Traffic & Transportation

Dear scholars, dear readers, dear authors,

The European railway system has played a pivotal role in shaping the continent's economic integration, cultural exchange, and sustainable mobility solutions. However, this system now faces unprecedented challenges, including climate change imperatives, digital transformation, and the need for revitalised cross-border connectivity. Additionally, knowledge from the European railway system has been transferred to the rest of the world, thereby exerting a broader influence.

Addressing funding mechanisms and harmonising regulatory and operational standards are equally vital to achieving seamless cross-border mobility. The current lack of coordination among national rail systems creates significant barriers to forming an interconnected, seamless European rail network, underscoring the urgency of developing solutions to improve interoperability, technical standardisation, safety, passenger experience, active participation in supply chain management, unified organisation, and aligned policy frameworks.

In this special issue, titled "Rethinking the European Railway System", we have published 13 papers that address a wide range of railway topics, with a focus on transport and traffic.

You will read a paper published as a result of two European research projects: Academics4Rail and PhDs EU-Rail. The main goal of these projects is to build a community of railway researchers and academia for EU-Rail and enable a network of PhD holders, so that academia and industry can work towards a better railway system. Both projects are supported by the European Rail Joint Undertaking and its members.

The papers in this special issue can be broadly organised into three main categories:

1) *Railway operations, planning, and optimisation*

   RÜGER, B. Influence of the Rail Vehicle Layout on Efficiency and Railway Operation. Promet – Traffic&Transportation. 2026;38(1):71–89. https://doi.org/10.7307/ptt.v38i1.3091

   MENG, X., KANG, Q., CHENG, X., and GAO, R. A Novel Integrated Model of Train Rescheduling and Station Track Usage Planning Based on Harris Hawks Optimisation Algorithm. Promet – Traffic&Transportation. 2026;38(1):125–139. https://doi.org/10.7307/ptt.v38i1.1035

   YUE, W., LI, H., GAO, R., and ZHANG, X. Integrated Optimisation of Train Timetables and Maintenance Windows under Mixed Passenger and Freight Train Operation Mode. Promet – Traffic&Transportation. 2026;38(1):140–155. https://doi.org/10.7307/ptt.v38i1.1038

   HE, J., ZHONG, Z., LI, B., FAN, J., DING, J., and CHEN, W. Intelligent Train Timetable Generation Technology Based on Monte Carlo Tree Search Algorithm. Promet – Traffic&Transportation. 2026;38(1):169–185. https://doi.org/10.7307/ptt.v38i1.1201

2) *Freight transport, intermodal systems, and network perspectives*

   CORNIANI, L., SCHITO, P., BELL, J., POMBO, J., and BRUNI, S. Aerodynamics of Freight Trains – Addressing the Complexity of Train Geometry through an Open Database. Promet – Traffic&Transportation. 2026;38(1):58–70. https://doi.org/10.7307/ptt.v38i1.3096

   GAO, R., CAO, S., and CUI, Q. Optimisation of High-Speed Railway Freight Transport Service Plan in Inter-Modal Transport Based on Extended Time-Space Network. Promet – Traffic&Transportation. 2026;38(1):90–108. https://doi.org/10.7307/ptt.v38i1.1152

   PANG, X., JIANG, S., and WANG, X. Multi-Criteria Data Analysis of China-Europe Railway Express – An Integrated Network Approach. Promet – Traffic&Transportation. 2026;38(1):109–124. https://doi.org/10.7307/ptt.v38i1.1252

3) *Digitalisation, sustainability, and socio-economic aspects of railway development*

ARSLAN, B., and MILIUS, B. From Written to Digital Commands in German Railway Operations – Challenges and Opportunities. Promet – Traffic&Transportation. 2026;38(1):1–6. https://doi.org/10.7307/ptt.v38i1.1096

FÖRSTER, K., and SCHULZ, W.H. Unlocking the Future of Travel – Understanding the Acceptance of Railway Passenger Services in Germany. Promet – Traffic&Transportation. 2026;38(1):42–57. https://doi.org/10.7307/ptt.v38i1.1215

BUREIKA, G., VAIČIŪTĖ, K., and SAMSONKIN, V. Assessing the Effects of Implementing Railway Technological Innovations on the Competencies of Logistics Specialists. Promet – Traffic&Transportation. 2026;38(1):186–205. https://doi.org/10.7307/ptt.v38i1.1159

KUSTOVA, I., HUDENKO, J., RICCI, S., and LACE, N. Application of Sustainable Infrastructure Criteria in Railway Projects With the Input–Process–Output–Outcome Approach. Promet – Traffic&Transportation. 2026;38(1):7–25. https://doi.org/10.7307/ptt.v38i1.3118

YUE, G., HUANG, Y., ZHANG, Z., and HU, H. Mid-Term Revenue Risk Assessment Model for Railway Public-Private Partnership Projects Based on Copula-NPVaR. Promet – Traffic&Transportation. 2026;38(1):156–168. https://doi.org/10.7307/ptt.v38i1.1079

BERMEJO-BARRERO, M.J., RUIZ-MORA, I., POSTIGO-POZO, S., and CASTILLO-AGUILAR, J.J. Women in the Railway Sector – A Bibliometric Analysis of the Last Ten Years' Scientific Production. Promet – Traffic&Transportation. 2026;38(1):26–41. https://doi.org/10.7307/ptt.v38i1.3094

We would like to express our deepest gratitude to the editorial board of Promet – Traffic&Transportation for entrusting us with the opportunity to serve as guest editors of this special issue. Our heartfelt thanks also go to the reviewers, whose dedication and expertise were instrumental in ensuring the quality and impact of the selected articles. Most importantly, we extend our sincere appreciation to the authors, whose groundbreaking research and visionary perspectives have made this issue possible.

We invite all readers to explore the contributions in this special issue and apply the findings to their own research and professional endeavours.

Together, let us continue innovating and shaping the future of the railway system toward a more sustainable, efficient, and cost-effective.

Yours truly,

Prof. Juan de Dios Sanz Bobi

Armando Manuel Carrillo Zanuy, PhD

Prof. Borna Abramović