Spring 2014 Seminar Series
Presented by the ECE Division

CHALLENGES AND OPPORTUNITIES FOR STORAGE SYSTEMS RESEARCH IN THE ERA OF BIG DATA

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1:30 PM – CREOL 102

Everyday 2.5 quintillion (2.5x1018, or 2.5 million trillion) bytes of data are created by people. This data comes from everywhere: from traditional scientific computing and on-line transactions, to popular social networks and mobile applications. Data produced in the last two years alone amounts to 90% of the data in the world today! This phenomenal growth and ubiquity of data has ushered in an era of "Big Data", which brings with it new challenges as well as opportunities. In this talk, I will first discuss big data challenges facing computer and storage systems research, brought on by the huge volume, high velocity, great variety and veracity with which digital data are being produced in the world. I will then present research being conducted in my research group that seeks a scalable systems and application-aware approach to addressing some of the challenges, from the many core and storage architectures to file systems and up to the applications.

DR. HONG JIANG
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Dr. Hong Jiang has been on the faculty of University of Nebraska-Lincoln where he is Willa Cather Professor of Computer Science and Engineering. He received the B.Sc. degree and the M.A.Sc. degree, both in Computer Engineering, from Huazhong University of Science and Technology, China, and the University of Toronto, Canada respectively; and the PhD degree in Computer Science from the Texas A&M University, USA. His areas of research emphasis include computer architecture, computer storage systems, high-performance computing, big data computing, and cloud computing. He has over 200 publications in major journals and international conferences in these areas. He has graduated 12 Ph.D. students who upon their graduations either landed academic tenure-track positions in Ph.D.-granting US institutions or were employed by major US IT corporations. He served as an Associate Editor of the IEEE Transactions on Parallel and Distributed Systems, PC member and organizer of many international conferences. His research has been supported by NSF, DOD, and Industry. He is currently on leave as a program director at NSF in the CCF division of the CISE directorate.