Special Issue

Planning and Operations for Modern Railway Transport Systems

Message from the Guest Editors

Efficient planning and operations are fundamental to delivering high-quality railway services for both passenger and freight transport. The planning phase covers strategic network and line planning as well as tactical service scheduling, while operations focus on real-time train rescheduling, control, and disruption management. The evolution of modern rail transport systems intensifies the need to develop advanced methodologies, technologies, and tools, aimed at improving resource efficiency, enhancing service quality, and strengthening system resilience under both nominal and disrupted conditions. This Special Issue aims to cover all aspects related to the planning and operational management of railway systems. This includes, but is not limited to, network and line planning, timetable development, rolling stock and crew scheduling, real-time dispatching, and disruption management. Theoretical, empirical, and computational investigations (or a combination thereof) are welcome. We also encourage submission of interdisciplinary research addressing challenges across the entire planning hierarchy, from long-term strategic network design to the dynamic control of daily train operations.

Guest Editors

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