Teaching Statement for Long Le

The main reason I have chosen to pursue an academic career is my admiration for the faculty that I have interacted closely with throughout my academic career. I have observed the obvious satisfaction they derive from a career integrating teaching and research. But beyond seeking personal satisfaction, I desire an academic career to help shape the careers of students and positively impact future generations of computer scientists in the same manner as my advisors and other great teachers have positively impacted my career.

From my teaching experience at University of North Carolina at Chapel Hill and at Technische Universität Berlin at both undergraduate- and graduate-level courses, I believe that a good teacher not only has to understand the material deeply but also needs to be able to explain it well through clear communication and good preparation. Further, great teachers inspire students to learn. To prepare for my teaching and presentation skills, I took a seminar on teaching at University of North Carolina at Chapel Hill from two professors who each have been teaching for more than 35 years and learned a tremendous amount from them. My presentation skills have also been further developed by giving talks at several major conferences in my research area. My teaching philosophy supports two important learning goals for students: learning by doing and life-long learning.

**Learning by doing.** I truly believe that students can only learn and understand course material well when they do a good amount of homework and projects. Thus, well designed homework and projects that challenge students to think deeply about the course material play a key role in students’ learning process. I believe that my strong background in experimental systems research can help me tremendously in designing hands-on homework and projects that not only reinforce the material given in my lectures but can also be fun and challenging for students.

**Life-long learning.** Computer science is a fast changing field and professionals in this field constantly have to acquire new knowledge through life-long learning. A teacher must prepare students for their life-long learning by inspiring enthusiasm, giving them a solid foundation for further development, and by teaching them to think critically. To inspire enthusiasm, I plan to make the classroom more enjoyable and interactive by engaging students in the lectures and by asking questions. In lower level courses, I give students a good amount of homework to help them develop their foundation and basic skills. In upper level and advanced courses, I give students research projects to train them in critical thinking and research methodology.

Besides teaching, I have been a mentor for a number of junior researchers in my research groups at University of North Carolina at Chapel Hill and at Technische Universität Berlin. I helped them understand and solve difficult and complex problems by giving intuitive examples and by breaking up large problems into smaller pieces. From my positive experience as a mentor, I look forward to advising students to do research. I will expose students to new exciting and challenging research problems. I plan to give them freedom in their research and avoid micromanaging. On the other hand, I will also provide them with research guidance to help them stay focused on important aspects of their research problems. My emphasis on experimental research and system building can significantly benefit me in training students for both their academic and professional careers. I plan to have my students build large and real-world systems and expect them to obtain a good deal of experience.

I have a solid background in systems and networking research and can teach many courses in this area. At the undergraduate level, I can teach courses in computer organization and architecture, operating systems, software engineering, computer networks, algorithms, data structures, and introductory and advanced programming in C/C++ and Java. At the graduate level, I can teach courses in computer networks, distributed systems, operating systems, embedded systems, and multimedia networking. I would also like to offer graduate-level seminars related to my research interests in computer networks, operating systems, distributed systems, embedded systems, mobile and wireless systems, and sensor networks.