<p style="text-align:center">**IEEE Transactions on Intelligent Vehicles (T-IV)**</p>

<p style="text-align:center">**Call for Papers**</p>

<p style="text-align:center">**Special Issue on Digital Twins and Parallel Intelligence for Intelligent Vehicles and Intelligent Transportation Systems**</p>

The digital twins (DT) and parallel intelligence (PI) play a significant role in the emerging development of intelligent vehicles (IV) and intelligent transportation systems (ITS). A DT provides a unique means to achieve the cyber-physical integration. Through data-driven digitization technologies, the characteristics, behaviors, and relations in the physical world are digitized holistically to create high-fidelity virtual models. Under the framework, the virtual-real interactions, which is highly conjoined, coordinated, and integrated with human and social characteristics, have been steadily growing to be an emerging research focus. In this context, the emerging parallel driving, which is a cloud-based methodology synergizing the features of cyber-physical social systems, DT and PI, aims at enhancing intelligent driving capability and offers an ample solution for achieving a more intelligent transportation system in the future. This special issue aims to compile the latest research and development advances in digital twins, parallel intelligence, and their applications in IV and ITS. The topics of interest within the scope of this special issue include (although not limited to) the following:

- Advanced modeling and simulation of IV and ITS
- Big data, machine learning and federated intelligence for IV and ITS
- Smart city applications with AI and big data
- Cyber security of IV and ITS
- Internet of Things (IoT) applications in IV and ITS
- Internet of Vehicles (IoV) and Software-Defined Vehicles (SDV) technologies and applications
- Edge computing-assisted technologies and applications for IV and ITS
- Cloud computing-assisted technologies and applications for IV and ITS
- Predictive diagnosis and maintenance of IV and ITS
- DTPI-based perception, sensor fusion and localization of IV and ITS
- DTPI-based decision making for IV and ITS
- DTPI-based trajectory planning and control for IV and ITS
- DTPI-based state monitoring, estimation and prediction for IV and ITS
- DTPI-enabled human-machine interaction and collaboration in IV and ITS
- DTPI-based testing, verification and assessment for IV and ITS.

Manuscript Preparation:
Papers must contain original contributions and be prepared in accordance with TIV standards. Instructions for authors are available online at: https://ieee-itss.org/pub/t-iv/

Manuscript Submission:
Manuscripts should be submitted through the online submission service at: https://mc.manuscriptcentral.com/t-iv. The cover letter should report the following statement: **"*This paper is submitted for possible publication in the Special Issue on DTPI in IV and ITS*"**. All manuscripts will be subjected to peer review process. If you have any question relating to this Special Issue, please email the handling editors.

Important Dates:

Manuscript Submission Due	~~October 1, 2022~~ **December 1, 2022** (all following dates are extended by two months)
Completion of First Review	October 21, 2022
Submission of Revised Papers	November 21, 2022
Completion of Final Review	December 15, 2022
Submission of Final Manuscripts and Copyright Forms	December 30, 2022
Publication	February, 2023

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