

# International Conference on High Performance Big Data and Intelligent Systems (HDIS 2023)

## Conference Schedule

**Main Conference Venue**  
**UM Guest House Multi-function Hall (N1-G014)**  
澳门大学聚贤楼N1地面层多功能厅G014

December 5, 2023 ( Beijing Time)	
14:00-18:00	Conference Check in and Materials Collection
December 6, 2023 ( Beijing Time)	
08:30-08:45	<b>Welcome Speech</b> <b>Cheng-Zhong Xu</b> , University of Macau <b>Kejiang Ye</b> , Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences
08:45-09:00	<b>Group Photo</b>
<b>Keynote Speech</b> Chair: <b>Cheng-Zhong Xu</b> , University of Macau	
09:00-09:55	<b>Networking Implications of Video Analytics</b> <b>Xiaoming Fu</b> , Chair Professor of Computer Science at the Institute of Computer Science, University of Göttingen, Germany.
09:55-10:50	<b>Ultra-flexible organic electronics for health monitoring</b> <b>Tomoyuki Yokota</b> , Associate Professor in Graduate School of Engineering at the University of Tokyo, Japan.
10:50-11:10	<b>Coffee Break</b>
<b>Session A-1: High Performance Computing Technologies and Applications I</b> Session Chair: <b>Huanle Xu</b> , University of Macau	
11:10-11:40	<b>Invited Talk</b> <b>Benchmarking And Dissecting The NVIDIA Hopper GPU Architecture</b> <b>Xiaowen Chu</b> , Professor, Hong Kong University of Science and Technology (Guangzhou)
11:40-12:10	<b>Invited Talk</b> <b>Towards Low Latency Serverless Computing For Complex Applications</b> <b>Quan Chen</b> , Professor, Shanghai Jiao Tong University
12:20-14:00	<b>Conference Lunch (Buffet)</b>
<b>Session A-2: Intelligent Technologies and Applications I</b> Session Chair: <b>Jianbing Shen</b> , University of Macau	
14:00-14:30	<b>Invited Talk</b> <b>Visual 3D Reconstruction in Autonomous Driving</b> <b>Wei Sui</b> , Senior Engineer, Horizon Robotics
14:30-14:45	<b>Citrus Diseases and Pests Image-Text Retrieval Based on Multi-Modal Transformer</b> <b>Xingyu Liu</b> , China Agricultural University
14:45-15:00	<b>ANN-based Approach to Modeling Energy Bands of GaN-based Heterojunction Material</b> <b>Meilan Hao</b> , AnnLab, Institute of Semiconductors, Chinese Academy of Sciences
15:00-15:15	<b>Leftover: Improving Large Language Model Inference Efficiency by Leveraging Idle Resources</b> <b>Gao Hong</b> , Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences
15:15-15:25	<b>Revolutionizing Indoor Air Quality: An Intelligent IoT Solution for Pollution Detection</b> <b>Karim H Moussa</b> , Xi'an Jiaotong Liverpool University
15:25-15:35	<b>An Approach for Multi-Object Tracking with Two-Stage Min-Cost Flow</b> <b>Huining Li</b> , Beihang University
15:35-15:55	<b>Coffee Break</b>
<b>Session A-3: Intelligent Technologies and Applications II</b> Session Chair: <b>Shuai Wang</b> , Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences	

15:55-16:25	<b>Invited Talk</b> <b>Advanced Scene Understanding And Decision-Making For Autonomous Driving</b> Wenchao Ding, Associate professor, Fudan University
16:25-16:40	<b>Machine Learning based Radar Heatmap Generation for Advanced Driver Assistance Systems</b> Angela Mariama Klassen, University of Rhode Island
16:40-16:55	<b>Interference Detection of Colocation Workloads in Sidecar Cluster</b> Ruihong Gao, Southern University of Science and Technology
16:55-17:10	<b>Optimizing FPGA-based DCN Accelerator with On-Chip Dataflow Reordering and Serial-Parallel Computing Array</b> Ming Zhang, AnnLab, Institute of Semiconductors, Chinese Academy of Sciences
17:10-17:25	<b>Feature Reduction-based Intrusion Detection (FRID) in Satellite-Terrestrial Integrated Networks</b> Ziyuan Tian, Dalian University of Technology
17:30-20:30	<b>Conference Reception (UM N1)</b>
<b>December 7, 2023 ( Beijing Time)</b>	
<b>Keynote Speech</b> Chair: <b>Junwen Zhong</b> , University of Macau	
09:00-09:55	<b>Linear Processing for Vector-Valued Signals with Vector-Valued Coefficients</b> Xiang-Gen Xia, Charles Black Evans Professor in Department of Electrical and Computer Engineering University of Delaware, USA.
09:55-10:50	<b>Dataflow based High Efficient Graph Processing Accelerator</b> Hai Jin, Chair Professor of computer science and engineering at Huazhong University of Science and Technology (HUST), China.
10:50-11:10	<b>Coffee Break</b>
<b>Session A-4: High Performance Computing Technologies and Applications II</b> Session Chair: <b>Minxian Xu</b> , Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences	
11:10-11:40	<b>Invited Talk</b> <b>Towards Cost-Efficient DNN Model Training And Inference Serving With Serverless Pipelines</b> Zhi Zhou, Associate professor, Sun Yat-sen University
11:40-11:55	<b>CJT:Boosting the Transferability of Adversarial Attacks with Color Jitter Transformation</b> Linlin Zeng, Guangzhou University
12:20-14:00	<b>Conference Lunch (Buffet)</b>
<b>Session A-5: Intelligent Technologies and Applications III</b> Session Chair: <b>Hui Kong</b> , University of Macau	
14:00-14:30	<b>Invited Talk</b> <b>Lidar-Based Autonomous UAVS</b> Fu Zhang, Assistant Professor, University of Hong Kong
14:30-15:00	<b>Invited Talk</b> <b>Research Advances in Edge Intelligence of UAVs</b> Haipeng Dai, Associate professor, Nanjing University
<b>Session A-6: Best Paper Award Candidate Session</b> Session Chair: <b>Weijun Li</b> , Institute of Semiconductors, Chinese Academy of Sciences	
15:00-15:15	<b>From LeanStore to LearnedStore: Using a Learned Index to Improve Database Index Search</b> Song Jiang, University of Texas at Arlington
15:15-15:30	<b>A Stationary Random Process based Privacy-Utility Tradeoff in Differential Privacy</b> Hongmiao Yan, Dalian University of Technology
15:30-15:45	<b>DoctorGPT: A Large Language Model with Chinese Medical Question-Answering Capabilities</b> Wenqiang Li, AnnLab, Institute of Semiconductors, Chinese Academy of Sciences
15:45-16:00	<b>SMFENet: Stage-Aware Multi-Scale Feature Extraction Network for Real-Time Semantic Segmentation of Street Scenes</b> Ziming Li, Guangzhou University
16:00-16:15	<b>Maize haploid identification using hyperspectral imaging and dual-branch CNN</b> Liu Zhang, China Agricultural University
16:15-16:35	<b>Coffee Break</b>
<b>Panel Discussion: Systems Support for Large Language Models and AI Applications</b> Panel Chair: <b>Song Guo</b> , Professor, IEEE Fellow, The Hong Kong University of Science and Technology (HKUST)	

16:35-18:00	<b>Panelists:</b> <b>Jianping Wang</b> , Professor, City University of Hong Kong, China. <b>Song Jiang</b> , Professor, University of Texas at Arlington, USA. <b>Xiaowen Chu</b> , Professor, The Hong Kong University of Science and Technology (Guangzhou), China. <b>Chuan Wu</b> , Professor, The University of Hong Kong, China. <b>Huanle Xu</b> , Professor, University of Macau, China.
19:00-21:00	<b>Conference Banquet (W Hotel)</b>
<b>December 8, 2023 ( Beijing Time)</b>	
<b>Keynote Speech</b> Chair: <b>Xiaobo Zhou</b> , University of Macau	
09:00-09:55	<b>Learning with Graphs</b> <b>Roger Wattenhofer</b> , Full professor at the Information Technology and Electrical Engineering Department, ETH Zurich, Switzerland.
<b>Session A-7: Intelligent Technologies and Applications IV</b> Session Chair: <b>Jiantao Zhou</b> , University of Macau	
09:55-10:25	<b>Invited Talk</b> <b>Optimizing Distributed DNN Training in AI Clouds</b> <b>Chuan Wu</b> , Professor, Hong Kong University
10:25--10:55	<b>Invited Talk</b> <b>Human-Computer Interaction in Intelligent Cockpit</b> <b>Cong Yang</b> , Associate professor, Soochow University
10:55-11:15	<b>Coffee Break</b>
<b>Session A-8: MetaRacing</b> Session Chair: <b>Ryan Leong Hou U</b> , University of Macau	
11:15--12:15	<b>MetaRacing Showcase &amp; Awards</b> <a href="https://contests.cis.um.edu.mo/meta_racing_2023/">https://contests.cis.um.edu.mo/meta_racing_2023/</a>
12:15-12:25	<b>Closing Ceremony</b> <b>Cheng-Zhong Xu</b> , University of Macau
12:30-14:00	<b>Conference Lunch (Buffet)</b>

**Parallel Session Venue**  
**UM Guest House 1st Floor (N1-1005)**  
 澳门大学聚贤楼N1一楼1005室

<b>December 6, 2023 ( Beijing Time)</b>	
<b>Session B-1: High Performance Computing &amp; Big Data Technologies and Applications</b> Session Chair: <b>Chengxi Gao</b> , Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences	
11:10-11:25	<b>Enhance Multi-domain Sentiment Analysis of Review Texts through Prompting Strategies</b> <b>Yajing Wang</b> , BNU-HKBU United International College <sup>2</sup>
11:25-11:40	<b>Time-aware Relay Chain-based Committee Consensus for Decentralized Identity</b> <b>Hong Zhang</b> , Beijing Institute of Technology <sup>2</sup>
11:40-11:55	<b>INTOP: Improving Nginx Performance by Tuning OS Parameters</b> <b>Wenxiong Chen</b> , Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences <sup>2</sup>
11:55-12:05	<b>Phase of Flight Classification in Aviation Safety using LSTM, GRU, and BiLSTM: A Case Study with ASN Dataset</b> <b>Hassan Wasswa</b> , University of New South Wales <sup>2</sup>
12:05-12:15	<b>An Improved Deep Reinforcement Learning-Based Multi-Agent Cooperative Game Approach</b> <b>Zhongqi Zhao</b> , Xi'an University of Technology <sup>2</sup>
12:20-14:00	<b>Conference Lunch (Buffet)</b>
<b>Session B-2: Intelligent Technologies and Applications V</b> Session Chair: <b>Min Wu</b> , Institute of Semiconductors, Chinese Academy of Sciences	
14:00-14:15	<b>Music-driven Motion Generation for Fashion Show via MP Loss</b> <b>Zeyu Yan</b> , Donghua University <sup>2</sup>
14:15-14:30	<b>Deep Embedding Clustering on Citation Networks for Community Detection</b> <b>Hailong Peng</b> , Xi'an University of Technology <sup>2</sup>

14:30-14:45	<b>Three-Dimensional Data Security Architecture of Agricultural Supply Chain Driven by Blockchain</b> Guofeng Zhang, Taishan University
14:45-15:00	<b>PIFU-RGBD: Single-view RGB-D Pixel-aligned Implicit Function for 3D Human Reconstruction</b> Yingli Wang, South China Normal University
15:00-15:15	<b>Larger receptive Field and Context Information for Pose estimation:Larger Gaussian kernel</b> Junxiao Ma, Beijing Forestry University
15:15-15:25	<b>Research on the Application of Drone Remote Sensing and Target Detection in Civilian Fields</b> Xiaochen Gao, Inner Mongolia University
15:25-15:35	<b>DFS-enhanced Lightgbm: an extended Lightgbm model applied to ICU heart failure mortality prediction</b> Zehang Lin, Xiamen University of Technology
15:35-15:55	Coffee Break
<b>Session B-3: Intelligent Technologies and Applications VI</b> Session Chair: Zhiwei Li, Institute of Semiconductors, Chinese Academy of Sciences	
15:55-16:10	<b>Relative Gradient Matching Cost for Mitigating Feature Discrepancies in Stereo Matchin</b> Changlin Liu, South China Normal Univeristy
16:10-16:25	<b>Design of Perception Layer for Monitoring System in Intelligent Animal Husbandry</b> Qianjun Chang, China Agricultural University
16:25-16:40	<b>Quadruple Extraction Algorithm for Building Temporal Knowledge Graphs for Pasture</b> Zhongwen Li, Southwest Minzu University
16:40-16:55	<b>Video Arbitrary Style Transfer via Style Attention and Contrastive Learning</b> Yangyang Qian, University of Shanghai for Science and Technology
16:55-17:10	<b>Competitive Swarm Optimizer Based on Individual Learning Mechanism</b> JingQi Tang, Xi'an University of Technology
17:10-17:25	<b>Digital Infrastructure Layout Based on New Power System Research on Key Technologies of Strategy</b> Yan Li, State Grid Electric Power Research Institute
17:30-20:30	Conference Reception (UM N1)
<b>December 7, 2023 ( Beijing Time)</b>	
<b>Session B-4: Intelligent Technologies and Applications VII</b> Session Chair: Yang Fei, Institute of Semiconductors, Chinese Academy of Sciences	
11:10-11:25	<b>A Verifiable Dispersal Consensus and Identity Aggregation-based Trustworthy Decentralized Identity Governance</b> Yiwei Feng, Beijing Institute of Technology
11:25-11:40	<b>Deep Learning Strategies for Addressing Anomalous Exposure in Image Processing: The FARDBUNet Approach</b> Qi Zhou, South China Normal University
11:40-11:55	<b>FPGA implementation of CNN-LSTM classifier in speech emotion recognition system</b> Zhaogang Gao, China Agricultural University
11:55-12:05	<b>Travel Attractions Recommendation based on Attentive Group Recommendation Algorithm</b> Junzhi Cheng, Xi'an University of Technology
12:20-14:00	Conference Lunch (Buffet)