

Saturday, Dec. 6: Edge Computing for Connected and Autonomous Vehicles (EdgeCAV)

Each paper is allocated a 20-minute slot (15 minutes presentation + 5 minutes Q&A).

9:00-10:20

Registration

Keynote

Dr. Xiaopeng (Shaw) Li (University of Wisconsin-Madison)

10:20-11:00

Talk title: Automated/Connected Vehicle Evaluation and Management with Edge Computing

Session Chair: Lanyu Xu

Session 1A: Perception and Trajectory Forecasting for Autonomous Driving

Session Chair: Ruimin Ke

1. *TinyBEV: Compact Temporal Fusion for Multi-View 3D Perception*

Hongyu Ke, Jack Morris (Georgia State University); Yongkang Liu, Satoshi Kitai, Kentaro Oguchi (InfoTech Labs, Toyota Motor North America R&D); Yi Ding, Haoxin Wang (Georgia State University)

2. *Communication-aware Diffusion Models for Multi-Agent Trajectory Forecasting in Connected and Autonomous Vehicles*

11:00-12:30

Jingyi He, Kehua Chen, Bingzhang Wang, Yin Hai Wang (University of Washington)

(10-min buffer)

3. *Context-Aware Perception: VLM-Augmented All-Weather Detection for Autonomous Driving*

Johora Akter Polin (William & Mary); Yichen Luo (William & Mary); Sidi Lu (William & Mary)

4. *Open-Vocabulary Object Detection with Driving-Aware Multi-Scale Feature Fusion for Autonomous Driving*

Tianyang Chen, Yongtao Yao (University of Delaware); H Peter Hofstee (IBM); Weisong Shi (University of Delaware)

12:30-13:30

Lunch

Session 1B: Trustworthy Edge Intelligence for Connected Vehicles

Session Chair: Johora Akter Polin

5. *Toward Design of a Scalable Federated Unlearning Framework for Trustworthy Edge Intelligence*

Haitham Y. Adarbah (Department of Electrical Engineering and Computer Science, Texas A&M University–Kingsville, Kingsville TX, USA); Kewei Sha (Department of Data Sciences, University of North Texas, Denton TX, USA); Afzel Noore (Department of Electrical Engineering and Computer Science, Texas A&M University–Kingsville, Kingsville TX, USA)

6. *A Cost-Aware Hierarchical Cascade for Anomaly Detection at the Edge in Connected Vehicles*

Cheng-Hsun Chang (Department of Computer Science, KTH Royal Institute of Technology, Stockholm, Sweden); Adarsh Prasad Behera (Department of Intelligent Systems, KTH Royal Institute of Technology, Stockholm, Sweden); Sophia Zhang Pettersson (Cloud and Embedded Platform, Traton AB, Södertälje, Sweden); James Gross (Department of Intelligent Systems, KTH Royal Institute of Technology, Stockholm, Sweden)

13:30-16:00
(10-min buffer)

7. *Training-Free Late Fusion across Geometry and BEV for Edge-Deployable LiDAR–Camera 3D Perception*

Yixuan Zhang, Sidi Lu (William & Mary, USA)

8. *Adaptive Edge Intelligence for Intersection Safety: Real-Time Dilemma Zone Management via DV-EISOS*

Luyang Gong, Hung-Min Hsu, Wei Sun (AIWaysion Inc.); Yin Hai Wang (University of Washington)

9. *Onboard Decisions and Cloud-Scale LLM Planning: Split Reasoning and Collaborative Intelligence for Autonomous Driving*

Meng Ma, Shuyang Li, Kaicong Huang, Talha Azfar (Rensselaer Polytechnic Institute); Naigang Wang (IBM T.J. Watson Research Center); Ruimin Ke (Rensselaer Polytechnic Institute)

10. *Edge-Deployable LLMs for Autonomous Vehicle Intelligence*

Ishparsh Uprety, Xinghui Zhao (Washington State University)

11. ***Evaluating the Impact of Network Latency on the Teleoperation of Autonomous Vehicles***

Mustafa Alsolami (University of Jeddah); Arpan Bhattacharjee, Weisong Shi (University of Delaware)