Keynote: *Research Experiences on Green Computing in Virtualized System*

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**About the keynote speaker**

Hai Jin is a Cheung Kung Scholars Chair Professor of computer science and engineering at the Huazhong University of Science and Technology (HUST) in China. He is now Dean of the School of Computer Science and Technology at HUST. Jin received his PhD in computer engineering from HUST in 1994. In 1996, he was awarded a German Academic Exchange Service fellowship to visit the Technical University of Chemnitz in Germany. Jin worked at The University of Hong Kong between 1998 and 2000, and as a visiting scholar at the University of Southern California between 1999 and 2000. He was awarded Excellent Youth Award from the National Science Foundation of China in 2001. Jin is the chief scientist of ChinaGrid, the largest grid computing project in China, and the chief scientist of National 973 Basic Research Program Project of Virtualization Technology of Computing System.

Jin is a senior member of the IEEE and a member of the ACM. Jin is the member of Grid Forum Steering Group (GFSG). He has co-authored 15 books and published over 400 research papers. His research interests include computer architecture, virtualization technology, cluster computing and grid computing, peer-to-peer computing, network storage, and network security.

Jin is the steering committee chair of International Conference on Grid and Pervasive Computing (GPC), Asia-Pacific Services Computing Conference (APSCC), International Conference on Frontier of Computer Science and Technology (FCST), and Annual ChinaGrid Conference. Jin is a member of the steering committee of the IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid), the IFIP International Conference on Network and Parallel Computing (NPC), and the International Conference on Grid and Cooperative Computing (GCC), International Conference on Autonomic and Trusted Computing (ATC), International Conference on Ubiquitous Intelligence and Computing (UIC).

**Summary:**

Green computing is a hot topic in these years and has attracted many researchers to focus on some typical issues, including energy saving problems in operating system and network transmission system. Now, with the development of virtualization technologies, system software has different layer concept (including physical machine, VMM and several VMs), which will make the traditional energy saving technologies invalid. For example, in client virtualization, different VMs have different energy saving decisions in their operating systems, which have conflict in VMM layer. But, on the other side, virtualization technologies can build a promising energy saving framework for data centers with the help of VM migrations in easier way than ever. So, it is important to find out the impact of virtualization technologies on computer systems and build a green map. Here, we will give our understanding on the problem and report some research experiences on green virtualized systems.