

CALL FOR PAPERS

2022 International Conference on Advances in High-Performance Computing

Tiako Center, Oklahoma City, OK, USA & Online, October 3-6

Oklahoma International Publishing (OKIP) is pleased to host the 2nd International Conference on Advances in High-Performance Computing (AHPC). The conference aims to bring together scholars from different disciplinary backgrounds to emphasize dissemination of ongoing research and development in the field. Proposals are solicited describing original works in fields below and related technologies. AHPC will include a peer-reviewed program of technical, industrial and poster sessions. Accepted and presented full papers from the tracks below will be published by OKIP and submitted for indexation in major abstract and citation databases of peer-reviewed literature. Extended version of best papers will be considered for the inaugural issue of the International Journal of Information Technology Research ISSN 1553-653X.

HPC Concepts

- High Performance Computing (HPC)
- Performance | Scalability | Virtualization
- Visualization | Simulation | Modelisation
- Prediction | Program Optimization | Workloads
- Algorithms | Networks | Efficiency |Scheduling
- Compiler Design and Technologies
- HPC Components and Technologies
- Data Management and Transport | Compilation
- Load Balancing | Resource Management
- Fault Tolerance | Reliability | Availability
- Multicore Algorithms | Operating System
- Software Design and Implementations
- Asynchronous Methods | Interconnects
- Interconnections | Distributed Computing
- High Scalability Computing | Accelerators
- High Performance Modeling/Software/Tools
- Routing Protocols | Quality of Service
- Allocation Framework | Benchmarks |...

Parallel Computing

- Parallelism | Automatic Parallelization
- Programming Languages/Libraries/Tools
- Programing Models/Environments
- Parallel Metaheuristics/Application-Behavior
- Parallel/Distributed Algorithms/Architectures
- Energy Factors/Technological Factors
- Partitioning and Optimal Scheduling
- Systems Performance/Potential/Efficiency
- Distributed/Heterogeneous Systems

Technical Research & Industry Contribution

Full Paper: Accomplished research results (10 pages)

Short Paper: Work in progress/fresh developments (6 pages)

Poster/Journal First: Displayed/Oral presented (3 pages)

Corporate Showcase & Exhibition

Booth: Display product and/or service offerings (3 pages)

Oral: Present product and/or service offerings (3 pages)

- System Synergy and Optimization
- Advances in Parallel Models/Systems/Tools

Mobile & Wireless Computing

- Communication Modeling/Designing/Analysis
- Mobile Communication Prediction/Control
- Mobile/Wireless Systems-of-Systems
- Mobile/Wireless Software and Hardware
- Heterogeneous Wireless Networks
- Medical Alert Devices/Privacy Consideration
- Wireless Sensor Network | IoT Platforms
- Mobile Network Loss Issues
- Ultra-Dense Networks | Mobile Performance
- Sensor Networks and Embedded Applications
- Innovative Mobile/Wireless Networks/Systems

Network Architecture/System

- Interconnection Networks and Architectures
- Memory Architecture Evaluation
- I/O, File Systems and Memory System
- Power-Efficiency | Systems-on-Chip
- System Modeling Methodologies
- Fault-Tolerant Algorithms/Systems
- Scalable Servers and Systems
- Shared Memory Implementation
- Memory Exploitation/Management Techniques
- Network Storage Systems and Services
- Cluster Management/Architecture
- Heterogeneous Architectures/Accelerators
- Multi/Many Core/CPU Framework/Systems
- Micro-Architecture Techniques

- Reconfigurable Architectures/Systems

HPC AI/Simulation/Security

- Surrogate Modeling | Machine Learning
- Neural Architecture Performance
- Deep Learning | Agent-based Modeling
- Intelligent Algorithm| Artificial Neural Network
- Distributed Deep Learning Systems
- Hybrid/Complex System Modeling/Simulation
- Advanced/Stochastic Simulation Frameworks
- Security, Policy and Management Issues
- Configuration, Policy, and Management issues
- Graph Partitioning/Analysis/Analytics
- Spiking Neural P Systems | Data Integrity
- Enabling Blockchain-as-a-Service
- Fuzzy Logic Approach | Streaming Algorithms
- Association Rule Mining | Anomaly Detection
- Big Data Analytics and Applications

HPC Applications

- HPC Applications and Case Studies
- Grid/Cloud/Fog/Bio-inspired Computing
- Scientific/Engineering/Commercial Workloads
- Augmented/Virtual Reality
- Biotechnology, Nanotechnology and Finance
- Space Research, Urban Planning and Energy
- Teleimmersion | Collaborative Applications
- Media/Entertainment Industry | Visualization
- Workflow Management | HPC Resiliency
- Advanced Computational Methods/Applications

Student Poster & Career Fair

Graduate & Doctoral: Peer-reviewed Poster (3 pages)

Undergraduate/High School: Selected Poster (3 pages)

Recruiter Booth: Product/Service & Job offerings (3 pages)

Workshop, Tutorial, Forum & Panel

Workshop, Tutorial & Tour: Proposal (3 pages)

Executive Forum, Panel & Talk: Proposal (3 pages)

For more information, submission details and important dates visit or contact:

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