Teaching interest

Guangning Tan

During my PhD career at McMaster, I worked as a teaching assistant for courses Scientific Computing, Machine-Level Programming, and Optimization Algorithms. I chose to give most tutorials in these courses, because I enjoy getting involved in the students' learning process and sharing with them my learning experience. I am eager to show students the efficient ways to grasp ideas behind each method, so that they would not struggle to memorize the materials.

My teaching philosophy is to explain how to interpret a problem, how to think, and how to solve it part by part and finally connect all parts together. I come up with informative examples that are not in the existing materials, generate illustrative problems related to my research, and combine them with the course materials. I also help students develop a good habit of studying and writing Matlab/C/C++/Fortran code. I was awarded the Best Teaching Assistant in 2015 by Software Engineering Club, Department of Computing and Software, McMaster.

If hired, I can teach the following undergraduate/graduate level courses

- Scientific computing, computational linear algebra, optimization algorithms, and numerical methods for solving differential equations (ODEs/-DAEs/PDEs),

and the following undergraduate level courses

- Algorithms and data structure, assembly language, C/C++/Python/Matlab programming, fundamental calculus (including multivariate calculus, vector calculus), fundamental statistics, signals and systems, digital circuits, electrical circuit analysis, and complex analysis.

Excerpts of teaching evaluations of Scientific Computing
(Students were asked to comment on the quality of TA's in this course.)

- very helpful TA (don't know his name, he gave most of the tutorials though) -tutorials were extremely helpful

- Gary is a high-quality TA. I like him. His tutorial helps a lot because his tutorial is a good supplement for Prof's lecture. He is willing to explain various questions no matter how weird they are. Please raise his salary and promote his position. Thank you.

- Gary - He held the tutorials pretty well. He was well prepared and his tutorials were helpful.

- Gary is an amazing TA. Comes to tutorials prepared with material to present and is very knowledgeable in Matlab. Very helpful and organized.

- Gary is the best TA I've had in all of my courses. He definitely knows his stuff and he always knows how to explain things in a way everyone understand. A pleasure to be with

- Gary is a very knowledgeable TA who is eager to help, which was much appreciated. Hit tutorials were helpful in understanding content and provided insight on how to work towards solutions on the assignments.

- ... Gary on the other hand was extremely helpful. He picked up all of (the other TA)'s slack and actually put in the minor amount of effort it took to help me. Thank's Gary, I appreciate it.

- The TA's in this class were good. Gary's tutorials were well structured, help clear up and reinforce complicated concepts and were tailored to the needs of the students.