# IWQoS 2023 Conference Schedule

3 keynote talks, 63 regular papers (10min each, 9min talk, 1min Q&A),
11 short papers (4min each, offline Q&A)

| Monday, June 19 (22 regular papers) |
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| 8:15 - 9:00 am | Continental Breakfast |

**Technical sessions 2 hours**

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| 9:00 - 9: 15 am | Opening statement |
| 9:15 - 10:15 am | Keynote 1: Bob Sutor, Vice President and Chief Quantum Advocate<br>Title: Considerations for Networked Quantum Processing<br>Session Chair: Yuanyuan Yang (Stony Brook University, USA) |
| 10:15 - 11:00 am | 4 regular papers, Session Chair: Deze Zeng (China University of Geosciences, China) |

**QoS for data analytics and machine learning**

| 127 spotDNN: Provisioning Spot Instances for Predictable Distributed DNN Training in the Cloud |
|---|
| Ruitao Shang (East China Normal University, China); Fei Xu (East China Normal University, China); Zhuoyan Bai (East China Normal University, China); Li Chen (University of Louisiana at Lafayette, USA); Zhi Zhou (Sun Yat-sen University, China); Fangming Liu (Huazhong University of Science & Technology, China) |
| 167 Boosting Distributed Machine Learning Training Through Loss-tolerant Transmission Protocol |
| Zixuan Chen (Fudan University, China); Lei Shi (Fudan University, China); Xuandong Liu (Fudan University, China); Xin Ai (Fudan University, China); Sen Liu (Fudan University, China); Yang Xu (Fudan University, China) |
| 203 OSCA: Online User-managed Server Selection and Configuration Adaptation for Interactive MAR |
| Xiaohang Shi (Nanjing University, China); Sheng Zhang (Nanjing University, China); Ke Cheng (Nanjing University, China); Yu Chen (Nanjing University, China); Andong Zhu (Nanjing University, China); Sanglu Lu (Nanjing University, China) |
| 309 High-throughput Sampling, Communicating and Training for Reinforcement Learning Systems |
| Laiping Zhao (Tianjin University, China); Xinan Dai (Tianjin University, China); Zhixin Zhao (Tianjin University, China); Yusong Xin (Tianjin University, China); Yitao Hu (Tianjin University, China); Jun Qian (Huawei, China); Jun Yao (Huawei, China); Keqiu Li (Tianjin University, China) |

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|---|---|
| 11:00 - 11:20 am | Coffee Break |
| 11:20 - 12:30 pm | Plenary Session |
| 12:30 - 2:00 pm | Lunch |

**Technical sessions 1.5 hours**

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|---|---|
| 2:00 - 3:30 pm | 8 regular papers, Session Chair: Li Chen (University of Louisiana at Lafayette, USA) |

**Artificial Intelligence for QoS**

| 97 Distributed Model Interpretation for Vertical Federated Learning with Feature Discrepancy |
|---|
| Rui Xing (Shanghai Jiao Tong University, China); Zhenzhe Zheng (Shanghai Jiao Tong University, China); Qinya Li (Shanghai Jiao Tong University, China); Fan Wu (Shanghai Jiao Tong University, China); Guihai Chen (Shanghai Jiao Tong University, China) |

| 111 | Biglog: Unsupervised Large-scale Pre-training for a Unified Log Representation |
|---|---|

Shimin Tao (University of Science and Technology of China & Huawei, China); Yilun Liu (Huawei, China); Weibin Meng (Huawei, China); Zuomin Ren (Huawei, China); Hao Yang (Huawei, China); Xun Chen (University of Science and Technology of China, China); Liang Zhang (Huawei, China); Yuming Xie (Huawei, China); Chang Su (Huawei, China); Xiaosong Qiao (Huawei, China); Weinan Tian (Huawei, China); Yichen Zhu (Media Group, China); Tao Han (Huawei, China); Ying Qin (Huawei, China); Yun Li (Huawei, China)

| 124 | EAGLE: Heterogeneous GNN-based Network Performance Analysis |
|---|---|

Jiacheng Liu (The Chinese University of Hong Kong, China); Feilong Tang (Shanghai Jiao Tong University, China); Long Chen (Simon Fraser University, Canada); Xu Li (Shanghai Jiao Tong University, China); Jiadi Yu (Shanghai Jiao Tong University, China); Yanmin Zhu (Shanghai Jiao Tong University, China); Yichuan Yu (Huawei, China); Yanqin Yang (East China Normal University, China)

| 232 | Triple:The Interpretable Deep Learning Anomaly Detection framework based on Trace-Metric-Log of Microservice |
|---|---|

Rui Ren (Institute of Computing Technology, Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Yang Wang (Institute of Computing Technology, Chinese Academy of Sciences, China); Fengrui Liu (Institute of Computing Technology, Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Zhenyu Li (Institute of Computing Technology, Chinese Academy of Sciences, China); Gaogang Xie (CNIC Chinese Academy of Sciences & University of Chinese Academy of Sciences, China)

| 331 | Reinforcement Learning-based Traffic Engineering for QoS Provisioning and Load Balancing |
|---|---|

Minghao Ye (New York University, USA); Yang Hu (Fortinet, USA); Junjie Zhang (Fortinet, USA); Zehua Guo (Beijing Institute of Technology, China); H. Jonathan Chao (New York University, USA)

| 437 | A Budget-aware Incentive Mechanism for Vehicle-to-Grid via Reinforcement Learning |
|---|---|

Tianxiang Zhu (Sun Yat-sen University, China); Xiaoxi Zhang (Sun Yat-sen University, China); Jingpu Duan (Peng Cheng Laboratory, China); Zhi Zhou (Sun Yat-sen University, China); Xu Chen (Sun Yat-sen University, China)

| 448 | Toward a Unified Framework for Verifying and Interpreting Learning-Based Networking Systems |
|---|---|

Yangfan Huang (Xiamen University, China); Yuling Lin (Xiamen University, China); Haizhou Du (Shanghai University of Electric Power, China); Yijian Chen (Shanghai University of Electric Power, China); Haohao Song (Xiamen University, China); Linghe Kong (Shanghai Jiao Tong University, China); Qiao Xiang (Xiamen University, China); Qiang Li (Alibaba, China); Franck Le (IBM Research, USA); Jiwu Shu (Xiamen University, China)

| 600 | Multi-Layer Collaborative Bandit for Multivariate Time Series Anomaly Detection |
|---|---|

Weiyao Zhang (Institute of Computing Technology, Chinese Academy of Sciences, China); Xuying Meng (Institute of Computing Technology, Chinese Academy of Sciences, China); Jinyang Li (Institute of Computing Technology, Chinese Academy of Sciences, China); Yequan Wang (Beijing Academy of Artificial Intelligence, China); Yujun Zhang (Institute of Computing Technology, Chinese Academy of Sciences, China)

| 3:30 - 4:00 pm | Coffee Break |
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| 4:00 - 4:50 pm | 5 regular papers, Session Chair: Qiao Xiang (Xiamen University, China) |

| **Security, privacy, system dependability, resilience and robustness** |
|---|
| 48   Energy Drain Attack in Satellite Internet Constellations |
| Yaoying Zhang (Tsinghua University, China); Qian Wu (Tsinghua University, China); Zeqi Lai (Tsinghua University, China); Yangtao Deng (Tsinghua University, China); Hewu Li (Tsinghua University, China); Yuanjie Li (Tsinghua University, China); Jun Liu (Tsinghua University, China) |
| 193   In-band Network Telemetry Manipulation Attacks and Countermeasures in Programmable Networks |
| Dezhang Kong (Zhejiang University, China); Zhengyan Zhou (Zhejiang University, China); Yi Shen (Zhejiang University, China); Xiang Chen (Zhejiang University, China); Qiumei Cheng (Zhejiang University, China); Dong Zhang (Fuzhou University, China); Chunming Wu (Zhejiang University, China) |
| 335   BackLip: Passphrase-Independent Lip-reading User Authentication with Backscatter Signals |
| Ye Tian (University of Science and Technology of China, China); Hao Zhou (University of Science and Technology of China, China); Haohua Du (Beihang University, China); Chenren Xu (Peking University, China); Jiahui Hou (University of Science and Technology of China, China); Dong Ren (University of Science and Technology of China, China); Xiang-Yang Li (University of Science and Technology of China, China) |
| 399   An Empirical Study of Storj DCS: Ecosystem, Performance, and Security |
| Hao Li (Shandong University, China); Xianghang Mi (University of Science and Technology of China, China); Yanzhi Dou (Independent Researcher); Shanqing Guo (Shandong University, China) |
| 563   RPBV: Reputation-Based Probabilistic Batch Verification Scheme for Named Data Networking |
| Kunpeng Ding (University of Science and Technology of China, China); Jiayu Yang (University of Science and Technology of China, China); Jiangping Han (University of Science and Technology of China, China); Bobo Wang (University of Science and Technology of China, China); Ruidong Li (Kanazawa University, Japan); Kaiping Xue (University of Science and Technology of China, China) |

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| **10min break** | |
| 5:00 - 5:50 pm | 5 regular papers, Session Chair: Jonathan Chao (New York University, USA) |

| **QoS in mobile and next generation cellular networks** |
|---|
| 30   People Counting with Carry-on RFID Tags |
| Xuan Wang (Nanjing University, China); Jia Liu (Nanjing University, China); Xi Yu (Nanjing University, China); Xingyu Chen (Nanjing University, China); Yujie Yu (Nanjing University, China); Zhihong Zhao (Nanjing University, China) |
| 453   A Data-Driven Framework for TCP to Achieve Flexible QoS Control in Mobile Data Networks |
| Jiaqi Yao (Zhengzhou University, China); Ke Liu (Institute of Computing Technology, Chinese Academy of Sciences, China); Ting Liang (Institute of Computing Technology, Chinese Academy of Sciences, China); Theophilus Benson (Carnegie Mellon University, USA); Jack Y. B. Lee (The Chinese University of Hong Kong, China); Vaneet Aggarwal (Purdue University, USA); Yungang Bao (Institute of Computing Technology, Chinese Academy of Sciences, China); Mingyu Chen (Institute of Computing Technology, Chinese Academy of Sciences, China) |

| 457 | Joint Upload-Download Transmission Scheme for Low-Latency Mobile Live Video Streaming |
|---|---|
| Dezheng Liu (University of Science and Technology of China, China); Xiaobin Tan (Laboratory for Future Networks, University of Science and Technology of China, Institute of Artificial Intelligence, China); Yangyang Liu (University of Science and Technology of China, China); Shunyi Wang (University of Science and Technology of China, China); Quan Zheng (Laboratory for Future Networks, University of Science and Technology of China, Institute of Artificial Intelligence, China); Qianbao Shi (Institute of Artificial Intelligence, China) | |
| 546 | IRS-Aided Sectorized Base Station Design and 3D Coverage Performance Analysis |
| Xintong Chen (Xiamen University, China); Jiangbin Lyu (Xiamen University, China); Liqun Fu (Xiamen University, China) | |
| 770 | Small Chunks can Talk: Fast Bandwidth Estimation without Filling up the Bottleneck Link |
| Lingang Li (Harbin Institute of Technology, China); Yongrui Chen (University of Chinese Academy of Sciences, China); Zhijun Li (Harbin Institute of Technology, China) | |

## Tuesday, June 20 (19 regular papers)

| 8:00 - 8:45 am | Continental Breakfast |
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**Technical sessions 2.15 hours**

| 8:45 - 9:45 am | Keynote 2: Hongyi "Michael" Wu, University of Arizona<br>Title: Neural Backdoor in Future Deep Learning Models: Challenges and Solution<br>Session Chair: Dan Wang (The Hong Kong Polytechnic University, Hong Kong) |
|---|---|
| 9:45 - 10:15 am | 3 regular papers, Session Chair: Michael Wu (University of Arizona, USA) |

**Design for future networks and computing systems with integrated QoS I**

| 38 | GOAT: Gradient Scheduling with Collaborative In-Network Aggregation for Distributed Training |
|---|---|
| Jin Fang (University of Science and Technology of China, China); Gongming Zhao (University of Science and Technology of China, China); Hongli Xu (University of Science and Technology of China, China); Zhuolong Yu (Johns Hopkins University, USA); Bingchen Shen (University of Science and Technology of China, China); Liguang Xie (Futurewei Technologies, USA) | |
| 143 | Optimizing Average AoI with Directional Charging for Wireless-Powered Network Edge |
| Quan Chen (Guangdong University of Technology, China); Song Guo (Hong Kong Polytechnic University, China); Wenchao Xu (Hong Kong Polytechnic University, China); Jing Li (Hong Kong Polytechnic University, China); Tuo Shi (Tianjin University, China); Zhipeng Cai (Georgia State University, USA); Hong Gao (Zhejiang Normal University, China) | |
| 157 | When Computing Power Network Meets Distributed Machine Learning: An Efficient Federated Split Learning Framework |
| Xinjing Yuan (Nankai University, China); Lingjun Pu (Nankai University, China); Lei Jiao (University of Oregon, USA); Xiaofei Wang (Tianjin University, China); Meijuan Yang (Nankai University, China); Jingdong Xu (Nankai University, China) | |

**5min break**

| 10:20 - 11:00 am | 4 regular papers, Session Chair: Qiao Xiang (Xiamen University, China) |
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| QoS in software-defined networking | |
|---|---|
| 58 | Vulnerabilities and Attacks of Inter-device Coordination in Programmable Networks |
| Hongyan Liu (Zhejiang University, China); Chen Xiang (Zhejiang University, China); Shen Yi (Zhejiang University, China); Qun Huang (Peking University, China); Zhengyan Zhou (Zhejiang University, China); Zhang Dong (Fuzhou University, China); Chunming Wu (Zhejiang University, China) | |
| 70 | Rusen: Rule Semantics Enabler toward Fast TCAM Update for Commodity SDN Switches |
| Hao Mei (Fudan University, China); Ruoshi Sun (Fudan University, China); Ruyi Yao (Fudan University, China); Chuhao Chen (Fudan University, China); Cong Luo (Fudan University, China); Zixuan Chen (Fudan University, China); Jiahui Li (Fudan University, China); Sen Liu (Fudan University, China); Yang Xu (Fudan University, China) | |
| 87 | RateSheriff: Multipath Flow-aware and Resource Efficient Rate Limiter Placement for Data Center Networks |
| Songshi Dou (Beijing Institute of Technology, China); Yongchao He (Tsinghua University, China); Sen Liu (Fudan University, China); Wenfei Wu (Peking University, China); Zehua Guo (Beijing Institute of Technology, China) | |
| 626 | Grandet: cost-aware traffic scheduling without prior knowledge in SD-WAN |
| Yuchao Zhang (Beijing University of Posts and Telecommunications, China); Huahai Zhang (Beijing University of Posts and Telecommunications, China); Peizhuang Cong (Beijing University of Posts and Telecommunications, China); Wengdong Wang (Beijing University of Posts and Telecommunications, China); Ke Xu (Tsinghua University, China) | |
| 11:00 - 11:20 am | Coffee Break |
| 11:20 - 12:30 pm | Plenary Session |
| 12:30 - 2:00 pm | Lunch　　　　　Poster session |

| Technical sessions 1.5 hours | |
|---|---|
| 2:00 - 3:30 pm | 8 regular papers, Session Chair: Fan Ye (Stony Brook University, USA) |

| QoS in Internet of Things (IoT), cyber-physical networks I | |
|---|---|
| 115 Data-Driven Similarity-based Worker Recruitment Towards Multi-task Data Inference for Sparse Mobile Crowdsensing | |
| En Wang (Jilin University, China); Zijie Tian (Jilin University, China); Yongjian Yang (Jilin University, China); Wenbin Liu (Jilin University, China); Baoju Li (Jilin University, China); Nan Jiang (East China Jiaotong University, China); Jie Wu (Temple University, USA) | |
| 153 A Fast Adversarial Sample Detection Approach for Internet-of-Things Applications | |
| Shigeng Zhang (Central South University, China); Yudong Li (Central South University, China); Shuxin Chen (Central South University, China); Xuan Liu (Hunan University, China); Jian Zhang (Central South University, China) | |
| 225 STABack: Making Dynamic Backscattering Stable for Fast and Accurate Object Tracking | |
| Yachen Mao (University of Science and Technology of China, China); PANLONG YANG (University of Science and Technology of China, China); Shanyue Wang (University of Science and Technology of China, China); Yubo Yan (University of Science and Technology of China, China) | |

| 296 | A Few-Shot Learning based Method to Object Recognition in Multiple Scenarios |
|---|---|

Shichang He (Hunan University, China); Xuan Liu (Hunan University, China); Shigeng Zhang (Central South University, China); Juan Luo (Hunan University, China)

| 633 | Ambient Backscatter with a Single Commodity AP |
|---|---|

Yifan Yang (University of Science and Technology of China & City University of Hong Kong, China); Wei Gong (University of Science and Technology of China, China); Yu Yang (City University of Hong Kong, China)

| 698 | Accurate IoT Device Identification based on A Few Network Traffics |
|---|---|

Shigeng Zhang (Central South University, China); Kai Xiao (Central South University, China); Jianjiang Yu (Central South University, China); Xuan Liu (Hunan University, China); Weiping Wang (Central South University, China)

| 753 | Energy-Efficient Transmission Scheduling with Guaranteed Data Imputation in MHealth Systems |
|---|---|

Ruipeng Gao (Beijing Jiaotong University, China); Haoyue Zhao (Beijing Jiaotong University, China); Zonglin Xie (Beijing Jiaotong University, China); Ru Zhao (North China Electric Power University, China); Dan Tao (Beijing Jiaotong University, China)

| 848 | AIoT-Empowered Smart Grid Energy Management with Distributed Control and Non-Intrusive Load Monitoring |
|---|---|

Linfeng Shen (Simon Fraser University, Canada); Feng Wang (University of Mississippi, USA); Miao Zhang (Simon Fraser University, Canada); Jiangchuan Liu (Simon Fraser University, Canada); Gaoyang Liu (Shenzhen Jiangxing Intelligence Inc., China); Xiaoyi Fan (Shenzhen Jiangxing Intelligence Inc., China)

| 3:30 - 4:00 pm | Coffee Break |
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| 4:15 - 5:15 pm | Plenary Panel Session: "Reflecting on 50 Years of Computing Research, and Future Outlook" |

**Technical sessions 45 minutes**

| 5:15 - 6:00 pm | 4 regular papers, Session Chair: Feng Wang (University of Mississippi, USA) |
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**Measurement, evaluation, adaptation, and verification I**

| 748 | ACTS: Autonomous Cost-Efficient Task Orchestration for Serverless Analytics |
|---|---|

Jananie Jarachanthan (University of Jaffna, Sri Lanka); Li Chen (University of Louisiana at Lafayette, USA); Fei Xu (East China Normal University, China)

| 537 | SteadySketch: Finding Steady Flows in Data Streams |
|---|---|

Xiaodong Li (Peking University, China); Zhuochen Fan (Peking University, China); Haoyu Li (Peking University, China); Zheng Zhong (Peking University, China); Jiarui Guo (Peking University, China); Sheng Long (Peking University, China); Tong Yang (Peking University, China); Bin Cui (Peking University, China)

| 691 | NetDiceSyn: Multi-Property Probabilistic Verification of Network Configurations |
|---|---|

Renrui Liu (Northeastern University, China); Fuliang Li (Northeastern University, China); Chengxi Gao (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China); Ce Ji (Northeastern University, China); Xingwei Wang (Northeastern University, China)

| 760 | Understanding the Benefits of Hardware-Accelerated Communication in Model-Serving Applications |
|---|---|
| Walid A. Hanafy (University of Massachusetts Amherst, USA); Limin Wang (Nokia-Bell Labs, USA); Hyunseok Chang (Nokia-Bell Labs, USA); Sarit Mukherjee (Nokia-Bell Labs, USA); T. V. Lakshman (Nokia-Bell Labs, USA); Prashant Shenoy (University of Massachusetts Amherst, USA) | |
| 7:00 - 9:00 pm | Banquet |

## Wednesday, June 21 (22 regular papers, 11 short papers)

| 8:00 - 8:45 am | Continental Breakfast |
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**Technical sessions 2.15 hours**

| 8:45 - 9:45 am | Keynote 3: Yingying (Jennifer) Chen, Rutgers University<br>Title: AI-Driven Efficiency and Security in Edge Sensing and Computing:<br>       Advancements, Vulnerabilities, and Opportunities in Smart-X Devices<br>Session Chair: Minghua Chen (City University of Hong Kong, China) |
|---|---|
| 9:45 - 10:15 am | 3 regular papers, Session Chair: Yuchao Zhang (Beijing University of Posts and Telecommunications, China) |

**Design for future networks and computing systems with integrated QoS II**

| 165 | You Can Trade Your Experience in Distributed Multi-Agent Multi-Armed Bandits |
|---|---|
| Guoju Gao (Soochow University, China); He Huang (Soochow University, China); Jie Wu (Temple University, USA); Sijie Huang (Soochow University, China); Yang Du (Soochow University, China) | |
| 764 | Improving Fairness in Coexisting 5G and Wi-Fi Network on Unlicensed Band with URLLC |
| Haodong Zou (BNU-HKBU United International College, China); Yupeng Li (Hong Kong Baptist University, China); Xiaowen Chu (The Hong Kong University of Science and Technology (Guangzhou), China); Changfu Xu (BNU-HKBU United International College, China); Tian Wang (Beijing Normal University & UIC, China) | |
| 876 | Revisiting Weighted AIMD-based Congestion Control: A Comprehensive Perspective |
| Jiaqi Zheng (Nanjing University, China); Changrong Wu (Nanjing University, China); Tiancheng Lan (Nanjing University, China); Chen Tian (Nanjing University, China); Guihai Chen (Nanjing University, China) | |

| **5min break** | |
|---|---|
| 10:20 - 11:00 am | 4 regular papers, Session Chair: Tarek Abdelzaher (University of Illinois, USA) |

**QoS-aware scheduling, resource management, queue management, admission control**

| 39 | ElasticShare: Ridesharing Order Dispatching with Dynamic Supply-demand Distribution |
|---|---|
| Shuxin Ge (Tianjin university, China); Xiaobo Zhou (Tianjin University, China) | |
| 135 | On Efficient Packet Batching and Resource Allocation for GPU based NFV Acceleration |
| Deze Zeng (China University of Geosciences, China); Andong Zhu (Nanjing University, China); Lin Gu (Huazhong University of Science and Technology, China); Quan Chen (Shanghai Jiao Tong University, China); Minyi Guo (Shanghai Jiao Tong University, China) | |
| 185 | CATS: A Computation-Aware Transaction Processing System with Proactive Unlocking |
| Bolun Zhu (Huazhong University of Science and Technology, China); Yu Hua (Huazhong University of Science and Technology, China); Ziyin Long (Huazhong University of Science and Technology, China); Xue Liu (McGill University, Canada) | |
| 241 | Integrating All-optical Switching and Entangled Photon Source Placement for Entanglement Routing |
| Qiucheng Zhu (University of Science and Technology of China, China); Yangming Zhao (University of Science and Technology of China, China); Hongli Xu (University of Science and Technology of China, | |

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| China); Liusheng Huang (University of Science and Technology of China, China); Chunming Qiao (SUNY at Buffalo, USA) | |
| 11:00 - 11:20 am | Coffee Break |
| 11:20 – 12:30 pm | Plenary Session |
| 12:30 – 2:00 pm | Lunch |

**Technical sessions 1.5 hours**

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|---|---|
| 2:00-3:30 pm | 8 regular papers, Session Chair: Li Chen (University of Louisiana at Lafayette, USA) |

**QoS in cloud computing, fog computing and edge computing**

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|---|---|
| 56 | AdaCoOpt: Leverage the Interplay of Batch Size and Aggregation Frequency for Federated Learning |

Weijie Liu (Sun Yat-sen University, China); Xiaoxi Zhang (Sun Yat-sen University, China); Jingpu Duan (Southern University of Science and Technology, China); Carlee Joe-Wong (Carnegie Mellon University, USA); Zhi Zhou (Sun Yat-sen University, China); Xu Chen (Sun Yat-sen University, China)

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|---|---|
| 107 | Proactive Auto-scaling For Delay-sensitive Service Providers Over Public Clouds |

Weimeng Wang (Shandong University, China); Lei LIU (Shandong University, China); Zhongmin Yan (Shandong University, China)

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|---|---|
| 126 | WAEVSR: Enabling Collaborative Live Video Super-Resolution in Wide-Area MEC Environment |

Daheng Yin (Southeast University, China); Fang Dong (Southeast University, China); Baijun Chen (Southeast University, China); Dian Shen (Southeast University, China); Ruiting Zhou (Southeast University, China); Xiaolin Guo (Southeast University, China); Zhaowu Huang (Southeast University, China)

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|---|---|
| 151 | How Far Have Edge Clouds Gone? A Spatial-Temporal Analysis of Edge Network Latency In the Wild |

Heng Zhang (Tianjin University, China); Shaoyuan Huang (Tianjin University, China); Mengwei Xu (Beijing University of Posts and Telecommunications, China); Deke Guo (Tianjin University, China); Xiaofei Wang (Tianjin University, China); Victor C. M. Leung (Shenzhen University, China); Wenyu Wang (Shanghai Zhuichu Networking Tecnologies Co., Ltd., China)

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| 184 | Online Midgress-Sensitive Traffic Allocation for Percentile Charging in Pracitcal CDNs |

Huiyou Zhan (University of Science and Technology of China, China); Haisheng Tan (University of Science and Technology of China, China); Huang Xu (Huawei Technologies Co., Ltd., China); Chi Zhang (University of Science and Technology of China, China); Hongqiu Ni (University of Science and Technology of China, China); Pengfei Zhang (University of Science and Technology of China, China); Weihua Shan (Huawei Technologies Co., Ltd., China); Xiang-Yang Li (University of Science and Technology of China, China)

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|---|---|
| 255 | A Holistic QoS View of Crowdsourced Edge Cloud Platform |

Shihao Shen (Tianjin University, China); Yicheng Feng (Tianjin University, China); Mengwei Xu (Beijing University of Posts and Telecommunications, China); Cheng Zhang (Tianjin University of Finance and Economics, China); Xiaofei Wang (Tianjin University, China); Wenyu Wang (Shanghai Zhuichu Networking Tecnologies Co., Ltd., China); Victor C.M. Leung (Shenzhen University, China)

| | |
|---|---|
| 259 | CONTC: A Traffic Control System for Container Overlay Networks |

Deze Zeng (China University of Geosciences, China); Lin Gu (Huazhong University of Science and Technology, China); Quan Chen (Shanghai Jiao Tong University, China); Yu Lei (Huazhong University of Science and Technology, China)

| 328 | On-demand Edge Inference Scheduling with Accuracy and Deadline Guarantee |
|---|---|
| Yechao She (City University of Hong Kong, China); Minming Li (City University of Hong Kong, China); Yang Jin (City University of Hong Kong, China); Meng Xu (City University of Hong Kong, China); Jianping Wang (City University of Hong Kong, China); Bin Liu (Tsinghua University, China) | |
| 3:30 - 4:00 pm | Coffee Break |

**Technical sessions 2 hours**

| 4:00 - 4:40 pm | 4 regular papers, Session Chair: Mo Sha (Florida International University, USA) |
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**Measurement, evaluation, adaptation, and verification II**

| 67 | FTM-RCA: A Fast Two-Stage Multi-dimensional Root-Cause Analysis of Network Anomalies |
|---|---|
| Yeqing Meng (Tsinghua University, China); Qianli Zhang (Tsinghua University, China); Xiangyu Tang (Tsinghua University, China); Wanhao Zhang (Tsinghua University, China); Jilong Wang (Tsinghua University, China) | |
| 78 | WiHunter: Enabling Real-time Small Object Detection via Wireless Sensing |
| Xiang Zou (Xi'an Jiaotong University, China); Jianwei Liu (Zhejiang University, China); Jinsong Han (Zhejiang University, China); Zhi Wang (Xi'an Jiaotong University, China); Wei Xi (Xi'an Jiaotong University, China) | |
| 118 | Meta-Learning Based Runtime Adaptation for Industrial Wireless Sensor-Actuator Networks |
| Xia Cheng (Florida International University, USA); Mo Sha (Florida International University, USA) | |
| 149 | Which Doors Are Open: Reinforcement Learning-based Internet-wide Port Scanning |
| Guanglei Song (Tsinghua University, China); Lin He (Tsinghua University, China); Tianyun Zhao (Beijing University of Posts and Telecommunications, China); Yirui Luo (Tsinghua University, China); Yichao Wu (Tsinghua University, China); Linna Fan (National University of Defense Technology & Tsinghua University, China); Chenglong Li (Tsinghua University, China); Zhiliang Wang (Tsinghua University, China); Jiahai Yang (Tsinghua University, China) | |
| **5min break** | |
| 4:45 - 5:15 pm | 3 regular papers, Session Chair: Mo Sha (Florida International University, USA) |

**Architectures and protocols for QoS, QoP or QoE support**

| 287 | DRA: Ultra-Low Latency Network I/O for TSN Embedded End-Systems |
|---|---|
| Chenglong Li (National University of Defense Technology, China); Tao Li (National University of Defense Technology, China); Junnan Li (National University of Defense Technology, China); Wenwen Fu (National University of Defense Technology, China); Baosheng Wang (National University of Defense Technology, China) | |
| 406 | MARS: An Adaptive Multi-Agent DRL-based Scheduler for Multipath QUIC in Dynamic Networks |
| Xueqiang Han (National University of Defense Technology, China); Biao Han (National University of Defense Technology, China); Ruidong Li (Kanazawa University, Japan); Xiaolan Ji (National University of Defense Technology, China) | |
| 505 | tMPT: Reconfiguration across Blockchain Shards via Trimmed Merkle Patricia Trie |
| Huawei Huang (Sun Yat-sen University, China); Yetong Zhao (Sun Yat-sen University, China); Zibin Zheng (Sun Yat-sen University, China) | |
| **5min break** | |
| 5:20 - 6:05 pm | 11 short papers (4 min each), Session Chair: Ye Tian (University of Science and Technology, China) |

| 4 | Chained-DP: Can We Recycle Privacy Budget? |
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Jingyi Li (Sun Yat-sen University, China); Guangjing Huang (Sun Yat-sen University, China); Liekang Zeng (Sun Yat-sen University, China); Lin Chen (Sun Yat-sen University, China); Xu Chen (Sun Yat-sen University, China)

| 6 | GraphIoT: Accurate IoT Identification based on Heterogeneous Graph |
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Linna Fan (National University of Defense Technology & Tsinghua University, China); Lin He (Tsinghua University, China); Xiaoqing Sun (Tsinghua University, China); Enhuan Dong (Tsinghua University, China); Jiahai Yang (Tsinghua University, China); Zhiliang Wang (Tsinghua University, China); Jinlei Lin (Tsinghua University, China); Guanglei Song (Tsinghua University, China)

| 9 | Enabling Reliable and Efficient Performance Monitoring and Troubleshooting in Datacenter Networks |
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Qinglin Xun (Southern University of Science Technology, China); Weichao Li (Peng Cheng Laboratory, China); Haorui Guo (Southern University of Science Technology, China); Qianyi Huang (Southern University of Science Technology, China); Jianer Zhou (Southern University of Science and Technology, China); Jingpu Duan (Peng Cheng Laboratory, China); Yi Wang (Peng Cheng Laboratory, China); Jinbei Zhang (Sun Yat-sen University, China)

| 24 | Boosting Optical Camera Communication via 2D Rolling Blocks |
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Xiao Zhang (Michigan State University, USA); Griffin Klevering (Michigan State University, USA); James Mariani (Michigan State University, USA); Li Xiao (Michigan State University, USA); Matt W. Mutka (Michigan State University, USA)

| 150 | INT and Delay Based Congestion Control for Cross-Datacenter Networks |
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Yantao Geng (Tsinghua University, China); Han Zhang (Tsinghua University, China); Xingang Shi (Tsinghua University, China); Jilong Wang (Tsinghua University, China); Xia Yin (Tsinghua University, China); Dongbiao He (Sangfor Technologies Inc, China); Yahui Li (Tsinghua University, China)

| 235 | TAG: An Efficient Storage System Towards Transactional and Analytical Processing on Property Graphs |
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Mingxiang Lu (University of Science and Technology of China, China); Min Lyu (University of Science and Technology of China, China); Yinlong Xu (University of Science and Technology of China, China)

| 300 | Enhanced Federated Learning with Adaptive Block-wise Regularization and Knowledge Distillation |
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Qingmin Zeng (University of Science and Technology of China, China); Jianchun Liu (University of Science and Technology of China, China); Hongli Xu (University of Science and Technology of China, China); Zhiyuan Wang (University of Science and Technology of China, China); Yang Xu (University of Science and Technology of China, China); Yangming Zhao (University of Science and Technology of China, China)

| 384 | An Adaptive Counter-Splicing-Based Sketch for Efficient Per-Flow Size Measurement |
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Guoju Gao (Soochow University, China); Zhaorong Qian (Soochow University, China); He Huang (Soochow University, China); Yang Du (Soochow University, China)

| 574 | Magpie: Efficient Big Data Query System Parameter Optimization based on Pre-selection and Search Pruning Approach |
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Rong Gu (Nanjing University, China); Jiajia Wei (Nanjing University, China); Xu Wang (Nanjing University, China); Jiahui Wang (Nanjing University, China); Haipeng Dai (Nanjing University, China); Jiaqi Zheng (Nanjing University, China); Baolong Mao (Tencent Inc., China); Yihua Huang (Nanjing University, China)

| 590 | Grace: Interpretable Root Cause Analysis by Graph Convolutional Network for Microservices |
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Rui Ren (Institute of Computing Technology, Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Yang Wang (Institute of Computing Technology, Chinese Academy of Sciences, China); Fengrui Liu (Institute of Computing Technology, Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Zhenyu Li (Institute of Computing Technology, Chinese Academy of Sciences, China); Gareth Tyson (Queen Mary University of London, UK); Tianhao Miao (Institute of Computing Technology, Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Gaogang Xie (CNIC Chinese Academy of Sciences & University of Chinese Academy of Sciences, China)

| 802 | Collaborative Edge Service Placement for Maximizing QoS with Distributed DataCleaning |
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Yuzhu Liang (Beijing Normal University, China); Wenhua Wang (Beijing Normal University, China); Xi Zheng (Macquarie University, Australia); Qin Liu (Hunan University, China); Liang Wang (Northwestern Polytechnical University, China); Tian Wang (Beijing Normal University, China)