Computer Science Dept. and IEEE Distinguished Seminar Series

Improving Software Reliability via Mining Software Engineering Data

Dr. Tao Xie, NC State University.

Apr 9 Tuesday, 12:30 to 1:30pm

209 Computer Science Building

Abstract – Since late 90's, various data mining techniques have been applied to analyze software engineering data, and have achieved many noticeable successes in improving software reliability. Substantial experience, development, and lessons of data mining for software engineering pose interesting challenges and opportunities for new research and development. This talk will present recent state-of-the-art research on mining software engineering data for improving software reliability. First, the speaker will present a problem-driven methodology in advancing the field of mining software engineering data. More specifically, researchers empirically investigate problems in the software engineering domain and identify required types of patterns for addressing those problems. Second, the speaker will present new mining algorithms for mining these required types of patterns, rather than being constrained by available mining algorithms from the data mining community. Finally, the speaker will present a roadmap for future research on mining software engineering data.

Brief Bio – Tao Xie is an Associate Professor in the Department of Computer Science at North Carolina State University. He received his Ph.D. in Computer Science from the University of Washington in 2005. His research interests are in software engineering, focusing on automated software testing and mining software engineering data. He has published more than 100 research papers in refereed journals and conference proceedings in the area of software engineering. Besides doing research, he has contributed to understanding the software engineering research community. He received a National Science Foundation Faculty Early Career Development (CAREER) Award in 2009. He received 2008, 2009, and 2010 IBM Faculty Awards and a 2008 IBM Jazz Innovation Award. He received 2010 North Carolina State University Sigma Xi Faculty Research Award. He received the ASE 2009 Best Paper Award and an ACM SIGSOFT Distinguished Paper Award.