Teaching Statement
Ragib Hasan, Ph.D.

Teaching Philosophy and Experience: Teaching is my passion and to me, teaching is not a job, but rather a vocation. I teach because I get immense satisfaction when I inform, educate, and transform the minds and lives of my students. My teaching philosophy combines several different themes. I subscribe to the philosophy of Active Learning. I believe that a good teacher needs to treat students not as disciples, but as friends. Effective interaction is the key to successful teaching. A good teacher should also be able to communicate ideas easily, through interactive examples, audio-visual aids, and new technology. In my teaching, I have combined these themes to be a mentor, friend, and guide to my students.

My teaching experience ranges from courses at the introductory and undergraduate levels to graduate and advanced research level courses. I take particular pleasure in the graduate course on Security and Privacy in Cloud Computing, which I first designed at the Johns Hopkins University, and taught it in Spring 2010 and Spring 2011. Designing one of the first courses on cloud security gave me a unique perspective on the topic and strengthened my interest in teaching. At UAB, I have taught this graduate course 5 times — in the Falls of 2011-2015. In all of these 5 years, the class had a healthy mix of undergraduate and graduate students. I designed the class to be a mixture of lectures and research — I introduced topics and then discussed cutting-edge research projects and papers. The students developed term projects on cloud security. This hybrid approach proven to be very useful — each year, multiple student term papers have eventually been published as a refereed conference paper (8 papers as of 2016) or journal paper (1 IEEE journal). I think that this demonstrates the impact of the course — the state of the art education and research explored by the students in my course allowed them to develop their own solutions to important cloud security problems. As I gained more experience teaching this course, I have recently converted the course to a traditional lecture-based course format.

In addition to graduate courses, I have also taught 4 undergraduate courses after joining UAB. In Spring 2012, Spring 2013, Fall 2013, Spring 2014, and Spring 2015, I have taught CS 250 — Discrete Structures, a core topic in computer science and an ABET course. I have also taught CS 101 Fluency with Information Technology to non-CS majors in Fall 2012. Since Fall 2014, I have taken over as the Course Master for CS 330: Computer System Organization and Assembly Language. During the first semester I've taught this, I organized the transition of the lab to more flexible Linux based development environment. Based on student feedback, I have improved the course with new assembly language text and educational materials in the second semester I taught it. The improved student ratings for CS 330 for both the course and my teaching in Fall 2015 shows the impact of these improvements. Teaching these courses allowed me to get back to the basics of computer science but also to hone my skills as a teacher in a large class. By developing a portfolio of teaching the core courses, I believe I can become a better and diverse educator.

Online teaching is the latest innovation in education. I have designed an online course: CS 436 Computer Security, which I am teaching to 40 undergraduate and graduate students in Fall 2016. I have won an online course development award from the UAB E-Learning and Professional Services (eLPS) for this course. This experience allowed me to learn the innovative teaching methods suitable for online teaching. Besides the traditional courses, I have also established Shikkhok.com, an open online education platform for students in South Asia. The volunteer effort has reached 100K registered students and has delivered 15 million lectures since August 2012, and won five international awards.

Finally, I frequently give research talks — both for the general and academic audiences — to disseminate my research. I have given such talks at MIT, Columbia, NIST, University of Alabama, and University of North Carolina-Charlotte.

Student Mentoring: Mentoring is an important job for faculty members and I have taken special care in actively mentoring my graduate and undergraduate student advisees and postdoctoral fellow. Besides teaching research skills and guiding my students in research, I strived to make their graduate studies well-rounded. I have actively engaged them in scholarly activities such as paper reviews, writing technical reports, and participating in student research contests. At the same time, I have strongly emphasized the value of ethics and honesty and tried to instill such virtues in their mindset.

At UAB, I have established the UAB SECuRE and Trustworthy Computing Lab (SECRETLab). As of August 2016, I have graduated my first two PhD student (Shams Zawoad and Rasib Khan). One of them, Rasib Khan, has joined the academia by becoming an Assistant Professor at Northern Kentucky University. Besides them, I have 2 PhD students in my group who are making good progress. I have graduated 6 Masters students, who went on to continue at academia for PhD at top schools, or to join top technology companies including Google, Microsoft, Amazon, Facebook, VMware, and Visa. I have recruited and mentored underrepresented minorities and female students in my lab. I have also mentored a postdoctoral fellow, Dr. Munir Haque, an trained him to write external grant proposals and gain classroom teaching experience. Since finishing his postdoc at UAB, he has joined Purdue University as a Research Scientist. I believe that my mentorship efforts will make him a very promising and productive researcher and academic.