Teaching Statement

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My primary motivation for remaining in academia is my love of mentoring. While I could continue to conduct innovative systems research in industry, that setting would not allow me to engage my passion for long-term student mentoring. I have advised three undergraduates in the past, each for more than a year; they are now graduate students at MIT, CMU and Cornell. I have also worked closely with many younger graduate students while completing my PhD. Given those experiences, I am now ready to undertake the challenges of guiding students through their entire PhD.

Mentoring Approach. I use a task-based approach to mentoring: I assign tasks to students, touch base with them on each task, and revise the list as necessary. The granularity of tasks and frequency of revisions depend on the student, e.g., a younger student might require daily discussions with more fine-grained tasks, which become less frequent and broaderScoped as the student gains experience. This approach ensures that potential problems are caught early and discussed before they block the student’s progress. For example, my first undergraduate advisee was a co-op intern at VMware, who helped with my research on checkpointing virtual machines. He was a sophomore when he started, so we wrote a task list on our whiteboard and reviewed it at the beginning of each day. Another undergraduate worked with me for two summers on the Sapphire platform for mobile/cloud applications. He started as a junior and had already taken several senior-level classes, so we discussed his goals weekly and left them at a high level. For example, he successfully implemented Paxos in the Sapphire framework in 4 uninterrupted weeks. In each case, I adapted my mentoring to the student’s experience, and both undergraduates thrived while working with me.

Teaching Approach. I have been dedicated to teaching and tutoring for the last 10 years. I worked as a lab assistant and tutor while an MIT undergraduate and an UW graduate student. I tutored a wide range of classes, including classes for non-CS majors and systems classes at every level, from sophomores to graduate students. At MIT, I served as a teaching assistant for Introductory Digital Systems (6.111) and graduate Operating Systems (6.828) classes and received one of their highest ratings for a TA (6.3/7.0). For two quarters at UW, I was a teaching assistant for the senior-level Distributed Systems class (CSE 452). Teaching distributed systems was particularly rewarding because I led sections of 35 students and gave three lectures to 70 students. I taught challenging topics (e.g., Paxos, distributed transaction protocols, and distributed caching) in an interactive environment, letting students propose failure modes and correctness conditions. A highly rated teaching assistant and lecturer (4.6/5.0), I received comments such as, “Really great, knowledgeable lecturer”; “I hope you become a professor!”; and “I enjoyed how you sometimes laugh at your own jokes.” Further, I received an honorable mention for the Bob Bandes TA award, a department-wide award for the best TA.

Going forward, I am excited to continue teaching distributed and operating systems classes, or developing new classes at both the undergraduate and graduate levels. Like many systems researchers, I believe that building systems is the best way to learn about them. Accordingly, my past teaching experience includes classes that all had a significant lab component. I would enjoy developing a new class in mobile/cloud systems with a set of programming labs that cover new technologies (e.g., Firebase, Amazon Lambda).

Outreach. I have consistently been involved in outreach activities throughout my career. The highlight of my graduate career was the establishment of an annual Women’s Research Day at UW CSE. We invite women computer science researchers from the area – including UW faculty and researchers from Microsoft Research and the Allen Center for AI – to give technical talks to an audience of undergraduate and graduate women. The day focuses on technical discussions in a supportive environment, not on specific women’s issues. Our primary goal is to provide research role models for younger women and to show the breadth of computer science research. I started the event and organized it for the last two years; it is now run by a committee of undergraduate and graduate CSE women. I would enjoy establishing a similar event at other institutions and continuing to connect to women at all stages of their careers.