From Online Cloud Services to Underlying Datacenter Optimization: Bridging Theory and Practice

Dr. Fangming Liu
School of Computer Science and Technology
Huazhong University of Science and Technology

Abstract:

Cloud computing and cloud storage upon large-scale datacenters (DCs) and/or content delivery networks (CDNs), are becoming the new paradigm of multiplexing and managing massive computing, storage and networking resources as utility, which host a wide range of Internet-scale applications/services. In this talk, we follow a "Top-Down Approach" to explore not only practical deployment of cloud-based online systems at the service-level spectrum (such as online content hosting and video streaming), but also underlying datacenter optimization problems at the infrastructure-level spectrum (such as datacenter power-performance tradeoff and multi-tenants IaaS infrastructure level spectrum). Concrete case studies and research results will be illustrated to bridge theory and practice, so as to foster comprehensive brainstorming and cross-discipline research collaboration between Dr. Fangming Liu’s group and researchers in The University of Hong Kong.

About the Speaker:

Fangming Liu is currently an Associate Professor in the School of Computer Science and Technology, Huazhong University of Science and Technology (HUST), Wuhan, where he is named the CHUTIAN Scholar of Hubei Province, China, and awarded with the highly competitive Excellent Young Scholar Fund in HUST. He is a Youth Scientist of National 973 Basic Research Program Project on “Software-defined Networking (SDN)-based Cloud Datacenter Networks,” which is one of the largest SDN projects in China. Since 2012, he has also been invited as a StarTrack Visiting Young Faculty in Microsoft Research Asia (MSRA), Beijing. He received his B.Engr. degree in 2005 from the Department of Computer Science and Technology, Tsinghua University, Beijing; and his Ph.D. degree in Computer Science and Engineering from the Hong Kong University of Science and Technology in 2011, supervised by Prof. Bo Li (IEEE Fellow). From 2009 to 2010, he was a visiting scholar at the Department of Electrical and Computer Engineering, University of Toronto, Canada, in close collaboration with Prof. Baochun Li. He was the recipient of two Best Paper Awards and one Best Paper Nominee from IEEE GLOBECOM 2011, IEEE IUCC 2012 and IEEE CloudCom 2012, respectively.

All are welcome!
For enquiries, please call 2859 2180 or email enquiry@cs.hku.hk
Department of Computer Science
The University of Hong Kong