Abstract

Programming language and big data seem to be two quite different research disciplines. While the main focuses of programming language research are program semantics, type systems, program analysis, program transformations, and language design and implementation, those of big data are modeling, classifying, clustering, and fusing data. In fact, numerous opportunities exist in synergizing them, which make programs more secure and correct, languages more usable, and big data more reliable. In this talk, through a few examples, I will show how big data can improve compiler error message generation and how programming language research can improve the reliability of big data programs. I will also give my own vision on future research directions intersecting these two disciplines.