrong and how to avoid the same mistake in the future. I also try to provide the most elegant and visually attractive solutions possible for the assignments, with suggestions for further exploration, hoping that this will help entice students to go beyond the required material. In fact, a few top students have been intrigued enough to come to my office to discuss advanced materials that sometimes reached the level of graduate courses.
In the life-long quest for improving my teaching skills, I joined Toastmasters to hone my communication skills, and attended public speaking and acting classes. The Teaching Resources Center at UC Davis videotaped my classes, at my request, and gave me useful feedback. In order to fully benefit from their constructive comments, I keep a teaching journal to reflect on the positive and negative aspects of each class. The criticism, which I culled out from the reflections, has transcended my ability to handle the difficult task of balancing between motivating top students and keeping average students interested.

Looking backward, I am surprised to see how much my teachers have transformed my life, both professional and personal. I strongly believe that teaching gives me a great opportunity to understand, value, and mold people. With my favorite motto *semper sursum* (always aim high), I never take my teaching skill for granted; each class presents a unique challenge that I have to work hard to better meet its needs.