

# 15th IEEE International Conference on JointCloud Computing (IEEE JCC 2024)

**Dates:** July 15-18, 2024

**Location:** Shanghai, China

**Conference:** IEEE CISOSE 2024 Congress

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## Day 1: Monday, July 15, 2024

**08:30 - 09:00:** Registration and Welcome Coffee

**09:00 - 09:30:** Opening Ceremony

- Welcome Address by Conference Chair
- Keynote Speech by Distinguished Guest

**09:30 - 10:00:** Keynote Session

- **Keynote Speaker:** IEEE Fellow, Prof. Hai Jin  
*Topic:* "Understanding Computability Net: A Distributed System Perspective"

Abs: Computability net provides opportunities to transcending state-of-the-art technologies in AI, computing and network. This talk will delve into the evolution and architectural design of computability net from the perspective of distributed systems, tracing traditional models like grid and cloud computing to modern computability networks. The discussion will then focus on the specific challenges posed by computability net, particularly in terms of managing heterogeneous compute nodes and network connections. Architectural strategies that effectively address these challenges and facilitate optimal resource allocation across multiple computing centers will be explored. Additionally, the talk will indicate the diverse applications of computability networks in areas such as AI, scientific computing, and beyond, demonstrating their wide-reaching impact and potential.

Bio: Hai Jin is a Chair Professor of computer science and engineering at Huazhong University of Science and Technology (HUST) in China. Jin received his PhD in computer engineering from HUST in 1994. In 1996, he was awarded a German Academic Exchange Service fellowship to visit the Technical University of Chemnitz in Germany. Jin worked at The University of Hong Kong between 1998 and 2000, and as a visiting scholar at the University of Southern California between 1999 and 2000. He was awarded Excellent Youth Award from the National Science Foundation of China in 2001. Jin is a Fellow of IEEE, Fellow of CCF, and a life member of the ACM. He has co-authored more than 20 books and published over 900 research

papers. His research interests include computer architecture, parallel and distributed computing, big data processing, data storage, and system security.

**10:00 - 10:30:** Coffee Break

**12:30 - 14:00:** Lunch Break

**18:00 - 20:00:** Welcome Reception and Networking Dinner

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## **Day 2: Tuesday, July 16, 2024**

**08:00 - 08:50:** Technical Session 1: JointCloud Migration and Resource Management

- *Chenhui Ji, Dingji Li, Zeyu Mi, Yubin Xia:* "Prometheus Migrate: Efficient Live Migration of Confidential Virtual Machine with Software Abstraction"
- *Jinghao Wang, Guangzu Wang, Tianyu Wo, Xu Wang, Renyu Yang:* "RESCAPE: Resource Estimation System for Microservices with Graph Neural Network and Profile Engine"

**08:50 - 09:00:** Coffee Break

**09:00 - 10:15:** Technical Session 2: Data Management and Scheduling in AI

- *Yaojie Li, Peichang Shi, Jianfei Liu, Rui Li, Fei Gao, Penghui Ma, Dong Xie, Guodong Yi:* "DCSA: The Deployment Mechanism of Chained Serverless Applications in JointCloud Environment"
- *Junchen Li, Yang Zhang, Kele Xu, Tao Wang, Huaimin Wang:* "Understanding the Challenges of Data Management in the AI Application Development"
- *Rui Li, Huaimin Wang, Peichang Shi:* "Bi-Objective Scheduling Algorithm for Hybrid Workflow in JointCloud"

**10:15 - 10:40:** Coffee Break

**10:40 - 11:20:** Short Papers Session 1: Fairness and IoT Applications

- *Jie Wang, Huanxi Liu, Dawei Feng, Bo Ding:* "FP4-Quantization: Lossless 4bit Quantization for Large Language Models"
- *Jiacheng Yang, Guodong Yi, Fei Gao, Peichang Shi, Huaimin Wang:* "Fairness-Aware AI-Workloads Allocation Considering Multidimensional User Demands in JointCloud"

**11:20 - 13:30:** Lunch Break

**13:30 - 15:10:** Technical Session 3: Performance and Optimization in Edge and Cloud

- *Chao Wang, Suzhen Pei, Jiawei Ding, Tianyu Zhong, Binbin Wu:* "IBCM: An IoT Solution for Building Collapse Monitoring in Smart Cities"
- *Rasha Kadhem, Mazin S. Mohammed, Souheyl Mallat, Mounir Zrigui:* "A recommendation system based on the semantic content using Arabic texts"
- *Antonios Makris, Ioannis Kontopoulos, Stylianos Nektarios Xyalis, Evangelos Psomakelis, Theodoros Theodoropoulos, Andreas Varvarigos, Konstantinos Tserpes:* "A Study on the Performance of Distributed Storage Systems in Edge Computing Environments"
- *Chang Deng, Zheyun Shen, Dingji Li, Zeyu Mi, Yubin Xia:* "The Design and Optimization of Memory Ballooning in SEV Confidential Virtual Machines"

**15:10 - 15:30:** Coffee Break

**15:30 - 16:20:** Technical Session 4: Cost and Computation in Cloud Services

- *Vasiliki Liagkou, Evangelia Filiopoulou, George Fragiadakis, Mara Nikolaidou, Christos Michalakelis:* "The cost perspective of adopting Large Language Model-as-a-Service"
- *Hoa Tran-Dang, Dong-Seong Kim:* "Parallel Computation in Dynamic Fog Computing Networks: A Multi-Armed Bandit Learning-based Decentralized Matching Approach"

**16:20 - 16:30:** Coffee Break

**16:30 - 16:50:** Short Papers Session 2: Performance Analysis and Tools

- *Weiyu Peng, Jinghao Wang, Tianyu Wo, Renyu Yang:* "Precision Probe: Non-intrusive Performance Analysis Tool for Deep Learning Recommendation Training Jobs"

**17:00 - 17:30:** Closing Session and Awards

- Summary of the conference
- Presentation of Best Paper Awards
- Closing Remarks
- Farewell Coffee