2024 OkIP International Conference on Advances in Parallel and Distributed Computing (APDC)

Monday, 1 April 2024 - Thursday, 4 April 2024

Tiako Center, Oklahoma City, OK, USA & Online

Scientific Tracks

High-Performance Computing (HPC)

HPC Advanced Concepts
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 |...
Other

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
Other

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

Other

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
Other

Security and Parallel/Distributed Systems

Security | Privacy | Compliance | Simulation
Edge Computing Security
Trusted Computing | Crowdsourcing
Cyber-physical Systems Security
Distributed Systems Security
Embedded Systems Security
IS Virtualization and Data Center Network
Secure Internet Connectivity
Cloud Security and Adoption Risks
Physical-layer 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
Identity/Credential/Trust Management
Cloud Accountability/Auditability/Trust
Authentication and Authorization Support
Security/Privacy/Compliance Control

Privacy Protection and Preservation
Data Protection and Loss/Leakage Prevention
Integrity/Systems Risk/Mitigation Management
Intrusion Detection System/Failure Awareness
Security/Privacy as a Service
Trust/Cryptography/Blockchain as a Service
Cloud Resiliency/Fault Tolerance
Cloud Disaster Recovery | Anomaly Detection
Traffic Reliability | Multi-Tier Cloud Apps
Cloud Risk/Mitigation/Cognitive-Compliance
Availability/Transparency/Regulation/Policy
Other

Blockchain and Information Warfare in Wireless/Parallel/Distributed Systems

Blockchain and Distributed Ledgers
Wireless and Digital Forensics
Trust Authority Distribution
Wireless Network Information Assurance (IA)
Bluetooth Information Assurance
Radio Frequency Fingerprints
Intelligent Forensic Systems
Honeypot Deception and Forensics
Steganography Techniques
Cyber-Attack Thwarting
Crime Data Mining
Anti-Spam Filtering Techniques
Untrusted Hardware Testing
Privacy Preservation and Protection
Intelligent and Secure Autofill Systems
Blockchain and Energy Systems
Secure Passport System
Insider Threat Prediction
Key Management and Recovery
Asset Tracking and Financial Services
Critical Infrastructure Protection
Threat Awareness Analysis
Traffic Flow Confidentiality
Intellectual Property Protection
Cyber-Attack and Cyber-Terrorism
Tamper Detection and Prevention
Physical Security and Soldier Security
Electromagnetic Bomb and Electronic Attack
Tactical Communication and Network Security
Distributed Consensus | Smart Contracts
Other

Parallel/Distributed 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
Other

Cloud Computing Concepts/Applications/Services

Pervasive Computing | Cloud Standards
Public/Private/Hybrid Cloud | Governance
Multi-Tenancy Clouds | 5G/6G/7G Cloud
Business Models | Industry-Specific Clouds
Middleware Frameworks | COTS Vs SaaS
Load Balancing | Cloudsourcing | …
Application Portability/Scalability/Availability
Application Modeling/Performance/Monitoring
Application Dvlpmt/Debugging Method/Tool
Application Testing/Architectures
Programming Models/Benchmarks/tools
Service Design/Creation/Delivery/Pricing
Service Modeling/Specification/Composition
Service Discovery/Monitoring/Control
Service Innovation/Operation/Strategy
Service Marketing/Management/Deployment
Service Frameworks/Standardization
Data Management Applications/Services/Tools
Everything as a service XaaS/IaaS/PaaS/SaaS
Service Delivery/Integration/Orchestration
Other

Platform/Provisioning/Storage in Parallel/Distributed Systems

Modeling and Provisioning in Cloud | Kernels
Virtualisation Technologies/Enablers
Software-Defined Networking | Microservices
Containers | Public/Private/Hybrid Storage
Integrated Circuits | Processing Units
FPGAs/GPUs/APUs/TPUs/vCPUS Design
System Scalability/Performance/Evaluation
Computational Resources/Engines/Functions
Storage Type/Process/Architecture
Object/Block/File/Archival Storage
Resource Provisioning/Monitoring/Management
Resource Evaluation/Maintenance
Serverless Design/Development/Deployment

Serverless Functions/Applications/Services
In-Memory Storage | Performance Prediction
CPU/Memory Resource Requirements
Cost-Effectiveness/Awareness
API Platform/Ecosystem
Other

Infrastructure in Parallel/Distributed Systems

Performance and Optimization in the Cloud
Architect. Modeling/Components Distribution
Cloudlet Infrastructure | Edge-Cloud Systems
Energy Efficiency | Performance Acceleration
Performance Monitoring/Evaluation
Multi-Cloud/Heterogeneous Environment
Distributed Infrastructure/Architecture
Workload-Alloc. |Hyperparameter Optimization
Elasticity in Cloud | Crowd Computing
Large-Scale Optimization | Fog Computing
Virtualized/Cloud/Green Data Centers
Portability/Interoperability/Mobility
Auditor/Carrier/Broker/Provider/Customer
Dynamic Resources/Service/Context Mgmt
Dynamic Cloud Innovation/Integration/Coop.
Dynamic Cloud Experimentation/Adaptability
Data Reduction/Compres./Recovery/Encryption
Genetic/Graph Algorithms in the Cloud
Association-Rule/Data Mining in the Cloud
Cloud Big Data Analytics/Benchmarks
Bayesian Networks/Optimization in the Cloud
Cloud Deep/Reinforcement/Machine Learning
Neural-Network/Collective Intelligence
Cloud Blockchain-Based Systems | eLearning
IoT Cloud Infrastructure/Models/Architectures
Stream Processing on the Cloud
eBanking/eBusiness/eGovernance/eHealth
Context-aware/Peer-to-Peer Computing
Other

Data and Big Data in Distributed Systems

Data Encryption Techniques
Data Mining Theoretical Foundation
Scientific and Statistical Data Mining
Data Mining and Knowledge Discovery
Data Mining Products/Systems/Languages
Big Data Search/Mining | Web Mining
Decision Support Data Systems
Dimensional Data Modeling
Big Data Security/Privacy/Trust
Big Data Infrastructure | Web Analytics
Text Analytics | Big Data as a Service

Big Data and Information/Data Quality
Change Detection | Big Data Applications
Social Web Search and Mining
Deep Learning and Big Data
Big Data Computational Models
Smart Grid Big Data | Text Mining
Big Data Cloud Computing
Big Data Stream Computing
Intelligent Data Retrieval System
Database Applications and Experiences
Scientific and Biological Databases
Smart Cities and Urban Data Analytics
Sensor Network Data Management
In-Network Data Processing
In-Memory/Purpose-built Databases
Distributed/Parallel/Peer-to-Peer Databases
Deep/Dark/Hidden Web Data Management
Energy-Efficient Data Centers
Storage Systems Security/Reliability
Data Loss/Breach Prevention & Protection
Visual and Audio Data Mining
Information Visualization
Open Source Databases
Software Engineering Data
Virtualized Data Center Network
Medical/Biomedical Big Data
Medical Data Interoperability/Security
Other

Algorithms/Models/Programming in Distributed Systems

Wireless/Parallel/Distributed Algorithms
Algorithms, Models, and Formal Verification
Graph Algorithms |
Model Checking for Parallel Computing
Message/Shared-Memory Broadcasting
Wireless Networks Modeling
Scalable Algorithms and Applications
Algorithms for Data in Distributed Systems
Parallel Programming Paradigms and APIs
FPGAs/GPUs/APUs/TPUS/vCPUS Programming
Bio/Nature-Inspired Parallel Algorithms
Parallel and Distributed Algorithms for AI
Algorithms for Social Networks
Urban/Vehicular Networks and Applications
Parallel, Distributed Big-Data Management
Massively Parallel/Distributed Data Visualization
Other

Distribution, Componentization, and Collaboration

Formal Methods and Theoretical Foundations
Component-Based Software Engineering
Critical and Embedded Software Design
Distributed and Parallel Systems
Real-time Embedded Software Engineering
Cloud Computing | Distributed SE
Distributed and collaborative SE
Workflow Management | Team-Based SD
Computer-Supported Cooperative Work
Middleware, Frameworks, and APIs
Parallel, Distributed, and Concurrent Systems
Aspect-Oriented Software Engineering
Decentralized Artificial Intelligence
Other