Keynote Speech 8

Towards Collaborative Computing with Urban Big data

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Abstract

Nowadays, sensing technologies and large-scale computing infrastructures have produced a variety of big data in urban spaces, e.g. human mobility, air quality, traffic patterns, and geographical data. The big data implies rich knowledge about a city and can help tackle these challenges when used correctly. We believe this is the right time to research on holistic urban big data which has been made possible due to recent advances in communication technologies that allow wireless connection and untethered data exchange among vast urban sensing and computing devices, as well as advanced data and computing science that provides us necessary methods and computing power to understand, model, and reason the urban data and people. In this talk, we will give some properties for processing urban big data and discuss how the collaborative computing bridges the data and computation in the cyber space and the environment, systems, people and things in the physical world.

Biography

Minyi Guo is currently Zhiyuan Chair professor and chair of the Department of Computer Science and Engineering, Shanghai Jiao Tong University (SJTU), China. Before joined SJTU, Dr. Guo had been a professor of the school of computer science and engineering, University of Aizu, Japan. Dr. Guo received the national science fund for distinguished young scholars from NSFC in 2007, and was supported by “1000 recruitment program of China” in 2010. His present research interests include parallel/distributed computing, compiler optimizations, embedded systems, pervasive computing, and cloud computing. He has more than 300 publications in major journals and international conferences in these areas, including the IEEE Transactions on Parallel and Distributed Systems, the IEEE Transactions on Computers, the ACM Transactions on Autonomous and Adaptive Systems, INFOCOM, IPDPS, ICS, ISCA, HPCA, SC, WWW, PODC, etc. He received 5 best paper awards from international conferences. He was on the editorial board of IEEE Transactions on Parallel and Distributed Systems and IEEE Transactions on Computers. Dr. Guo is a senior member of IEEE, member of ACM, IEICE IPSJ, and CCF.