The 22nd IEEE International Conference on High Performance Computing and Communications (HPCC-2020)
Dec. 14-16, 2020, Fiji

High Performance Computing and Communications

With the rapid growth in computing and communications technology, the past decade has witnessed a proliferation of powerful parallel and distributed systems and an ever increasing demand for practice of high performance computing and communications (HPCC). HPCC has moved into the mainstream of computing and has become a key technology in determining future research and development activities in many academic and industrial branches, especially when the solution of large and complex problems must cope with very tight timing schedules.

Among a series of highly successful International Conferences on High Performance Computing and Communications (HPCC), the HPCC-2020 conference is the 22nd edition of a forum for engineers and scientists in academia, industry, and government to address the resulting profound challenges and to present and discuss their new ideas, research results, applications and experience on all aspects of high performance computing and communications. IEEE HPCC-2020 is sponsored by IEEE, IEEE Computer Society, and IEEE Technical Committee on Scalable Computing (TCSC).

The 2020 High Performance Computing and Communications (HPCC-2020) will provide a high-profile, leading-edge forum for researchers, engineers, and practitioners to present state-of-art advances and innovations in theoretical foundations, systems, infrastructure, tools, testbeds, and applications for the HPCC, as well as to identify emerging research topics and define the future.

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IMPORTANT DATES
Special Session:	Jun. 30, 2020
Submission Deadline(hard):	Sep. 25, 2020
Author Notification Date:	Oct. 25, 2020
Final Manuscript Due:	Nov. 15, 2020

IEEE HPCC-2020 Tracks and Topics

Track 1: High Performance Computing and Applications
- High performance computing theory
- High performance computing architectures
- System software and middleware
- System software support for scientific workflows
- Storage and I/O systems
- Resource management
- Instruction-level and thread-level parallelism
- Performance modeling and evaluation
- Massively multicore systems
- Future novel computing platforms
- Database applications and data mining
- High performance computing for bioinformatics
- High performance computing for big data
- High performance computing for AI
- High performance computing for block chains
- Green high performance computing

Track 2: Parallel and Distributed Computing and Systems
- Parallel and distributed system architectures
- Parallel and distributed algorithms
- Data center architectures
- Resource virtualization
- Web services and Internet computing
- Cloud computing
- Grid and cluster computing
- Biological/molecular computing
- Embedded systems
- Distributed systems and applications
- Pervasive/ubiquitous computing and intelligence
- Distributed Graphics and VR/AR/MR Systems
- Distributed AI and Soft/Natural Computing
- Power-efficient and green computing systems
- Parallel and distributed computing for big data
- Parallel and distributed computing for AI

Track 3: Communications and Networking
- Network and interconnect architecture
- Computer networks
- Internet architectures and protocols
- Telecommunications
- Trust, security, and privacy
- Energy-aware computing and networking
- 5G network
- Software defined networking
- Network functions virtualization
- Machine learning and deep learning
- Social networking and computing
- Performance evaluation and measurement

Special Issues
1. IEEE Transactions on Industrial Informatics SI on Digital Twinning: Integration AI-ML and Big Data Analytics for Virtual Representation
2. IEEE Transactions on Network Science and Engineering SI on Computing and Networking for Cyber-Physical-Social Systems
3. Information Fusion SI Fusion from Big Data to Smart Data
4. Information Fusion SI on Data Fusion for Trust Evaluation
5. IEEE/CAA Journal of Automatics Sinica SI on Blockchain for Internet-of-Things and Cyber-Physical Systems: Emerging Trends, Issues and Challenges
6. Future Generation Computer Systems SI on Artificial Intelligence for Cyber Defence and Smart Policing
7. Journal of Systems Architecture SI on Ubiquitous Edge Computing for Next Generation IoT AND 6G: Architecture, Modelling and Systems
8. Neurocomputing SI on Edge Intelligence: Neurocomputing Meets Edge Computing
9. Journal of Systems Architecture SI on High-Performanc-Computing-Communications for Cyber-Physical-Social Systems
10. Computer Networks SI on Towards Efficient and Flexible Management and Interworking Techniques for Industrial Internet of Things
11. Journal of Cloud Computing SI on Security and Privacy Issues for AI in Edge-Cloud Computing
12. MDPI Electronics special issue on Blockchain-based Technology for Mobile Applications

Paper Submission

All papers need to be submitted electronically through the conference submission website (http://edas.info/N27662) with PDF format. You can confirm the IEEE Computer Society Proceedings Author Guidelines at the following web page: http://www.computer.org/web/cs-cps/