TEACHING STATEMENT: SENPING LUO

I have greatly enjoyed the opportunities I have had to teach so far, and look forward to teaching in my future post-doctoral position. I find it fortunate that we can share our ideas, intuitions and insights with the students through the lectures, and during office hours. It is also helpful to discuss their questions with the students.

1. Teaching experience

1.1. Teaching at UBC. At UBC, I have taught Math 101 (integral calculus), Math 104 (differential calculus) and Math 255 (ordinary differential equations). Most students feel that I am enthusiastic in teaching, lecture notes are easy to follow, and that I am approachable outside the classroom. In my first and second years of teaching, I have been taking patience as my starting point; I think generally patience is very important. In my perspective, well organized lecture notes, step by step demonstrations, and writing down every important sentence are three ingredients contributing towards good teaching. I have also been learning a lot of methods and teaching-related ideas from the senior teaching faculty at UBC, and from the surveys of the students or class visits by the senior professors, which inspired me and helped me improve. I have also been very attentive to the feedback of the students, and observing the reactions from the students in class – all these observations have helped me adjust various aspects of my teaching and develop further teaching skills.

1.2. At Tsinghua: Recitation. At Tsinghua university, the students were among the best students in China. I served as a teaching assistant for the following courses: Calculus B(1), Calculus B(2), Linear algebra (1), University mathematics (which mainly was a course in linear algebra aimed at the students from the humanities and social sciences school), Calculus A(1), Measure theory and integration. I also served as a coach focusing on Analysis and topology in the Yau summer school for high-school students, 2016, Tsinghua.

My TA responsibilities were: grading every week and giving the recitation sessions once a week or every two weeks. Grading, I would very carefully read the handwritten proofs in the homework, and giving the recitation sessions was very exciting and interesting for me. In my class, anyone could ask me questions about the topics they were studying, which is not a usual practice in a Chinese class. In my opinion, the students cannot understand the topic fluently if they are stuck on some question related to the previous material; on the other hand, if their questions are answered, the students can feel free and happy in the class, which is helpful for their critical thinking.

2. Teaching Philosophy

2.1. General aspects. As I am at the beginning of my teaching career, my teaching philosophy is still being sharpened. However the following is clear for me. Depending on whether the course is aimed towards students who specialize in mathematics or who do not, the teaching methods are somewhat different: one more focussed on theory, and another more focussed on examples. Of course, theory, computation, techniques and methods all are needed for the different courses, the difference is the relative weight and emphasis. Beyond these, I think a profound mathematical foundation, deep understanding, good organization of the presentation, face-to-face communication with the students, and an open mind towards improving one’s teaching are the five most important aspects for excellent teaching. I think that I can take care of all the five aspects.
2.2. Method and Technique. From my teaching experience at UBC, I have extracted the following methods or techniques of good teaching, which I have been practicing, as mentioned above.  
1: Prepare well-organized lecture notes before the class. 2: Provide step by step demonstration or explanation in class. 3: Write down every important sentence or idea, or every logical step on the board or scanned papers with clear handwriting. 4: Provide good motivation. Also, graphs and pictures and intuitive explanations for new or abstract concepts are welcomed by the students. 5: Keeping an open mind to improve any point from the feedback by the students or by observing the reaction (via eye contact) from the students is helpful for self-improvement of one’s teaching. 6: Be approachable and patient with the students. These 6 points are my personal perspective.

3. Teaching interests

I would like to teach the fundamental courses: Calculus, Ordinary differential equations and Partial differential equations. I call these courses fundamental since they are crucial for further study. On the other hand, Calculus courses may be the first few courses in the students’ beginning of their university life, and the experience in these courses may affect the students’ recognition of the university, their feelings about studying at the university, etc. In this sense, positive spirit and positive energy are important in these courses.

Furthermore, my research area and interests are nonlinear PDE(s), and thus I may bring some more advanced application or deeper understanding from my research projects.