

Transport Systems Development – Methods and Solutions

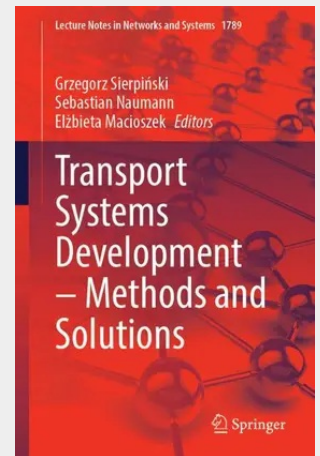
This book gathers selected papers presented at the 21st "Transport Systems. Theory and Practice" Scientific and Technical Conference organized by the Department of Transport Systems, Traffic Engineering and Logistics at the Faculty of Transport and Aviation Engineering of the Silesian University of Technology. The conference was held on September 9–10, 2025 in Katowice (Poland).

How does a modular architecture facilitate Big Data integration with PTV Visum? How does road traffic trajectory data aid in the calibration of microscopic simulations (SUMO)? What methodology allows for effective matching of public transport stops between GTFS and OpenStreetMap? What multi-criteria approach (e.g., cost criterion and risk criterion) is used to evaluate and select the optimal route for the transport of oversize loads? What specific spatial analyses are necessary to identify critical bottlenecks for cargo transport? How does groupage logistics, using terminals and cross-docking technology, change the rules of planning in international road transport? This book provides you with answers to these and many other questions. It also contains an abundance of numerical analyses based on significant data sets, illustrating the close affiliation between mobility and quality of life.

With regard to the research results discussed and the selected solutions applied, the book primarily addresses the needs of three target groups:

- Scientists and researchers (ITS field).
- Local authorities (responsible for the transport systems at the urban and regional level).
- Representatives of business (traffic strategy management) and industry (manufacturers of ITS components).

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