

CALL FOR PAPERS - SPECIAL SESSION Combined control and observer methods for vehicles and transportation systems for CODIT 2025

July 15-18, 2025 • Split, Croatia

Session Co-Chairs:

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Session description:

This special session deals with the problem of the control and observer design for autonomous vehicles and transportation systems. Nowadays, machine learning, especially neural networksbased algorithms are gaining attention in the field of vehicle and transportation systems. These methods can deal with the uncertain, nonlinear dynamics of the mentioned systems, which are hard to handle using conventional, classical methods. On the other hand, the machine learning-based solutions do not provide theoretical guarantees regarding their stability thus these solutions cannot be used in safety-critical systems such as autonomous vehicles and transportation systems.

The goal is to present new control and observer methods combining the classical and unconventional control techniques. Thus, the stability of the control system can be proven and, in parallel, high-performance level can be maintained. The topics of interest include, but are not limited to:

- Vehicle control and observer design
- Transportation systems
- Classical control solutions
- Machine learning-based control
- Combined methods
- Stability analysis

SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by February 07, 2025: http://controls.papercept.net/conferences/scripts/start.pl. In PaperCept, click on the CoDIT 2025 link "Submit a Contribution to CoDIT 2025" and follow the steps.

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

February 07, 2025: deadline for paper submission April 27, 2025: notification of acceptance/reject

May 17, 2025: deadline for final paper and registration