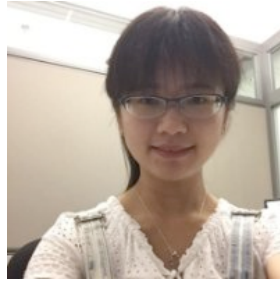


UNIVERSITY OF CHICAGO
DEPARTMENT OF COMPUTER SCIENCE

PRESENTS:

“Higher-Level Program Optimizations for Data Analytics”



Yufei Ding
North Carolina State University

Abstract:

Many modern applications, especially those data analytics, often spend a large number of cycles on unnecessary computations. To find a document most similar to a query document, for instance, these applications typically would need to examine hundreds of thousands of other documents (that are not the most similar ones) in the dataset. Such redundant computations have been hidden in the useful instructions of the applications and are elusive for traditional compiler-based code optimizations. My work harnesses these hidden but significant optimization opportunities by raising the level of program optimizations from implementations to algorithms, and from instructions to formulas.

Bio:

Yufei Ding is a Ph.D. candidate in the Computer Science Department at North Carolina State University. She received her B.S. and M.S. in Physics from University of Science and Technology of China and The College of William and Mary respectively. In 2012, she started her Ph.D. study in Computer Science. Her research interest resides at the intersection of Compiler Technology and (Big) Data Analytics, with a focus on enabling Higher-Level Program Optimizations for data analytics and other data-intensive applications. Yufei has been actively publishing in major venues in both computer systems and data analytics areas, such as ASPLOS, PLDI, VLDB, ICDE, and ICML. She was the receipt of NCSU Computer Science Outstanding Research Award in 2016.

Thursday, February 9, 2017
3:00 pm
Ryerson 251
Host: Shan Lu