



4th International Symposium on Big Data and Cloud Computing Challenges (ISBCC-2017)

March 9-10, 2017

VIT University, Chennai, India

Call for Papers

Cloud computing has emerged as a de facto computing model, enabling software, infrastructure, and information to be used as services over the network in an on-demand manner. Currently, both industry and high-resolution datasets that allow for data-intensive decision-making, at a level never before imagined. The Fourth International Symposium on Cloud Computing and Big Data Challenges (ISBCC 17) solicits high quality original research papers in all aspects of Cloud Computing, Big Data, semantic cloud, networking with emphases on Cloud Systems, Cloud Services and Big Data Management in Clouds.

Topics

Topics include but are not limited to:

1. Architecture

- 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, and APU
- Monitoring, management and maintenance
- Economic and business models
- Dynamic resource provisioning

2. MapReduce

- 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

3. Security and Privacy

- 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

4. Services and Applications

- 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

5. Virtualization

- 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

6. HPC on Cloud

- 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

7. Big Data Science and Foundations

- Novel Theoretical Models for Big Data
- New Computational Models for Big Data
- Data and Information Quality for Big Data
- New Data Standards

8. Big Data Infrastructure

- Cloud/Grid/Stream Computing for Big Data
- High Performance/Parallel Computing Platforms for Big Data
- Autonomic Computing and Cyber-infrastructure, System Architectures, Design and Deployment
- Energy efficient Computing for Big Data
- Programming Models and Environments for Cluster, Cloud, and Grid Computing to Support Big Data
- Software Techniques and Architectures in Cloud/Grid/Stream Computing
- Big Data Open Platforms
- New Programming Models for Big Data beyond Hadoop/MapReduce, STORM
- Software Systems to Support Big Data Computing

9. Big Data Management

- Advanced database and Web Applications
- Novel Data Model and Databases for Emerging Hardware
- Data Preservation
- Data Provenance
- Interfaces to Database Systems and Analytics Software Systems
- Data Protection, Integrity and Privacy Standards and Policies
- Information Integration and Heterogeneous and Multi-structured Data Integration
- Data management for Mobile and Pervasive Computing
- Data Management in the Social Web
- Crowd sourcing
- Spatiotemporal and Stream Data Management
- Scientific Data Management
- Workflow Optimization
- Database Management Challenges: Architecture, Storage, User Interfaces

10. Big Data Search and Mining

- Social Web Search and Mining
- Web Search
- Algorithms and Systems for Big Data Search
- Distributed, and Peer-to-peer Search
- Big Data Search Architectures, Scalability and Efficiency
- Data Acquisition, Integration, Cleaning, and Best Practices
- Visualization Analytics for Big Data

- Computational Modeling and Data Integration
- Large-scale Recommendation Systems and Social Media Systems
- Cloud/Grid/Stream Data Mining- Big Velocity Data
- Link and Graph Mining
- Semantic-based Data Mining and Data Pre-processing
- Mobility and Big Data

11. Big Data Security & Privacy

- Intrusion Detection for Gigabit Networks
- Anomaly and APT Detection in Very Large Scale Systems
- High Performance Cryptography
- Visualizing Large Scale Security Data
- Threat Detection using Big Data Analytics
- Privacy Threats of Big Data
- Privacy Preserving Big Data Collection/Analytics
- HCI Challenges for Big Data Security & Privacy
- User Studies for any of the above
- Sociological Aspects of Big Data Privacy

12. Big Data Applications

- Complex Big Data Applications in Science, Engineering, Medicine, Healthcare, Finance, Business, Law, Education,
- Transportation, Retailing, Telecommunication
- Big Data Analytics in Small Business Enterprises (SMEs),
- Big Data Analytics in Government, Public Sector and Society in General
- Real-life Case Studies of Value Creation through Big Data Analytics
- Big Data as a Service
- Big Data Industry Standards
- Experiences with Big Data Project Deployments

13. Additional Topics this year

- Semantic Cloud
- Cognition and Semantic Web
- Mobile Web
- Wireless Sensor networks
- Machine Learning
- Web Science
- e-Healthcare
- Green Computing
- Internet of Things (IOT)

Industrial Track

The Industrial Track solicits papers describing implementations of Big Data solutions relevant to industrial settings. The focus of industry track is on papers that address the practical, applied, or pragmatic or new research challenge issues related to the use of Big Data in industry. We accept full papers (up to 6 pages) and extended abstracts (2-4 pages).

Submission Guidelines

All paper submissions must represent original and unpublished work. Each submission will be peer reviewed by at least three program committee members. Submission of a paper should be regarded as an undertaking that, should the paper be accepted, at least one of the authors will register for the conference and present the work. Submit your paper(s) as a PDF at the submission site <https://easychair.org/conferences/?conf=isbcc2017>

Publication

Accepted and presented papers will be included in the conference proceedings published by Springer in the CCIS series which is abstracted (indexed) by DBLP, EI, Scopus and it is submitted for the inclusion in ISI Proceedings and Inspec. Thus, the papers are available in Web of Knowledge (Web of Science) database. Information about series Springer-Verlag CCIS: Communications in Computer and Information Science (ISSN 1865-0929). <http://www.springer.com/series/7899>

Authors of accepted papers, or at least one of them, are requested to register and present their work at the conference, otherwise their papers will not be included in the proceedings

Distinguished Papers

Distinguished papers presented at the conference, after further revision, will be recommended for publication in special issues of the reputed journals

Call for Special Sessions

A special session is a group of 6 papers (or multiple of 6), organized on the initiative of any volunteer proposing NO MORE than 2 papers inside. Special session topics must be in areas consistent with those of the conference.

In order to avoid that Special Sessions tend to draw papers from Regular Tracks, the Special Sessions on Topics not enough specific and too general will be rejected.

Organizer Instructions: Any potential organizer (or group of organizers: no more than 2) has to complete the following tasks:

- Provide Special Sessions Chairs with a provisional title of the special session;
- Send a “Call for Papers” dedicated to that special session to Special Sessions Chair: Deadline November 28, 2016;
- Send a potential list of authors to be invited to submit a paper;

- Send a list of potential reviewers (at least 3 reviewers per paper) to facilitate the review process
- If less than 6 papers will be submitted before the end of the deadline, the submitted papers will be moved to regular tracks to be reviewed as regular contributions.

Special Session Chair: Dr. D Rekha, SCSE, VIT Chennai.

Important Dates:

Paper submission on or before: August 31, 2016

Acceptance notification to authors: October 31, 2016

Camera ready paper submission: November 15, 2016

Symposium date: March 9 – 10, 2017