Teaching Statement
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Since the evolution of knowledge is an ever-lasting accumulation process, teaching known as the only knowledge delivery approach is an absolutely necessary part of the process. Only through teaching, people can inherit previous results, based on which new discovery could be created. Therefore, I believe that teaching is an honorable responsibility for researchers.

Teaching has two basic missions, which are helping students 1) to learn problem solving skills, and 2) to setup the necessary background, which helps to efficiently apply the problem solving skills. The first mission is more important than the second one since after graduation, students should be able to handle various problems which they have never met before. The background serves as an index to the database of knowledge. Only when associated with problem solving skills, people could figure out what knowledge is related to a faced question, and review or learn the necessary knowledge to solve the problem. Motivating, encouraging and guiding students to think are my strategy to achieve the first mission. For example, abstract problems and concepts should be introduced associated with their practical applications which are preferred to be directly related to experiences of students. An interactive process should be promoted in teaching. Specially, besides lecturing and asking students questions, students are strongly encouraged to ask questions. Through solving these questions interactively, students could experience and learn the method of thinking. A basic, extensive and up to date coverage of topics in a course will help to achieve the second objective. The depth of the content will depend on feedback and interests of students.

When I was the teaching assistant for two graduate level courses in computer science, I had successfully carried out my strategy in answering questions during office hours. Instead of going directly to the solution, I tended to provide hints or refer to previously solved similar problems to guide students to solve the problem themselves. Even it took a lot of time, I was very patient and tried to explain problems in different ways. I felt very happy when they finally solved the problem themselves. Many times, I could even gain more insight of a problem when I explained it from a different perspective. I also have advised an undergraduate for his bachelor thesis. It is a very valuable experience to me, from which I learned that the two most important parts of advising are to help the student to find a project that best matches one's interest and help them to build a solid background for the project.

I have rigorous training in computer science, electrical engineering, and mathematics. When I was in Tsinghua University in China, I also learned physics and engineering mechanics. It would be natural for me to teach the following courses in computer science, electrical engineering, and mechanical engineering: robotics, robotic control, motion planning, mathematical methods in engineering, nonlinear systems, artificial intelligence, algorithms, data structure, mechanics, modeling and control of physical systems, kinematics and dynamics of machinery, and geometry in robotics.

If I have the chance, I am also very interested in designing a robotics course about hardware and software co-design, in which simple experimental mobile robots will be built with off the shelf components, and planning and control algorithms could be applied to complete assigned tasks.