Georgios Michelogiannakis Teaching Statement

I have practiced teaching and mentoring in a variety of roles. Most recently, I was the sole instructor for CS152: computer architecture and engineering, which is an upper-level undergraduate class in UC Berkeley. That class had 30 students and one TA, and taught a variety of topics including superscalar processors, caches, instruction-level parallelism, and data-level parallelism. Apart from the obvious rewards of teaching, this experience was particularly enjoyable because I got to provide students with my perceptive on career paths and subject areas within EECS. In fact, two of the students are now summer interns in my research group in LBNL and one will join in the fall. Those were just few of the students who enjoyed the material and had a productive time in the class. This was reflected by the class evaluations TODO. This class also required me to mentor the teaching assistant in regards to teaching and compiling exams.

My previous teaching experience was also as the sole instructor of EE382C: interconnection networks at Stanford University. This was a graduate class so I viewed my role in the lectures as a provider of information to some degree, but also a facilitator of discussion. There were only 7 enrolled students, making discussions quite productive. Many of the slides presented in lectures presented an open question that either made students come to the answer themselves, or invited students to express opinions. Not only does producing an answer or arguing for a position help with retention, but also it teaches the way of thinking to the students, apart from just the material. The thought process of dealing with a problem or researching information is more valuable to develop. The class included a large research project that was a gateway to research that got students excited about the impact of networks in modern systems. Students rated me above average among instructors in my department for that quarter, with particularly high scores for student interaction, class content, and ability to engage. One student comment was particularly encouraging: “The instructor is able to convey topics clearly and also provides some interesting reaching insights in class. Very knowledgeable, accessible, and explained concepts well”.

I have also practiced one-on-one mentoring both at Lawrence Berkeley National Laboratory and as a Federal Aviation Administration flight instructor teaching student pilots. My style in such settings is hands off because I believe that students who are micromanaged later become graduates who have a hard time being leaders or even independent. One-on-one mentoring has the added challenge and opportunity of customizing the teacher and student relationship to fit both personalities.

In my faculty career, I would like to create a networking class for on-chip/HPC style networks, as well as a class on hardware design of chip multiprocessors including the cache hierarchy, data movement, memory, interaction of software (e.g., task placement), and other topics. These topics are more suited for the graduate level and can act as introduction to research. Both classes nicely complement classes that are more traditionally taught, such as parallel programming and operating systems. I am also able to teach classes on numerous areas of computer architecture, other styles of networking, HPC systems, and other topics such as introduction to software engineering.