

Call for papers

Scope/Context:

The key trends in mobility—electrification, shareification, and automation—change in fundamental ways the mobility landscape. In part, these trends lead to new ways of organizing existing modes, distributing resources, providing energy and managing vehicle fleets, as well as offering new modes of transport.

The large-scale deployment of such systems gives rise to new challenges as well, including in terms of system reliability and resilience. For example, some of these challenges are related to the transient interaction with the power grid and communication networks and with other infrastructure systems, to fleet management and relocation methods, and to the matching and pricing principles governing the platform that matches vehicles and passenger demand. These emerging mobility systems will also need to adapt to chronic stresses partly linked with ageing infrastructure and with sudden changes, for example related to a changing climate. This calls for the development of new concepts, theories and methods that address reliability and resilience related to the planning, dynamic operation, and level of service of emerging mobility systems.

This special issue on **Reliability and Resilience of Emerging Mobility Systems** is dedicated to methodological and theoretical developments as well as advanced applications in this domain. The call is linked, but not limited, to contributions in this domain presented in INSTR2020 (the 8th International Symposium on Transport Network Reliability). The call is thus open to any related high-quality contributions.

Topics of interest include (but are not limited to):

- Models of service dynamics and the evolution of emerging mobility services
- Uncertainty and variability of the level-of-service of mobility-on-demand services
- User perceptions towards the reliability of new mobility services
- Resilience of multi-layer networks for emerging mobility and multi-modal transport services
- Robust fleet management methods
- Cybersecurity of connected vehicles and fleet management platforms
- Interdependencies between new mobility services and other infrastructure systems (e.g. power grid)
- Emerging mobility systems and adaptation to climate change

Proposed timeline:

Editorial system opening for SI submissions: February 1, 2020

Manuscript submission deadline: June 30, 2020

Guest Editors:

Associate Professor Oded Cats, Delft University of Technology & KTH Royal Institute of Technology

Associate Professor Sybil Derrible, University of Illinois at Chicago

Assistant Professor Joseph Chow, New York University