

# **2023 OkIP International Conference on Advances in High-Performance Computing (AHPC)**

**Monday, 2 October 2023 - Thursday, 5 October 2023**

**Tiako Center, Oklahoma City, OK, USA & Online**

## **Scientific Tracks**

## **HPC Advanced 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  
Programming 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  
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 Systems  
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