The 2nd IEEE International Conference on Mobility: Operations, Services, and Technologies

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May 1, 2024 (Wednesday)	
8:00	Registration Open & Breakfast
8:45-9:00	Opening Remarks Room: Ballroom
9:00-10:00	Keynote I: Automated Public transportation is not just self driving Speaker: Dr. Ali U. Peker, CEO & Cofounder ADASTEC Corp. Chair: Song Fu, University of North Texas Room: Ballroom of the Gateway Center at UNT
10:00-10:30	Coffee break
10:30-12:30	Paper Session 1: AI-enabled mobility technologies Chair: M. Ilhan Akbas, Embry-Riddle Aeronautical University Room: Ballroom of the Gateway Center at UNT
12:30-13:30	Lunch break
13:30-15:00	Paper Session 2: Validation and Testing Chair: Yili Jiang, University of Mississippi Room: Ballroom of the Gateway Center at UNT
15:00-15:30	Coffee break
15:30-17:30	Paper Session 3: Real-Time Mobility Chair: Zheng Dong, Wayne State University Room: Ballroom of the Gateway Center at UNT

May 2, 2024 (Thursday)

8:00	Registration Open & Breakfast
9:00-10:00	Keynote II: The Art of Open Source, Reimagine Intelligent Vehicles Speaker: Shinpei Kato, Founder & CEO of TIER IV, Co-founder and Chairman of the Autoware Foundation Chair: Kewei Sha, University of North Texas Room: Ballroom of the Gateway Center at UNT
10:00-10:30	Coffee break
10:30-12:30	Paper Session 4: Planning and Control Technologies Chair: Wei Cheng, University of Washington Room: Ballroom of the Gateway Center at UNT
12:30-13:30	Lunch break
13:30-15:00	Panel: Autonomous Driving: State-of-the-art and Challenges Moderator: Weisong Shi, University of Delaware Panelists: Shinpei Kato (TIER IV & Autoware Foundation), Jeff White (Dell Technologies), Shawn Taikratoke (Mozee), Cemre Kavvasoglu (ADASTEC Corp) Room: Ballroom of the Gateway Center at UNT
15:00-15:30	Coffee break
15:30-17:30	Paper Session 5: Dependability of Mobility Chair: Md Tanvir Arafin, George Mason University Room: Ballroom of the Gateway Center at UNT
17:30-18:30	Poster/Demo Session Chair: Lanyu Xu (Oakland University) Wenjia Li (NYIT) Room: Ballroom of the Gateway Center at UNT
18:30-20:30	**Conference Banquet and Award Ceremony**

May 3, 2024 (Friday)

8:00	Registration Open & Breakfast
8:50-10:10	Paper Session 6: Indoor Mobility Chair: Xinghui Zhao, Washington State University Room: Ballroom of the Gateway Center at UNT
10:10-10:30	Coffee break
10:30-12:00	Tutorial: Autoware Tutorial Presenter: William He, University of Delaware Room: Ballroom of the Gateway Center at UNT
12:00-13:30	Lunch break
13:30 – 16:30	Demo and Exhibition: in the front of the Gateway Center at UNT

Main conference papers

Paper Session 1: AI-enabled mobility technologies

- Impact of Raindrops on Camera-Based Detection in Software-Defined Vehicles
  Yichen Luo, Daoxuan Xu, Gang Zhou, Yifan Sun, Sidi Lu (College of William & Mary)

- Multi-View Object Detection Using NeRF and YOLO
  Nándor Kőfaragó, Márton Szemenyei (Budapest University of Technology and Economics)

- Enhancing Driving Behavior Analysis in Autonomous Systems: A Reservoir Computing and Temporal-Aware Machine Learning Approach
  Fabiha Nowshin, Sanchit Sethi (Virginia Tech); Zheng Dong (Wayne State University); Yang Yi (Virginia Tech)

- Automatic Traffic Monitoring Using Spatial Transformer Network and Monocular Depth Estimation
  Ádám Kürti, Dr. Márton Szemenyei (Budapest University of Technology and Economics)

- Supporting Deep Learning Based Autonomous Driving Applications on Resource-Constraint Device
  Ishparsh Uprety, Griffen Agnello, Xinghui Zhao (Washington State University)

Paper Session 2: Validation and Testing

- PolyFlows: Modular Test Framework Design for Autonomous Vehicles
  Mustafa Ilhan Akbas (Embry-Riddle Aeronautical University); Mahesh Menase, Shivendra Verma (Acclivis Technologies Pvt. Ltd.); Rahul Razdan (Florida PolyTechnic University)

- An Integrated Scenario-Based Testing and Explanation Framework for Autonomous Vehicles
  Quentin Goss, Pate William, Mustafa Ilhan Akbas (Embry-Riddle Aeronautical University)

- Efficiently Build An Accurate Curbside Parking Rule Database on Edge
  Jiayu Li, Yin Jin, Deyang Zhong, Juhua Hu, Wei Cheng (University of Washington)

- Evaluating Impressions on Urban Transportation Networks via Seaport-Induced Traffic
  Muhammad Tabish Bilal, Davide Giglio (University of Genoa)

Paper Session 3: Real-Time Mobility

- Eco-driving Accounting for Interactive Cut-in Vehicles

Chaozhe He (University at Buffalo); Nan Li (Auburn University)

- Enhancing Real-time Inference Performance for Time-Critical Autonomous Driving Systems
  FNU Sumaiya, Reza Jafarpourmarzouni (Wayne State University); Sidi Lu (College of William & Mary); Zheng Dong (Wayne State University)

- I know you changed your lane without seeing you: a lane change time estimation based on following vehicle's trajectory only
  Hanlin Chen, Xiaolin Xu (Purdue University); Jeffrey Sun (West Lafayette High School); Qilin Chen (Wuhan Britain-China School); Yiheng Feng (Purdue University)

- Latency & Energy Efficiency: A comparative study for Autonomous Vehicles
  Alvika Gautam, Srikanth Saripalli (Texas A&M University)

- UWB Radar Signal Kick Detection for Tailgate Unlocking Based on Spatio-Temporal Network
  Yuhan Wang (Hangzhou City University); Shuang Yan (Zhejiang University); Yiling Fu (Hangzhou City University); Yuxuan Sun (Westlake University); Lin Sun (Hangzhou City University)

Paper Session 4: Planning and Control Technologies

- Enhancing Autonomous Vehicles Control: Distributed Microservices with V2X Integration and Perception Modules
  Joaquim Ramos (Instituto de Telecomunicações); Andreia Figueiredo (University of Aveiro); Pedro Almeida (Instituto de Telecomunicações); Tiago Aston, André Campos (CEiiA); Gonçalo Perna, Marcos Mendes, Pedro Rito (Instituto de Telecomunicações); Susana Sargento (University of Aveiro)

- Cloud-Based Centralized Vehicle Control: From Concept to Reality
  Andras Rovid, Viktor Tihanyi, Marton Cserni, Mihaly Csontho, Adam Domina, Viktor Remeli, Zsolt Vincze, Matyas Szanto, Matyas Szalai, Szabolcs Nagy, Zsolt Szalay (Budapest University of Technology and Economics)

- Hazardous Area Aware Path-Planning for Drone Swarms
  Vinh Quach, Burak Tufekci, Cihan Tunc, Ram Dantu (University of North Texas)

- L-MBOP-E: Latent-Model Based Offline Planning with Extrinsic Policy Guided Exploration
  Imran Adham, Hang Wang (University of California, Davis); Sen Lin (University of Houston); Junshan Zhang (University of California, Davis)

- Enhancing Intersection Safety: A Fusion of Historical and Real-Time Data For Route Planning

Raef Abdallah, Prabhjot Kaur (Wayne State University); Weisong Shi (University of Delaware)

Paper Session 5: Dependability of Mobility

- An Advanced Driving Agent with the Multimodal Large Language Model for Autonomous Vehicles
  Junzhou Chen (Hohai University); Sidi Lu (College of William & Mary)

- Impact of Environmental Factors on Flash Storage Performance in Autonomous Vehicles: An Empirical and Analytical Study
  Ying He (University of North Texas); Shuwen Liang (Amazon); Song Fu (University of North Texas)

- The Architectural Implications of Multi-modal Detection Models for Autonomous Driving Systems
  Yunge Li, Shaibal Saha, Lanyu Xu (Oakland University)

- Towards Robust LIDAR Lane Clustering for Autonomous Vehicle Perception in ROS 2
  Miklós Unger, Ernő Horváth, Dániel Pup (Széchenyi István University); Claudiu Radu Pozna (Transylvania University of Brasov)

- In-Vehicle Communication Security: Testing Real-Life Data
  Sulav Poudyal, Krill Morozov (University of North Texas)

Paper Session 6: Indoor Mobility

- ICAT: An Indoor Connected and Autonomous Testbed for Vehicle Computing
  Zhaofeng Tian, William He (University of Delaware); Ren Zhong (Wayne State University); Boyang Tian (University of Delaware); Erfan Foorgi (Wayne State University); Weisong Shi (University of Delaware)

- Improving LSTM-based Indoor Positioning via Simulation-Augmented Geomagnetic Field Dataset
  Elio Vinciguerra, Enrico Russo, Maurizio Palesi, Giuseppe Ascia, Hamaad Rafique (University of Catania)

- Unguided Self-exploration in Narrow Spaces with Safety Region Enhanced Reinforcement Learning for Ackermann-steering Robots
  Zhaofeng Tian (University of Delaware); Zichuan Liu, Xingyu Zhou (Wayne State University); Weisong Shi (University of Delaware)

Poster/demo papers

- Poster: VeriCharge: Towards A Formal Framework for Designing and Verifying Secure and Transparent Vehicle-to-Vehicle Transaction Platforms
  Yuxuan Wang (Oakland University, USA), Brendan Makar (Oakland University, USA), Jingshu Chen (Oakland University, USA)

- Poster: Fuzzing for Command Injections in Medical Software with Large Language Models
  Yuxuan Wang (Oakland University, USA), Qi Guan (Oakland University, USA), Jingshu Chen (Oakland University, USA)

- Poster: Towards Constraint-Based Model Repair to Ensure Multiple Mission Objectives in UAV-Enabled MEC Systems for Disaster Response and Rescue
  Yuxuan Wang (Oakland University, USA), Jingshu Chen (Oakland University, USA)

- Poster: Empowering IoT-Driven Remote ECG Monitoring: The Role of AI Spread-out
  Adarsha Bhattarai (University of Nebraska–Lincoln), Dongming Peng (University of Nebraska–Lincoln)

- Poster: Address Resolution Protocol Based Attacks for Multi-Robot Systems
  Blake E Todorowski (George Mason University, USA), Michael Lane Fox (George Mason University, USA), Harris E Laing (George Mason University, USA), Kirthan Gaddam (George Mason University, USA), Anosh Mian (George Mason University, USA), Rohit Eagala (George Mason University, USA), Jair Ferrari (George Mason University, USA), Md Tanvir Arafin (George Mason University, USA)

- Poster: An Efficient Road Detection Framework for Supporting Autonomous Driving in Rural Areas
  Griffen Agnello (Washington State University, WA), Ishparsh Uprety (Washington State University, WA), Xinghui Zhao (Washington State University, WA)

- Poster: Machine Learning Based False Position Detection Using Data-to-Image Transformation
  Xian Chen (University of Mississippi, USA), Yili Jiang (University of Mississippi, USA), Jiaqi Huang (University of Central Missouri, USA), Sohan Gyawali (East Carolina University, USA)