

The International Workshop on Big Data Management on Emerging Hardware (HardBD 2013)

<http://idke.ruc.edu.cn/HardBD2013>, in Conjunction with **WAIM 2013**, Beidaihe, China, 14-16 June, 2013

IMPORTANT DATES

Paper submission deadline: *March 24, 2013*

Author Notification: April 20, 2013

Final Camera-ready Copy Deadline: April 27, 2013

HIGHLIGHT: Selected papers will be recommended to **International Journal of Automation and Computing (EI-indexed)** Special issue on Big Data.

DESCRIPTION

Data properties and hardware characteristics are two key aspects for efficient data management. A clear trend in the first aspect, data properties, is the increasing demand to manage and process Big Data, characterized by the fast evolution of “Big Data Systems”, where nearly every aspect of both enterprise and consumer services is being driven by data processing and analysis. Examples of big data systems include NoSQL storage systems, Hadoop/MapReduce, data analytics platforms, search and indexing platforms, and messaging infrastructures. These systems address needs for structured and unstructured data across a wide spectrum of domains such as Web, social networks, enterprise, cloud, mobile, sensor networks, multimedia/streaming, cyber-physical and high performance systems, and for multiple application areas such as healthcare, transportation, and scientific computing.

At the same time, the second aspect, hardware characteristics, is undergoing rapid changes, imposing new challenges for an efficient utilization of hardware resources. Recent trends include storage-class memory, massive multi-core processing systems, very large main memory systems, fast networking components, big computing clusters, and large data centers that consume massive amounts of energy. It is clear that many aspects of data management have to evolve with these trends. Utilizing new hardware technologies for efficient Big Data management is of urgent importance.

However, many essential issues in this area have to be exploited, such as new system

architecture, new storage devices and indexes, query processing, energy efficiency and proportionality, and so on. The aim of this half-day workshop is to bring together researchers, practitioners, system administrators, system programmers, and others interested in sharing and presenting their perspectives on the effective management of big data over new hardware platforms, and to also discuss and identify future directions and challenges in this area. In addition, a number of invited papers will also be solicited.

TOPICS

We welcome papers that address fundamental research issues in this challenging area, with emphasis on big data management on emerging hardware. Submissions covering topics from the following non-exclusive list are encouraged:

- * New systems architecture
- * New storage devices and indexes
- * Query processing
- * Transaction processing
- * Energy-efficient and energy-proportional data processing
- * Benchmarking
- * Fault management and reliability
- * Heterogeneous hardware
- * Main memory data management
- * Sustainable power management
- * Scalable and reconfigurable challenges

SUBMISSIONS

Authors are invited to submit electronically original, English-language research contributions not concurrently submitted elsewhere. Accepted papers will be published by Springer as proceedings in Lecture Notes in Computer Science (LNCS). All submitted papers should be Springer LNCS camera-ready format. The style files are available from Springer LNCS site.

Selected papers will be recommended to International Journal of Automation and Computing (EI-indexed) Special issue on Big Data.

All submissions files should be in PDF formats. The number of pages should not

exceed 12 pages. Any paper more than 12 pages will be rejected. Please submit your paper(s) at: <https://www.easychair.org/conferences/?conf=HardBD2013>

ORGANIZATION

Workshop General Co-Chair:

Xiaofeng Meng, Renmin University of China (RUC), China

Theo Haerder, Technical University of Kaiserslautern (TU Kaiserslautern), Germany

Program Co-Chair:

Peiquan Jin, University of Science and Technology of China (USTC), China

Binsheng He, Nanyang Technological University (NTU), Singapore

Publicity Chair:

Yi Ou, Technical University of Kaiserslautern (TU Kaiserslautern), Germany

PC Members (to be added):

Bin Cui, Peking University, China

Bin He, IBM Almaden Research, USA

Sang-Wook Kim, Hanyang University, Korea

Ioannis Koltsidas, IBM Research - Zurich, Switzerland

Ziyu Lin, Xiamen University, China

Yi Ou, TU Kaiserslautern, Germany

Iliia Petrov, Reutlingen University, Germany

Vijayan Prabhakaran, Microsoft Research, USA

Jianliang Xu, Hong Kong Baptist University, China