

Teaching Statement

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In an age when students have unprecedented access to information, I believe interaction at a personal level between students and professors is more important than ever. Thus, I am excited by the prospect of being a teacher and an adviser, and being able to guide students towards success in their career, regardless of the path they choose.

Lecturing Approach

As a TA at UIUC (for “Programming Languages and Compilers”) I taught several lectures. I also gave guest lectures in the Programming Language Semantics class, where I presented some of my ongoing research. I have discovered that having a very interactive lecture leads to the best outcome. Thus, I actively encourage strong student participation during the lecture.

- I prefer to ask students a lot of questions, sometimes even very simple ones, and I try to get as many different students to answer as possible. If the class is small enough, I learn all their names. This helps the students understand the concepts, and help me ascertain if the lecture is going too fast or too slow.
- Before introducing a concept, I describe what problem it is trying to address, and then I ask the students to propose solutions, discussing with them the advantages and disadvantages of their proposals.
- I try to tie abstract concepts in programming languages to practical coding experiences. For example, when discussing types, I would ask them about their experience of writing code in dynamically typed languages vs statically typed languages, and which did they like more.
- Using code snippets and asking the students to comment on them, or sometimes to complete them is another great way of engaging the students.

I received positive feedback from the students and the professor on how I encourage students to participate and to guide the lecture. After one of the lectures the professor noticed how much I enjoyed teaching and how well the students responded and encourage me consider a career in education. The classes where I gave the lectures consisted of between 15 and 200 students.

As a TA both at UIUC and at “Politehnica” University of Bucharest (for “Algorithm Design” and for “Introduction to Operating Systems”), I noticed that students learn best when they apply in practice what they learn in class under the supervision of a professor or a TA. Thus, during office hours, I always try to help the students answer their own questions by providing hints or by making a parallel with a simpler problem that they know how to solve. One professor told me the students were equally confident in attending my office hours or the professor’s.

Advising Approach

I am very fond of mentoring students at all level (more junior graduate students or undergraduate students). Throughout my Ph.D. I informally mentored four junior doctoral students and two undergraduate students.

Also, as a TA, I have offered students more general advice regarding their academic careers. One theme that I discovered is that, at this level, students come from very different cultural and academic backgrounds, and that there is no one size fits all approach to advising. Thus, I strived to understand each individual student's unique set of circumstances and tailored my interaction with the student accordingly in terms of topics and method of communication (e.g. daily short interaction vs weekly longer meetings). I have found this approach to be generally productive. I have also constantly sought guidance from faculty and fellow students in order to improve my interactions with the students.

I enjoy being hands-on when working with students on research projects. I like to know enough details to be able to contribute myself, in order to be able to understand and address any problem the students might be confronting with. I would often review code, and offer suggestions for improvement. I believe this is very important feedback for all students, but especially for the students who consider careers in industry.

The two undergraduate students I mentored have been accepted for doctoral programs at the top schools (David Lazar to Massachusetts Institute of Technology and Yilong Li to Stanford University). My collaboration with junior doctoral students resulted in two papers.

Teaching Interest

As a TA and as a mentor, I have greatly enjoyed teaching, my experience covering a wide range of topics at both graduate and undergraduate levels. I was fortunate to learn from great professors and mentors at UIUC and "Politehnica" University of Bucharest, and I am looking forward to teaching undergraduate and graduate level courses, as well as to organize discussion seminars. I am interested in teaching on a variety of topics, including programming languages, formal methods, program analysis, software engineering, compilers and systems programming.

To conclude, I am very excited at the prospect of being able to create an environment where students can excel at every level, and become prepared for their future careers in both academia and industry.