

Call for Papers
IEEE Open Journal of Vehicular Technology, Special Issue on
Distributed Intelligence for Future Vehicular Networks

Future vehicular networks have become an important component of the next generation communication technologies such as the 5G, 6G, and beyond. With the widespread use of automobile and other vehicles, research studies of future vehicular networks are urgently needed to meet the service requirements of connected vehicular users pave the way for the future development of autonomous ecosystems. The future vehicular networks can become much more challenging than current conventional vehicular systems in terms of autonomous controls, security, and high mobility, connectivity and compatibility. With the emergence of new communication technologies and applications, the important features such as intelligent network functionalities, large-scale network deployments, and smart integrated services are greatly in demand.

Recently, machine learning (ML) and artificial intelligence (AI) enabled distributed intelligence has become a promising approach to address the aforementioned intelligent data and service challenges in the premise of large-scale decentralized vehicular networks. Distributed intelligence exploits the computational capabilities of edge components (e.g., vehicles) in future vehicular networks. Previously unmanageable network and service problems under centralized system architectures can be efficiently solved by applying distributed approaches, e.g., crowd intelligence, multi-agent learning, and edge computing. Future vehicular networks will benefit from distributed intelligence. Therefore, it is essential to develop novel vehicular network techniques enabled by distributed intelligence, addressing various challenges related to future vehicular networks.

Topics of interest include but are not limited to:

- Distributed intelligence theories, frameworks, and algorithms for future vehicular networks
- Distributed intelligence for physical layer and infrastructure issues in future vehicular networks
- Distributed intelligence for MAC and network routing in future vehicular networks
- Distributed intelligence empowered vehicular networks in the 5G, 6G systems and beyond
- Mobile and edge intelligence frameworks and algorithms design for future vehicular networks
- Distributed and collaborative machine learning for future vehicular networks
- Distributed data privacy, security, and data persistence approaches in future vehicular networks
- Distributed intelligence enabled green and energy-efficient vehicular networks
- Market models and network economics in future vehicular networks with distributed intelligence
- Simulations, experiments, and testbeds of distributed intelligence for future vehicular networks
- Distributed intelligence in automatic driving, traffic engineering, and other related transportation studies
- Use cases and applications highlighting distributed intelligence for future vehicular networks

Important Dates:

Manuscript submission:	1 December 2020	Final Editorial Decision:	1 March 2021
Notification of Authors:	30 January 2021	Final Papers Due:	15 March 2021
Revised Manuscripts Due:	15 February 2021	Publication Date:	Second Quarter 2021

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