



IEEE ITSC 2022

The 25th IEEE International Conference on Intelligent Transportation Systems

Special Session on “Long-tailed Situation Understanding in New Era of Intelligent Transportation: Benchmarks, Models and Applications”

Topics of Interest

The topics of interest include and but are not limited to the following:

- Few shot traffic scene understanding
- Fault detection and prediction in various transport carriers
- Traffic accident detection or prediction
- Road damage detection and prediction
- Object detection, tracking, trajectory prediction in long-tailed traffic situation
- Digital twins in long-tailed traffic situation
- Communication failure detection and prevention in connected vehicles
- New benchmarks and models for long-tailed traffic situation understanding
- New applications within this field

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The development of intelligent transportation nowadays is undergoing a new era with cooperative, digital, smart, green, and friendly demand. Long-tailed situation understanding of intelligent transportation is becoming the pain point for satisfying these demands, such as the traffic accident detection or prediction in previous research. In the meantime, more and more long-tailed situation will emerge with the technical development, such as fault detection of railway, communication interference of connected vehicles, the long-tailed situation in cyber-physical systems, and so on.

Long-tailed situation in intelligent transportation commonly has fewer data samples, severer condition of occurrence, and greater safety risk than normal situations. In recent years, some research teams take the few-shot or zero-shot learning models, and some researchers begin to adopt the “digital twins” or virtual simulation tool to overcome the shortcoming of scenarios. However, there are large space to develop more and promising models and application. Therefore, it is urgent to find the new applications with long-tailed situation in intelligent transportation, construct new benchmarks, and propose new solutions. Based on this session, we want to absorb and contribute excellent insight in this domain, and promote the development of intelligent transportation in new era.

If you are interested in this special session (**Code: cc8hb**), please contact the organizers or prepare the paper through the official conference website (<https://its.papercept.net/conferences/scripts/start.pl>) illustration, and all the papers submitted to the Special Session will undergo the review process as the Regular submission.

Important Dates

- **March 15, 2022:** Paper submission for regular, workshop and tutorial/invited/industrial sessions
- **May 1, 2022:** Notification of paper acceptance
- **June 1, 2022:** Final paper submission
- **October 8-12, 2022:** Onsite Conference

Paper Submission

Manuscripts should be submitted in PDF version electronically.

Detailed instructions for submissions please find at the conference website: www.ieee-itsc2022.org.

If you have any questions, please feel free to contact us at:

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