**22nd IEEE International Conference on Industrial Informatics (INDIN), August 17-20, 2024, Beijing, BJ, China**

**Special Session on**

**Continual and Transfer Learning Techniques for Intelligent Connected Vehicles**

# Organized by

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# Call for Papers

Theme: (100 words)

In practical industrial applications, encountering out-of-distribution (OOD) samples, which deviate from the training distribution, is a common occurrence. In security-critical applications, the presence of OOD scenarios or objects can lead to severe safety incidents, particularly in the field of autonomous driving. However, current autonomous driving systems trained on static datasets lack the capability to promptly identify out-of-distribution (OOD) targets and adapt rapidly to OOD scenarios. This special session aims to facilitate discussions among researchers on methodologies, constraints, and future research avenues focused on enhancing the capability of autonomous vehicles to detect OOD scenarios or objects through transfer and continual learning.

Topics of interest include, but are not limited to:

Transfer Learning in ICVs

Similarity of learning task in ICVs

Continual object detection in ICVs

Online learning model for ICVs

OOD fault diagnosis

Model transfer between different traffic scenarios

Empirical Studies on Model Generalization

Generative-based OOD data augmentation