IEEE Transactions on Industrial Informatics

CALL FOR PAPERS
for Special Section on

Advanced Industrial Informatics towards Smart, Safe and Sustainable Transportation Infrastructures

Theme: Transportation infrastructures are crucial for the development of society as they directly affect daily life of everyone. Thus, the evaluation, maintenance and construction of transportation infrastructures have always been hot spots for engineers. With the fast development and increasing industrial applications of artificial intelligence, advanced sensing technologies, automatic testing methods, internet of things, big data, automated piloting, resilient materials and structures, and the life cycle assessment, the new generation of transportation infrastructures will perform more "smart, safe and sustainable" for public. This transformation replies on the breakthrough of intelligent industrial informatics technologies related to the structure health sensing and monitoring, infrastructure testing, intelligent infrastructure performance evaluation, and advanced materials characterizations. To improve the public transportation safety, the intelligence in infrastructure evaluation, and maintenance, sustainability and the resilience, it is of necessity to apply the most recent progresses of advanced industrial informatics in transportation infrastructures. Although they are still under development, these approaches have been initially tested, evaluated, and validated both in the industry and academia of transportation infrastructure engineering area.

In summary, the use of advanced informatics in transportation infrastructures can not only promote the development at academic level, but also benefit the transportation industry, as well as the whole society. The purpose of this special issue is thus to collect the latest researches and achievements, and discuss progresses in advanced industrial informatics technologies in building and maintenance of smart, safe and sustainable transportation infrastructures.

Potential topics of interest include, but are not limited to:

- Advanced industrial informatics in using smart sensors and sensor network technologies for monitoring in transportation infrastructures
- Advanced industrial informatics in using Artificial Intelligence (AI) methods and data mining methods for performance evaluation/modeling and asset management in transportation infrastructures
- Advanced industrial informatics in using automated pilot technologies/drones for condition/distress detection and analysis in transportation infrastructures
- Advanced industrial informatics in using nondestructive tests for structural performance in transportation infrastructures
- Advanced industrial informatics in using computer-aided algorithm for materials characterization in transportation infrastructures
- Advanced industrial informatics in LCA, and intelligent design and development of resilient and renewable energy and materials in transportation infrastructures

Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics . Please submit your manuscript in electronic form through Manuscript Central web site: https://mc.manuscriptcentral.com/tii . On the submitting page #1 in popup menu of manuscript type, select: SS on **Advanced Industrial Informatics towards Smart, Safe and Sustainable Transportation Infrastructures**

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages.

Note: The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable:	Deadline for manuscript submissions	November 30, 2021
	Expected publication date (tentative)	July 2022

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