



4th IEEE International Conference on
 Cloud Computing Technology and Science
 IEEE CloudCom 2012
 The Grand Hotel, Taipei, Taiwan

2012.cloudcom.org

Call for Papers

Dec 3 – 6, 2012

The “Cloud” is a natural evolution of distributed computing and of the widespread adaption of virtualization and SOA. In Cloud computing, IT-related capabilities and resources are provided as services, via the Internet and on-demand, accessible without requiring detailed knowledge of the underlying technology. The *IEEE International Conference and Workshops on Cloud Computing Technology and Science*, steered by the Cloud Computing Association, aims to bring together researchers, developers and industry representatives who work on cloud computing and related technologies.

Architecture

David Wallom, Univ. of Oxford, UK
 Cho-Li Wang, University of Hong Kong, China

- Cloud Infrastructure as a Service
- Cloud Platform as a Service
- Cloud federation and hybrid cloud infrastructure
- Programming models and systems/tools
- Green data center
- Networking technologies for data center
- Cloud system design with FPGA, GPU, APU
- Monitoring, management and maintenance
- Economic and business models
- Dynamic resource provisioning

Services and Applications

Jiannong Cao, Hong Kong Poly U., Hong Kong
 Wolfgang Ziegler, Fraunhofer - SCAI, Germany

- Cloud Service Composition
- Query and discovery models for cloud services
- Trust and Security in cloud services
- Change management in cloud services
- Organization models of cloud services
- Innovative cloud applications and experiences
- Business process and workflow management
- Service-Oriented Architecture in clouds

Poster and Demo (with C3-Cloud Computing Challenge)

Hsi-Ya Chang, NCHC, Taiwan
 Rui Maximo Esteves, Univ. Stavanger, Norway

MapReduce

Heshan Lin, Virginia Tech, USA
 Gabriel Antoniu, INRIA, France

- Performance characterization and optimization
- MapReduce on multi-core, GPU
- MapReduce on hybrid distributed environments
- MapReduce on opportunistic / heterogeneous computing systems
- Extension of the MapReduce programming model
- Debugging and simulation of MapReduce systems
- Data-intensive applications using MapReduce
- Optimized storage for MapReduce applications
- Fault-tolerance & Self-* capabilities

Virtualization

Samee U. Khan, North Dakota State University, USA
 Pavan Balaji, Argonne National Lab, USA

- Server, storage, network virtualization
- Resource monitoring
- Virtual desktop
- Resilience, fault tolerance
- Modeling and performance evaluation
- Security aspects
- Enabling disaster recovery, job migration
- Energy efficient issues

PhD Consortium

Che-Rung Lee, National Tsing Hua Univ., Taiwan
 Qi Yu, Rochester Institute of Technology, USA

Security and Privacy

Siani Pearson, HP Cloud & Security Research Lab, UK
 Jianying Zhou, I²R, Singapore

- Accountability
- Audit in clouds
- Authentication and authorization
- Cryptographic primitives
- Reliability and availability
- Trust and credential management
- Usability and security
- Security and privacy in clouds
- Legacy systems migration
- Cloud integrity and binding issues

HPC on Cloud

Bing Bing Zhou, Univ. of Sydney, Australia
 Thomas J. Hacker, Purdue University, USA

- Load balancing for HPC clouds
- Middleware framework for HPC clouds
- Scalable scheduling for HPC clouds
- HPC as a Service
- Performance Modeling and Management
- Programming models for HPC clouds
- HPC cloud applications
- Optimal cloud deployment for HPC

Industrial Applications

Jerry Chou, National Tsing Hua Univ., Taiwan
 Viraj Bhat, Yahoo! Inc., USA

Workshops Chairs

Y. Demchenko,
 Univ. of Amsterdam, The Netherlands
 Kuan-Ching Li
 Providence University, Taiwan

Panels and Tutorials

Chair: *Sartaj Sahni*, University of Florida, USA
Standards and Interoperability: *S. L. Diamond*,
 Chair of the IEEE Cloud Computing Initiative
MapReduce/Hadoop Tutorial: *Viraj Bhat*,
 Principal Technical, Yahoo! Inc., USA

Keynotes

Sanjay Ranka, University of Florida, USA
Hai Jin, HUST, China
Amr El-Abbadi, University of California, USA
San-Cheng Chang, Executive Yuan, Taiwan, R.O.C.
Siani Pearson, HP Cloud Research Lab, UK
Mazin Yousif, Shell, USA
Joe Baguley, VMware, (Pending)

Submissions & Publication

Conference proceedings will be published by IEEE CS Press and Indexed by EI.

Extended and revised versions of distinguished papers will be invited for publication in special issues of reputable international journals.

- Future Generation Computer Systems (Elsevier) (SCI, EI)
- International Journal of Communication Systems (Wiley) (SCI, EI)
- Journal of Systems Architecture (Elsevier) (SCI, EI)
- Automated Software Engineering (Springer) (SCI, EI)
- Journal of Internet Technology (SCIE, EI)
- Information System Frontiers (Springer) (SCI, EI)

Important Dates

Abstract Submission (obligatory): July 13, 2012
 Full Submission: July 27, 2012
 Notification: Sep. 7, 2012
 Camera-ready & Author registration: Sep. 28, 2012
Workshop Proposals: May 13, 2012
 Poster and Demo: Sep. 10, 2012
 Poster and Demo Notification: Sep. 20, 2012

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Albert Zomaya,
 The University of Sydney, Australia
Yeh-Ching Chung,
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Program Committee available on the website.

