

# The 24th IEEE International Conference on High Performance Computing & Communications (HPCC-2022)

Dec. 18-20, 2022, Chengdu, China

## Call for Papers

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-2022 conference is the 24th 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-2022 is sponsored by IEEE, IEEE Computer Society, and IEEE Technical Committee on Scalable Computing (TCSC). The 2022 High Performance Computing and Communications (HPCC-2022) 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.

### 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
- Federated Learning
- Embedded systems
- Distributed systems and applications
- Pervasive/ubiquitous computing & 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

## Paper Submission

The materials presented in the papers should not be published or under submission elsewhere. Each paper is limited to 8 pages (or 10 pages with over length charge) including figures and references using IEEE Computer Society Proceedings Manuscripts style (two columns, single-spaced, 10 fonts). All papers need to be submitted electronically through the conference submission website with PDF format: [Coming soon](#)

## Paper Publication

Accepted conference papers will be published by IEEE (IEEE-DL and EI indexed). At least one author of each accepted paper is required to register and present their work at the conference; otherwise the paper will not be included in the proceedings. Selected papers, after further extensions and revisions, will be recommended to special issues.

## Co-located with Five Other Conferences

- o The 2022 IEEE Int'l Conf. on Embedded Software and Systems (ICCESS-2022)
- o The 2022 IEEE Int'l Conf. on Smart City (SmartCity-2022)
- o The 2022 IEEE Int'l Conf. on Data Science and Systems (DSS-2022)
- o The 2022 IEEE Int'l Conf. on Data, Information, Knowledge and Wisdom (DIKW-2022)
- o The 2022 IEEE Int'l Conf. on Dependability in Sensor, Cloud and Big Data Systems and Applications (DependSys-2022)

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Special Session  
Jun. 30, 2022

Submission Deadline  
Sep. 01, 2022

Author Notification  
Oct. 15, 2022

Final Manuscript Due  
Nov. 10, 2022