

IEEE/ACM IWQoS 2022 Program

Day 1, June 10 th	
Friday	9:00am-12:10pm & 13:00pm-17:40pm, 10 June 2022 (Oslo Time/Central European Time)
Friday	15:00pm-18:10pm & 19:00pm-23:40pm, 10 June 2022 (Beijing Time)
Friday	3:00am-6:10am & 7:00am-11:40am, 10 June 2022 (New York Time)
❖ IEEE/ACM IWQoS Opening	
Friday	9:00am-9:20am, 10 June 2022 (Oslo Time/Central European Time)
Friday	15:00pm-15:20pm, 10 June 2022 (Beijing Time)
Friday	3:00am-3:20am, 10 June 2022 (New York Time)
<p>Opening: Yan Zhang, University of Oslo, Norway</p> <p>Welcome Message: Olav Lysne, Simula Metropolitan Center for Digital Engineering (SimulaMet), Norway</p> <p>Message from Technical Program Chair: Ahmed Elmokashfi, Simula Metropolitan Center for Digital Engineering (SimulaMet), Norway</p>	
❖ Keynote 1	
Friday	9:20am-10:20am, 10 June 2022 (Oslo Time/Central European Time)
Friday	15:20pm-16:20pm, 10 June 2022 (Beijing Time)
Friday	3:20am-4:20am, 10 June 2022 (New York Time)

Title: DeepFake Detection: Applicability and Robustness

Speaker: Kui Ren, IEEE/ACM Fellow, Zhejiang University, China

Session Chair: Yan Zhang, University of Oslo, Norway

❖ **Best Paper and IWQoS 2023**

Session Chair: Yan Zhang, University of Oslo, Norway

Friday 10:20am-10:40am, 10 June 2022 (Oslo Time/Central European Time)

Friday 16:20pm-16:40pm, 10 June 2022 (Beijing Time)

Friday 4:20am-4:40am, 10 June 2022 (New York Time)

❖ **Session 1: QoS in AI/ML**

Session Chair: TBD

Friday 10:40am-12:10pm, 10 June 2022 (Oslo Time/Central European Time)

Friday 16:40pm-18:10pm, 10 June 2022 (Beijing Time)

Friday 4:40am-6:10am, 10 June 2022 (New York Time)

● **AIQoSer: Building the efficient Inference-QoS for AI Services (Best Paper Award)**

Jianxin Li (Beihang University, China); Tianchen Zhu (Beihang University, China); Haoyi Zhou (Beihang University, China); Qingyun Sun (Beihang University, China); Chunyang Jiang (Beihang University, China); Shuai Zhang (Beihang University, China); and Chunming Hu (Beihang University, China)

- **Accelerating Blockchain-enabled Distributed Machine Learning by Proof of Useful Work**

Yao Du (The University of British Columbia, Canada); Cyril Leung (The University of British Columbia, Canada); Zehua Wang (The University of British Columbia, Vancouver, Canada); Victor C.M. Leung (Shenzhen University, China & The University of British Columbia, Canada)

- **An Online Approach for DNN Model Caching and Processor Allocation in Edge Computing**

Zhiqi Chen (Nanjing University, China); Sheng Zhang (Nanjing University, China); Zhi Ma (Nanjing University, China); Shuai Zhang (Nanjing University, China); Zhuzhong Qian (Nanjing University, China); Mingjun Xiao (University of Science and Technology of China, China); Jie Wu (Temple University, USA); Sanglu Lu (Nanjing University, China)

- **PRM: An Efficient Partial Recovery Method to Accelerate Training Data Reconstruction for Distributed Deep Learning Applications in Cloud Storage Systems**

Piao Hu (Shanghai Jiao Tong University, China); Yunfei Gu (Shanghai Jiao Tong University, China); Ranhao Jia (Shanghai Jiao Tong University, China); Chentao Wu (Shanghai Jiao Tong University, China); Minyi Guo (Shanghai Jiao Tong University, China); Jie Li (Shanghai Jiao tong University, China)

- **Quality-aided Annotation Service Selection in MLaaS Market**

Shanyang Jiang (University of Science and Technology of China, China); Lan Zhang (University of Science and Technology of China, China)

Virtual Lunch Break

❖ Keynote 2	
Friday	13:00pm-14:00pm, 10 June 2022 (Oslo Time/Central European Time)
Friday	19:00pm-20:00pm, 10 June 2022 (Beijing Time)
Friday	7:00am-8:00am, 10 June 2022 (New York Time)
<p>Title: Quality of Service in the Coming Quantum Internet</p> <p>Speaker: Donald F. Towsley, IEEE/ACM Fellow, University of Massachusetts, Amherst</p> <p>Session Chair: Ahmed Elmokashfi, Simula Metropolitan Center for Digital Engineering (SimulaMet), Norway</p>	
Session 2: Federated Learning	
Session Chair:	TBD
Friday	14:00pm-15:10pm, 10 June 2022 (Oslo Time/Central European Time)
Friday	20:00pm-21:10pm, 10 June 2022 (Beijing Time)
Friday	8:00am-9:10am, 10 June 2022 (New York Time)
● How Asynchronous can Federated Learning Be?	
Ningxin Su (University of Toronto, Canada); Baochun Li (University of Toronto, Canada)	
● Federated Graph Learning with Periodic Neighbour Sampling	
Bingqian Du (The University of Hong Kong, Hong Kong); Chuan Wu (The University of Hong Kong, Hong Kong)	
Bingqian Du (The University of Hong Kong, Hong Kong); Chuan Wu (The University of Hong Kong, Hong Kong)	

- **Adaptive Clustered Federated Learning for Clients with Time-Varying Interests**

Ne Wang (Wuhan University, China); Ruiting Zhou (Wuhan University, China); Lina Su (Wuhan University, China); Guang Fang (Wuhan University, China); Zongpeng Li (Tsinghua University, China)

- **FedSyL: Computation-Efficient Federated Synergy Learning on heterogeneous IoT devices**

Hui Jiang (Institute of Computing Technology, Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Min Liu (Institute of Computing Technology, Chinese Academy of Sciences, China); Sheng Sun (Institute of Computing Technology, Chinese Academy of Sciences, China); Yuwei Wang (Institute of Computing Technology Chinese Academy of Sciences, China); Xiaobing Guo (Lenovo Corporate Research & Development, China)

Virtual Break (10 minutes)

Session 3: Inter-Networking Communications

Session Chair:	TBD
Friday	15:20pm-16:30pm, 10 June 2022 (Oslo Time/Central European Time)
Friday	21:20pm-22:30pm, 10 June 2022 (Beijing Time)
Friday	9:20am-10:30am, 10 June 2022 (New York Time)

● **Towards Sustainable Multi-Tier Space Networking for LEO Satellite Constellations (Best Paper Award Runner-up)**

Yi Ching Chou (Simon Fraser University, Canada); Xiaoqiang Ma (Douglas College, Canada); Feng Wang (University of Mississippi, USA); Sami Ma (Simon Fraser University, Canada); Sen Hung Wong (Hong Kong University of Science and Technology, Hong Kong); Jiangchuan Liu (Simon Fraser University, Canada)

● **DoCile: Taming Denial-of-Capability Attacks in Inter-Domain Communications**

Marc Wyss (ETH Zurich, Switzerland); Giacomo Giuliani (ETH Zurich, Switzerland); Markus Legner (ETH Zurich, Switzerland); Adrian Perrig (ETH Zurich Switzerland & Carnegie Mellon University, USA)

● **Geographic Low-Earth-Orbit Networking without QoS Bottlenecks from Infrastructure Mobility**

Lixin Liu (Tsinghua University, China); Hewu Li (Tsinghua University, China); Yuanjie Li (Tsinghua University, China); Zeqi Lai (Tsinghua University, China); Yangtao Deng (Tsinghua University, China); Yimei Chen (Tsinghua University, China); Wei Liu (Tsinghua, China); Qian Wu (Tsinghua University, China)

● **FABMon: Enabling Fast and Accurate Network Available Bandwidth Estimation**

Tao Jin (Tsinghua Shenzhen International Graduate School, China); Weichao Li (Peng Cheng Laboratory, China); Qing Li (Peng Cheng Laboratory, China); Qianyi Huang (Southern University of Science and Technology & Peng Cheng Laboratory, China); Yong Jiang (Graduate School at Shenzhen, Tsinghua University, China); Shutao Xia (Tsinghua University, China)

Session 4: Congestion Control	
Session Chair:	TBD
Friday	16:30pm-17:40pm, 10 June 2022 (Oslo Time/Central European Time)
Friday	22:30pm-23:40pm, 10 June 2022 (Beijing Time)
Friday	10:30am-11:40am, 10 June 2022 (New York Time)
<ul style="list-style-type: none"> ● A Control-Theoretic and Online Learning Approach to Self-Tuning Queue Management 	
<p>Jiancheng Ye (Huawei, Hong Kong); Kechao Cai (Sun Yat-Sen University, China); Dong Lin (Huawei, Hong Kong); Jiarong Li (Tsinghua University, China); Jianfei He (City University of Hong Kong, Hong Kong); John C.S. Lui (The Chinese University of Hong Kong, Hong Kong)</p>	
<ul style="list-style-type: none"> ● When Power-of-d-Choices Meets Priority 	
<p>Jianguo Niu (Southern University of Science and Technology, China); Chunpu Wang (Canada); Chen Feng (University of British Columbia, Canada); Hong Xu (The Chinese University of Hong Kong, Hong Kong)</p>	
<ul style="list-style-type: none"> ● On the Joint Optimization of Function Assignment and Communication Scheduling toward Performance Efficient Serverless Edge Computing 	
<p>Yuepeng Li (China University of Geosciences, China); Deze Zeng (China University of Geosciences, China); Lin Gu (Huazhong University of Science and Technology, China); Kun Wang (University of California, Los Angeles, USA); Song Guo (The Hong Kong Polytechnic University, Hong Kong)</p>	

- **Congestion-Aware Modeling and Analysis of Sponsored Data Plan from End User Perspective**

Yi Zhao (Tsinghua University, China); Qi Tan (Tsinghua University, China); Xiaohua Xu (University of Science and Technology of China, China); Hui Su (Tsinghua University, China); Dan Wang (The Hong Kong Polytechnic University, Hong Kong); Ke Xu (Tsinghua University, China)

Day 2, June 11th

Saturday	9:00am-12:10pm & 13:00pm-17:50pm, 11 June 2022 (Oslo Time/Central European Time)
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Saturday	15:00pm-18:10pm & 19:00pm-23:50pm, 11 June 2022 (Beijing Time)
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Saturday	3:00am-6:10am & 7:00am-11:50am, 11 June 2022 (New York Time)
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❖ Keynote 3

Saturday	9:00am-10:00am, 11 June 2022 (Oslo Time/Central European Time)
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Saturday	15:00pm-16:00pm, 11 June 2022 (Beijing Time)
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Saturday	3:00am-4:00am, 11 June 2022 (New York Time)
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Title: Network Configuration for High-performance Distributed Machine Learning

Speaker: Carla Fabiana Chiasserini, IEEE Fellow, Politecnico di Torino, Italy

Session Chair: TBD

❖ Keynote 4	
Saturday	10:00am-11:00am, 11 June 2022 (Oslo Time/Central European Time)
Saturday	16:00pm-17:00pm, 11 June 2022 (Beijing Time)
Saturday	4:00am-5:00am, 11 June 2022 (New York Time)
<p>Title: From a need, to an idea, to a complete system: A perspective based on real-world applications</p> <p>Speaker: Pål Halvorsen, SimulaMet; and Oslo Metropolitan University, Norway</p> <p>Session Chair: TBD</p>	
❖ Session 5: Privacy	
Session Chair:	TBD
Saturday	11:00am-12:10pm, 11 June 2022 (Oslo Time/Central European Time)
Saturday	17:00pm-18:10pm, 11 June 2022 (Beijing Time)
Saturday	5:00am-6:10am, 11 June 2022 (New York Time)
● Privacy-Preserving and Robust Federated Deep Metric Learning	
<p>Yulong Tian (Nanjing University, China); Xiaopeng Ke (Nanjing University, China); Zeyi Tao (William and Mary, USA); Shaohua Ding (Nanjing University, China); Fengyuan Xu (Nanjing University, China); Qun Li (William & Mary, USA); Hao Han (Nanjing University of Aeronautics and Astronautics, China); Sheng Zhong (Nanjing University, China); Xinyi Fu (Ant Group, China)</p>	
● PPAR: A Privacy-Preserving Adaptive Ranking Algorithm for Multi-Armed-Bandit Crowdsourcing	
<p>Shuzhen Chen (Shandong University, China); Dongxiao Yu (Shandong University,</p>	

China); Feng Li (Shandong University, China); Zongrui Zou (Shandong University, China); Weifa Liang (City University of Hong Kong, Hong Kong); Xiuzhen Cheng (Shandong University, China)

● **A Privacy-aware Distributed Knowledge Graph Approach to QoS-driven COVID-19 Misinformation Detection**

Lanyu Shang (University of Illinois at Urbana-Champaign, USA); Ziyi Kou (University of Illinois at Urbana-Champaign, USA); Yang Zhang (University of Notre Dame, USA); Jin Chen (Cleveland Clinic, USA); Dong Wang (University of Illinois at Urbana-Champaign, USA)

● **Nearly Optimal Protocols for Computing Multi-party Private Set Union**

Xuhui Gong (Huazhong University of Science and Technology, China); Qiang-Sheng Hua (Huazhong University of Science and Technology, China); Hai Jin (Huazhong University of Science and Technology, China)

Virtual Lunch Break

❖ **Session 6: Mobile and Wireless Networks**

Session Chair:	TBD
Saturday	13:00pm-14:10pm, 11 June 2022 (Oslo Time/Central European Time)
Saturday	19:00pm-20:10pm, 11 June 2022 (Beijing Time)
Saturday	7:00am-8:10am, 11 June 2022 (New York Time)

● **An Experimental Study of Triggered Multi-User Uplink Access with Real Application Traffic (invited paper)**

Vinicius Da Silva Goncalves (Rice University, USA); Edward W. Knightly (Rice University, USA)

● **Bandwidth Prediction for 5G Cellular Networks**

Yuxiang Lin (Zhejiang University, China); Wei Dong (Zhejiang University, China); Yi Gao (Zhejiang University, China)

● **Investigating the Predictability of QoS Metrics in Cellular Networks**

Stefan Herrleben (University of Wuerzburg, Germany); Johannes Grohmann (University of Wuerzburg, Germany); Veronika Lesch (University of Wuerzburg, Germany); Thomas Prantl (University of Wuerzburg, Germany, Germany); Florian Metzger (University of Wuerzburg, Germany, Germany); Tobias Hoßfeld (University of Wuerzburg, Germany, Germany); Samuel Kounev (University of Wuerzburg, Germany)

● **Timely-throughput Optimal Scheduling for Wireless Flows with Deep Reinforcement Learning**

Qi Wang (Institute of Computing Technology, Chinese Academy of Sciences, China); ChenTao He (Institute of Computing Technology, Chinese Academy of Sciences, China); Katia Jaffrès-Runser (University of Toulouse - Toulouse INP & IRIT Laboratory, France); Jianhui Huang (Institute of Computing Technology, Chinese Academy of Sciences, China); Yongjun Xu (Institute of Computing Technology, Chinese Academy of Sciences, China)

❖ Session 7: Edge Computing	
Session Chair:	Nakjung Choi, Nokia Bell Labs
Saturday	14:10pm-15:20pm, 11 June 2022 (Oslo Time/Central European Time)
Saturday	20:10pm-21:20pm, 11 June 2022 (Beijing Time)
Saturday	8:10am-9:20am, 11 June 2022 (New York Time)
<ul style="list-style-type: none"> ● When Multi-access Edge Computing Meets Multi-area Intelligent Reflecting Surface: A Multi-agent Reinforcement Learning Approach 	
<p>Shen Zhuang (Shenzhen University, China); Ying He (Shenzhen University, China); F. Richard Yu (Carleton University, Canada); Chengxi Gao (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China); Weike Pan (Shenzhen University, China); Zhong Ming (Shenzhen University, China)</p>	
<ul style="list-style-type: none"> ● JCSP: Joint Caching and Service Placement for Edge Computing Systems 	
<p>Yicheng Gao (Imperial College London, United Kingdom (Great Britain)); Giuliano Casale (Imperial College London, United Kingdom (Great Britain))</p>	
<ul style="list-style-type: none"> ● Service Placement and User Assignment in Multi-Access Edge Computing with Base-Station Failure 	
<p>Haruto Taka (Kyoto University, Japan); Fujun He (Kyoto University, Japan); Eiji Oki (Kyoto University, Japan)</p>	

- **Dynamic Pricing Scheme for Edge Computing Services: A Two-layer Reinforcement Learning Approach**

Feng Lyu (Central South University, China); Xinyao Cai (Central South University, China); Fan Wu (Tsinghua University, China); Huali Lu (Central South University, China); Sijing Duan (Central South University, China); Ju Ren (Tsinghua University, China)

Virtual Break (10 minutes)

- ❖ **Session 8: Traffic Analytics**

Session Chair:	TBD
Saturday	15:30pm-16:40pm, 11 June 2022 (Oslo Time/Central European Time)
Saturday	21:30pm-22:40pm, 11 June 2022 (Beijing Time)
Saturday	9:30am-10:40am, 11 June 2022 (New York Time)

- **AdvTraffic: Obfuscating Encrypted Traffic with Adversarial Examples**

Hao Liu (University of Cincinnati, USA); Jimmy Dani (University of Cincinnati, USA); Hongkai Yu (Cleveland State University, USA); Wenhai Sun (Purdue University, USA); Boyang Wang (University of Cincinnati, USA)

- **Flow Sequence-Based Anonymity Network Traffic Identification with Residual Graph Convolutional Networks**

Ruijie Zhao (Shanghai Jiao Tong University, China); Xianwen Deng (Shanghai Jiao Tong University, China); Yanhao Wang (QI-ANXIN Technology Research Institute, China); Libo Chen (Shanghai Jiao Tong University, China); Ming Liu (Shanghai Jiao Tong University, China); Zhi Xue (Shanghai Jiao Tong University, China); Yijun Wang (Shanghai Jiao Tong University, China)

- **APS: Adaptive Packet Sizing for Efficient End-to-End Network Transmission**

Feixue Han (Tsinghua University, China); Qing Li (Peng Cheng Laboratory, China); Jianer Zhou (SUSTech, China); Hong Xu (The Chinese University of Hong Kong, Hong Kong); Yong Jiang (Graduate School at Shenzhen, Tsinghua University, China)

- **iSwift: Fast and Accurate Impact Identification for Large-scale CDNs**

Jiyan Sun (Institute of Information Engineering, Chinese Academy of Sciences, China); Tao Lin (Communication University of China, China); Yinlong Liu (Institute of Information Engineering, Chinese Academy of Sciences & School of Cyber Security, University of Chinese Academy of Sciences, China); Xin Wang (Stony Brook University, USA); Bo Jiang (Shanghai Jiao Tong University, China); Liru Geng (Institute of Information Engineering Chinese Academy of Sciences, China); Pengkun Jing (Institute of Information Engineering, Chinese Academy of Sciences, China); Liang Dai (Institute of Information Engineering, Chinese Academy of Sciences, China)

- ❖ **Session 9: Video Streaming**

Session Chair:	TBD
Saturday	16:40pm-17:50pm, 11 June 2022 (Oslo Time/Central European Time)
Saturday	22:40pm-23:50pm, 11 June 2022 (Beijing Time)
Saturday	10:40am-11:50am, 11 June 2022 (New York Time)

- **VPPlus: Exploring the Potentials of Video Processing for Live Video Analytics at the Edge**

Junpeng Guo (Purdue University, USA); Shengqing Xia (Purdue University, USA); Chunyi Peng (Purdue University, USA)

- **Ivory: Learning Network Adaptive Streaming Codes**

Salma Emara (University of Toronto, Canada); Fei Wang (University of Toronto, Canada); Isidor Kaplan (University of Toronto, Canada); Baochun Li (University of Toronto, Canada)

- **Choice-supportive bias affects video viewing experience: Subjective experiment and evaluation**

Daichi Kominami (Osaka University, Japan)

- **Harmonizing Energy Efficiency and QoE for Brightness Scaling-based Mobile Video Streaming**

Chao Qian (Hunan University, China); Daibo Liu (Hunan University, China); Hongbo Jiang (Hunan University, China)

Day 3, June 12th

Sunday	8:30am-12:10pm & 13:00pm-18:00pm, 12 June 2022 (Oslo Time/Central European Time)
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Sunday	14:30pm-18:10pm & 19:00pm-00:00am, 12 June 2022 (Beijing Time)
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Sunday	2:30am-6:10am & 7:00am-12:00pm, 12 June 2022 (New York Time)
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- ❖ **Session 10: WiFi Sensing**

Session Chair:	TBD
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Sunday	8:30am-9:40am, 12 June 2022 (Oslo Time/Central European Time)
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Sunday	14:30pm-15:40pm, 12 June 2022 (Beijing Time)
Sunday	2:30am-3:40am, 12 June 2022 (New York Time)
<ul style="list-style-type: none"> ● EAScatter: Excitor-Aware Bluetooth Backscatter 	
<p>Zhanxiang Huang (University of Science and Technology of China, China); Wei Gong (University of Science and Technology of China, China)</p>	
<ul style="list-style-type: none"> ● SpiroFi: Contactless Pulmonary Function Monitoring using WiFi Signal 	
<p>Yu Gu (Hefei University of Technology, China); Meng Wang (Hefei University of Technology, China); Peng Zhao (Hefei University of Technology, China); Yantong Wang (Hefei University of Technology, China); Hao Zhou (University of Science and Technology of China, China); Yusheng Ji (National Institute of Informatics, Japan); Celimuge Wu (The University of Electro-Communications, Japan)</p>	
<ul style="list-style-type: none"> ● Blind-area Elimination in Video Surveillance Systems by WiFi Sensing with Minimum QoS Loss 	
<p>Linqing Gui (Nanjing University of Posts and Telecommunications, China); Wenyang Yuan (Nanjing University of Posts and Telecommunications, China); Fu Xiao (Nanjing University of Posts and Telecommunications, China)</p>	
<ul style="list-style-type: none"> ● WiVi: WiFi-Video Cross-Modal Fusion based Multi-Path Gait Recognition System 	
<p>Jinmeng Fan (University of Science and Technology of China, China); Hao Zhou (University of Science and Technology of China, China); Fengyu Zhou (University of Science and Technology of China, China); Xiaoyan Wang (Ibaraki University, Japan); Zhi</p>	

Liu (The University of Electro-Communications, Japan); Xiang-Yang Li (University of Science and Technology of China, China)

❖ Session 11: Scheduling

Session Chair: TBD

Sunday 9:40am-10:50am, 12 June 2022 (Oslo Time/Central European Time)

Sunday 15:40pm-16:50pm, 12 June 2022 (Beijing Time)

Sunday 3:40am-4:50am, 12 June 2022 (New York Time)

● TASP: Enabling Time-triggered Task Scheduling in TSN-based Mixed-criticality system

Xuyan Jiang (National University of Defense Technology, China); Yiming Zhang (NUDT & NiceX Lab, China); Wenwen Fu (National University of Defense Technology, China); Xiangrui Yang (National University of Defense Technology, China); Yinhan Sun (National University of Defense Technology, China); Zhigang Sun (National University of Defense Technology, China)

● BUDA: Budget and Deadline Aware Scheduling Algorithm for Task Graphs in Heterogeneous Systems

Hamza Djigal (Nanjing University of Posts and Telecommunications, China); Linfeng Liu (Nanjing University of Posts and Telecommunications, China); Jian Luo (Nanjing University of Posts and Telecommunications, China); Jia Xu (Nanjing University of Posts and Telecommunications, China)

● **Rethinking the use of network cycle in Time-Sensitive Networking (TSN) flow scheduling**

Jiashuo Lin (Southern University of Science and Technology, China); Weichao Li (Peng Cheng Laboratory, China); Xingbo Feng (City University of Hong Kong, China);

Shuangping Zhan (Peng Cheng Laboratory, China); Jingbin Feng (Peng Cheng Laboratory, China); Jian Cheng (Peng Cheng Laboratory, China); Tao Wang (Guangdong University of Technology, China); Qing Li (Peng Cheng Laboratory, China); Yi Wang (Southern University of Science and Technology, China); Fuliang Li (Northeastern University, China); Bo Tang (Southern University of Science and Technology, China)

● **Online Traffic Allocation Based on Percentile Charging for Practical CDNs**

Huan Chen (University of Science and Technology of China, China); 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); Weihua Shan (Huawei Technologies Co., Ltd., China); Shiteng Chen (Chinese Academy of Sciences, China); Xiang-Yang Li (University of Science and Technology of China, China)

Virtual Break (10 minutes)

❖ **Session 12: DCNs**

Session Chair:	TBD
Sunday	11:00am-12:10pm, 12 June 2022 (Oslo Time/Central European Time)
Sunday	17:00pm-18:10pm, 12 June 2022 (Beijing Time)
Sunday	5:00am-6:10am, 12 June 2022 (New York Time)

- **NQ/ATP: Architectural Support for Massive Aggregate Queries in Data Center Networks**

Yixi Chen (Tsinghua University, China); Wenfei Wu (Peking University, China); Ying Zhang (Facebook, USA); Shan-Hsiang Shen (National Taiwan University of Science and Technology, Taiwan)

- **BubbleTCAM: Bubble Reservation in SDN Switches for Fast TCAM Update**

Cong Luo (Fudan University, China); Chuhao Chen (Fudan University, China); Hao Mei (Fudan University, China); Ruyi Yao (Fudan University, China); Ying Wan (Tsinghua University, China); Wenjun Li (Harvard University, USA); Sen Liu (Fudan University, China); Bin Liu (Tsinghua University, China); Yang Xu (Fudan University, China)

- **UFLB: A Unified Framework for Modeling and Analyzing Load Balancing Methods in DCNs**

Yawen Chen (Tianjin University, China); Deke Guo (National University of Defense Technology, China); Bangbang Ren (National University of Defense Technology, China); Junjie Xie (National University of Defense Technology, China); Lailong Luo (National University of Defense Technology, China)

- **Flexible and Efficient Multicast Transfers in Inter-Datacenter Networks**

Long Luo (University of Electronic Science and Technology of China, China); Linjian Yu (University of Electronic Science and Technology of China, China); Tie Ma (University of Electronic Science and Technology of China, China); Hongfang Yu (University of Electronic Science and Technology of China, China)

Virtual Lunch Break

❖ Session 13: Monitoring & Classification	
Session Chair:	TBD
Sunday	13:00pm-14:10pm, 12 June 2022 (Oslo Time/Central European Time)
Sunday	19:00pm-20:10pm, 12 June 2022 (Beijing Time)
Sunday	7:00am-8:10am, 12 June 2022 (New York Time)
● DUET: Joint Deployment of Trucks and Drones for Object Monitoring	
<p>Lihao Wang (Nanjing University, China); Weijun Wang (Nanjing University & University of Goettingen, China); Haipeng Dai (Nanjing University & State Key Laboratory for Novel Software Technology, China); Jiaqi Zheng (Nanjing University, China); Bangbang Ren (National University of Defense Technology, China); Shuyu Shi (University of Nanjing, China); Rong Gu (Nanjing University, China)</p>	
● Scorpius: Proactive Code Preparation to Accelerate Function Startup	
<p>Heng Yu (Tsinghua University, China); Junxian Shen (Tsinghua University, China); Han Zhang (Tsinghua University, China); Jilong Wang (Tsinghua University, China); Congcong Miao (Tsinghua University, China); Mingwei Xu (Tsinghua University, China)</p>	
● FROD: An Efficient Framework for Optimizing Decision Trees in Packet Classification	
<p>Longlong Zhu (Fuzhou University, China); Jiashuo Yu (Fuzhou University, China); Jiayi Cai (Fuzhou University, China); Jinfeng Pan (Fuzhou University, China); ZhiGao Li (Fuzhou University, China); Zhengyan Zhou (Zhejiang University, China); Dong Zhang (Fuzhou University, China); Chunming Wu (Zhejiang University, China)</p>	

- **PextCuts: A High-performance Packet Classification Algorithm with Pext CPU Instruction**

Chunyang Zhang

(Institute of Computing Technology, Chinese Academy of Sciences, China); Gaogang Xie (CNIC Chinese Academy of Sciences & University of Chinese Academy of Sciences, China); Peng He (ByteDance, China)

- ❖ **Session 14: Monitoring & Identification**

Session Chair:	TBD
Sunday	14:10pm-15:20pm, 12 June 2022 (Oslo Time/Central European Time)
Sunday	20:10pm-21:20pm, 12 June 2022 (Beijing Time)
Sunday	8:10am-9:20am, 12 June 2022 (New York Time)

- **Progressive Construction of k-identifiable Networks**

Yongshuo Wan (Hong Kong); Cuiying Feng (City University of Hong Kong, Hong Kong); KuiWu (University of Victoria, Canada); Jianping Wang (City University of Hong Kong, Hong Kong)

- **Order-preserved Tensor Completion For Accurate Network-wide Monitoring**

Xiaocan Li (Hunan University, China); Kun Xie (Hunan University, China); Xin Wang (Stony Brook University, USA); Gaogang Xie (Institute of Computing Technology, Chinese Academy of Sciences, China); Kenli Li (Hunan University, China); Dafang Zhang (Hunan University, China); Jigang Wen (Chinese Academy of Science & Institute of Computing Technology, China)

- **Accurately Identify Time-decaying Heavy Hitters by Decay-aware Cuckoo Filter along Kicking Path**

Qingjun Xiao (Southeast University of China, China); Haotian Wang (Southeast University, China); Guannan Pan (Southeast University, China)

- **Improving disk failure detection accuracy via data augmentation**

Wang Wang (University of Chinese Academy of Science, China); Xuehai Tang (Institute of Information Engineering, Chinese Academy of Sciences, China); Biyu Zhou (Institute of Information Engineering, Chinese Academy of Sciences, China); Wenjie Xiao (Institute of Information Engineering, Chinese Academy of Sciences, China); Jizhong Han (IIE, CAS, China); Songlin Hu (IIE, China)

Virtual Break (10 minutes)

- ❖ **Session 15: Routing**

Session Chair: TBD

Sunday 15:30pm-16:40pm, 12 June 2022 (Oslo Time/Central European Time)

Sunday 21:30pm-22:40pm, 12 June 2022 (Beijing Time)

Sunday 9:30am-10:40am, 12 June 2022 (New York Time)

- **QoS Routing Using Dominant-Distance Vectors**

Jj Garcia-Luna-Aceves (University of California at Santa Cruz, USA); Brad Smith (University of California, Santa Cruz, USA); Judith Samson (University of California Santa Cruz, USA)

- **The Differentiated Reliable Routing Mechanism for 5GB5G**

Yaoguang Lu (Northeastern University, China); Xingwei Wang (Northeastern University, China); Bo Yi (Northeastern University, China); Min Huang (Northeastern University, China)

- **Online Entanglement Routing in Quantum Networks**

Lan Yang (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, China); Chunming Qiao (University at Buffalo, USA)

- **Break the Blackbox! Desensitize Intra-domain Information for Inter-domain Routing**

Peizhuang Cong (Beijing University of Posts and Telecommunications, China); Yuchao Zhang (Beijing University of Posts and Telecommunications, China); Lei Wang (Beijing University of Posts and Telecommunications, China); Hao Ni (Beijing University of Posts and Telecommunications, China); Wendong Wang (Beijing University of Posts and Telecommunications, China); Gong Xiangyang (Beijing University of Posts and Telecommunications P.R. China, China); Tong Yang (Peking University, China); Dan Li (Tsinghua University, China); Ke Xu (Tsinghua University, China)

- ❖ **Session 16: Networking Protocol**

Session Chair:	TBD
Sunday	16:40pm-17:50pm, 12 June 2022 (Oslo Time/Central European Time)
Sunday	22:40pm-23:50pm, 12 June 2022 (Beijing Time)
Sunday	10:40am-11:50am, 12 June 2022 (New York Time)

● **ACCeSS: Adaptive QoS-aware Congestion Control for Multipath TCP**

Xiaolan Ji (National University of Defense Technology, China); Biao Han (National University of Defense Technology, China); Ruidong Li (Kanazawa University, Japan); Cao Xu (National University of Defense Technology, China); Yahui Li (National University of Defense Technology, China); Jinshu Su (National University of Defense Technology, China)

● **Demystifying and Mitigating TCP Capping**

Qingkai Meng (Tsinghua University, China); Fengyuan Ren (Tsinghua University, China); Tong Zhang (Nanjing University of Aeronautics and Astronautics, China); Danfeng Shan (Xi'an Jiaotong University, China); Yajun Yang (Tencent Technology Shenzhen Company, China)

● **Consistent and Fine-Grained Rule Update with In-Network Control for Distributed Rate Limiting**

Yongchao He (Tsinghua University, China); Wenfei Wu (Peking University, China)

● **HPUCache: Toward High Performance and Resource Utilization in Clustered Cache via Data Copying and Instance Merging**

Wang Qianli (University of Science and Technology of China (USTC), China); Si Wu (University of Science and Technology of China, China); Yongkun Li (University of Science and Technology of China, China); Yinlong Xu (University of Science and Technology of China, China); Fei Chen (Huawei Technologies, China); Pengcheng Wang (Huawei Technologies, China); Lei Han (Huawei Technologies, China)

❖ Closing Session	
Sunday	17:50pm-18:00pm, 12 June 2022 (Oslo Time/Central European Time)
Sunday	23:50pm-00:00am, 12 June 2022 (Beijing Time)
Sunday	11:50am-12:00pm, 12 June 2022 (New York Time)