CALL FOR PAPERS

IEEE International Conference on Big Data

(IEEE BigData 2021)

http://bigdataieee.org/BigData2021/
December 15 – 18, 2021 @ Online Event

IEEE BIG DATA 2021
Virtual Event · December 15-18

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In recent years, "Big Data" has become a new ubiquitous term. Big Data is transforming science, engineering, medicine, healthcare, finance, business, and ultimately our society itself. The IEEE Big Data conference series started in 2013 has established itself as the top tier research conference in Big Data.

- The first conference IEEE Big Data 2013 had more than 400 registered participants from 40 countries and the regular paper acceptance rate was 17.0%.
- The IEEE Big Data 2019, regular paper acceptance rate: 18.7%) was held in Los Angeles, CA, Dec 9-12, 2019 with close to 1200 registered participants from 54 countries.
- The IEEE Big Data 2020 (regular paper acceptance rate: 15.7%) was held online, Dec 10-13, 2020 with close to 1100 registered participants from 50 countries.

We solicit high-quality original research papers (and significant work-in-progress papers) in any aspect of Big Data with emphasis on 5Vs (Volume, Velocity, Variety, Value and Veracity), including the Big Data challenges in scientific and engineering, social, sensor/IoT/IoE, and multimedia (audio, video, image, etc.) big data systems and applications. The conference adopts single-blind review policy. We expect to have a very high quality and exciting technical program at Seattle this year. Example topics of interest includes but is not limited to the following:

1. 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
2. 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
3. Big Data Management
Search and Mining of variety of data including scientific and engineering, social, sensor/IoT/IoE, and multimedia data
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
Multimedia and Multi-structured Data- Big Variety Data
4. 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/StreamData Mining- Big Velocity Data
Link and Graph Mining
Semantic-based Data Mining and Data Pre-processing
Mobility and Big Data
Multimedia and Multi-structured Data-Big Variety Data
5. Big Data Learning and Analytics
Predictive analytics on Big Data
Machine learning algorithms for Big Data
Deep learning for Big Data
Feature representation learning for Big Data
Dimension redution for Big Data
Physics informed Big Data learning
6. Ethics, Privacy and Trust in Big Data Systems
Techniques and models for faimess and diversity
Experimental studies of fairness, diversity, accountability, and transparency
Techniques and models for transparency and interpretability
Trade-offs between transparency and 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 Preserving Big Data Collection/Analytics
HCI Challenges for Big Data Security & Privacy
Trust management in IoT and other Big Data Systems
7. Hardware/OS Acceleration for Big Data
FPGA/CGRA/GPU accelerators for Big Data applications
Operating system support and runtimes for hardware accelerators
Programming models and platforms for accelerators
Domain-specific and heterogeneous architectures
Novel system organizations and designs
Computation in memory/storage/network
Persistent, non-volatile and emerging memory for Big Data
Operating system support for high-performance network architectures
8. 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

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 10 pages) and extended abstracts (2-4 pages).

Paper Submission: Please submit a full-length paper (up to **10 pages IEEE 2-column format**) through the online submission system.

Important Dates:

Electronic submission of full papers:
September 5, 2021
Notification of paper acceptance:
Oct 27, 2021
Camera-ready of accepted papers:
Nov 15, 2021
Conference:
Dec 15-18, 2021