

Shared, High-Performance Software Components for Shared, High-Performance Hardware

(Keynote)

Xiaosong Ma,

Principal scientist,

Qatar Computing Research Institute, HBKU

xma@hbku.edu.qa

Abstract

Today clouds and data centers have become the default platforms for many applications, sharing hardware resources at different levels. Though current-generation processors, networks, and storage are increasingly designed for such sharing, individually optimized applications do not easily achieve predictable performance or good overall resource utilization. In this talk, I will share my thoughts on shared software components for running on shared hardware and discuss several related systems developed in our research.

Biography

Xiaosong Ma is currently a Principal Scientist at Qatar Computing Research Institute. Her research interests are in the areas of graph systems, distributed/cloud computing, and storage systems. Xiaosong has published over 100 research papers and currently serves on the editorial board of the ACM Transactions on Storage. She received both the DOE Early Career Principal Investigator Award and the NSF CAREER Award, and was named a University of Illinois Department of Computer Science Alumni Distinguished Educator and an ACM Distinguished Member. Xiaosong received her Ph.D. from the University of Illinois at Urbana-Champaign in 2003, and her B.S. from Peking University in 1997.