

Special Interest Groups(SIG) on AI Empowered Internet of Vehicles

Chair: Ning Zhang
University of Windsor, Canada

Vice Chairs: Xianfu Chen, Alagan Anpalagan, Ning Lu

Scope and Objectives

Internet of Vehicles (IoV) empower vehicles to communicate with the surrounding environment and remote servers, enabling a wide range of on-the-go services, including road safety, infotainment, and intelligent transportation. To better support IoV, heterogeneous networks (terrestrial networks, aerial networks and satellite networks) and heterogeneous resources (communication, computing and storage) expects to be integrated to provide service anywhere and anytime.

In such a dynamic and complex scenario, many technical challenges arise, e.g., high mobility of vehicles, stringent of service requirements, multi-dimensional randomness, great heterogeneity, etc. Artificial intelligence (AI) has great potential to address these technical challenges and manage heterogeneous resources efficiently to meet different quality of service (QoS) requirements of IoV.

This SIG group aims to provide a platform for researchers and developers from both industry and academia to exchange ideas, discuss key technologies, and share latest results, to promote the development of AI empowered IoV.

SIG Members

➤ **Chair:**

- Ning Zhang, Associate Professor, University of Windsor, Canada

➤ **Vice-Chair**

- Xianfu Chen, Senior Scientist, VTT Technical Research Centre of Finland, Finland
- Alagan Anpalagan, Professor, Ryerson University, Canada
- Ning Lu, Assistant Professor, Queen's University, Canada

➤ **Founding Members**

- Mehdi Bennis, University of Oulu, Finland
- Hongbing Liang, Southwest Jiaotong University, China
- Siyu Lin, Beijing Jiaotong University, China
- Jussi Kangasharju, University of Helsinki, Finland
- Yi Zhou, Henan University, China
- Tao Huang, James Cook University, Australia
- Mohamed Mahmoud, Tennessee Technological University, USA
- Chunhe Song, Chinese Academy of Sciences, China
- Dajiang Chen, University of Electronic Science and Technology of China, China
- Mohammad S Khan, East Tennessee State University, USA
- Peng Yang, Huazhong University of Science and Technology, China
- Xiaojie Fang, Harbin Institute of Technology, China
- Sai Mounika Errapotu, University of Texas at El Paso, USA

Recent Update

➤ **Completed Activities—2 items**

- *IEEE VTC 2020 Fall*, Track of Vehicle Cooperation and Control, Assisted and Autonomous Driving Dashboard
- *IEEE Wireless Communications*, SI on Service-Oriented Space-Air-Ground Integrated Networks

➤ **Ongoing Activities—5 items**

- *IEEE Internet of Thing Journal*, SI on Space-Air-Ground Integrated Networks for Internet of Vehicles
- *IEEE Wireless Communications*, SI on Aerial Computing: Drones for Multi-Access Edge Computing
- *IEEE Transactions on Industrial Informatics*, SI on AI Empowered Communication and Computing Systems for Industrial Internet of Things
- *IEEE SAGC 2020*- IEEE International Conference on Space-Air-Ground Computing
- *AICON 2020*- EAI International Conference on Artificial Intelligence for Communications and Networks, Track of AI for Networking

*Thank you !
Welcome!*