International Conference on Algorithms and Architectures for Parallel Processing

Workshop on Intelligent Distributed Computing （IDC）

Distributed computing, as a powerful computational paradigm, significantly enhances computational efficiency by dispersing computational tasks across multiple nodes for parallel processing. It is widely applied in numerous fields, including big data processing, cloud computing, and the Internet of Things. However, with the rapid development of artificial intelligence, distributed computing faces new challenges. On the one hand, the training and inference of artificial intelligence models require processing massive amounts of data, which poses higher demands on the data transmission and storage efficiency of distributed systems. On the other hand, data security and privacy protection have become key issues, as traditional distributed computing architectures struggle to meet the stringent data privacy requirements of artificial intelligence applications.

Intelligent distributed computing has emerged to address these challenges. It integrates artificial intelligence technologies and can optimize the allocation of computing resources through intelligent scheduling algorithms, thereby improving the performance and efficiency of distributed systems. Moreover, by leveraging advanced encryption techniques and privacy protection mechanisms, such as federated learning, it ensures the security and privacy of data in distributed environments. Intelligent distributed computing not only provides stronger computational support for artificial intelligence applications but also injects new vitality into the development of distributed computing. It holds significant research value and broad application prospects.

This workshop is now soliciting relevant research findings from a wide range of researchers and looks forward to your active contributions!

Interested topics (but not limited to):

- Distributed Swarm Robotics Systems
- Distributed / Decentralized / Federated Machine Learning
- Intelligent Distributed Applications
- Intelligent Distributed and High-Performance Architecture
- Intelligent Distributed Knowledge Representation and Processing
- Intelligent Distributed Ledgers, Blockchains and AI
- Intelligent Energy Systems

- Intelligent Production Systems, Intelligent Transportation Systems
- Machine Learning Methods for Distributed Systems
- Multi-Agent Systems
- Multi-Agent Machine Learning
- Multi-Agent Reinforcement Learning
- Nature-Inspired Methods for Supervised and Unsupervised Data Mining
- Networked Intelligence, Organization and Management
- Parallel Metaheuristics for Optimization
- Smart City Applications, Smart Grid Applications

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