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

**Special Session on**

**“Robust**  **and Trustworthy Perception, Planning and Control of Connected and Autonomous Vehicles”**

# Organized by

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# Call for Papers

Theme: (100 words)

Connected and autonomous vehicles represent a transformative evolution in the automotive industry, integrating cutting-edge AI, computer vision, optimization, and control technologies to enhance traffic safety, efficiency, and the overall driving performance. In particular, robust and trustworthy perception, planning, and control are essential technologies of developing safe and efficient connected and autonomous vehicles. Specifically, robustness involves dealing with uncertainties in the real-world driving scenarios such as multimodal sensor fusion, adverse weather/environmental conditions, and corner/unseen/hard cases. Trustworthiness ensures that the autonomous system can operate reliably and safely, which mainly focuses on transparency, accountability, fairness, ethical considerations, and reliability, etc.

Topics of interest include, but are not limited to:

* Multimodal sensing fusion
* Interaction-aware multimodal motion prediction
* End-to-end interpretable prediction and planning
* Robust decision-making and planning under uncertainty
* Trustworthy interaction-aware decision-making and planning
* Reinforcement learning-based decision, planning, and control
* Robust cooperative control for nonlinear multi-vehicle platooning
* Reachability-based safety assurance within the planning framework
* Simulation and test of autonomous systems

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