Keynote Lecture: Practical and research challenges towards sustainable and resilient rail infrastructure systems

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Keynote Lecture: Practical and research challenges towards sustainable and resilient rail infrastructure systems

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Summary.

This presentation presents recent collaborative research at the University of Birmingham in order to promote and encourage further collaboration in research, development and innovation in improving safety, reliability, resilience and sustainability in transportation and transit systems. Practical and research challenges to improve resilience and sustainability of railway infrastructure systems have been highlighted. The collaborative research are aligned with United Nation's Sustainable Development Goals, especially:

- Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation;
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable;
- Goal 12. Ensure sustainable consumption and production patterns;
- Goal 13. Take urgent action to combat climate change and its impacts.

The presentation discusses a wide coverage of timely issues on railway track technologies and innovations focusing on broad aspects of rail infrastructure in order to address global grand challenges and UN's sustainable development goals with great social and economic importance. It enables new insights into advanced methods, technologies and concepts for the design, operations, construction and development towards sustainability of assets, infrastructures, as well as interdependent and interconnected rail transportation systems. The presentation will also provide highlights of world-class research and education at the University of Birmingham, U.K.

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