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Series editor

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Elżbieta Macioszek · Grzegorz Sierpiński
Editors

Recent Advances in Traffic Engineering for Transport Networks and Systems

14th Scientific and Technical Conference "Transport Systems. Theory & Practice 2017" Selected Papers

Springer

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Preface

Contemporary technical and technological development as well as the ever-growing mobility provide favourable conditions for designing innovative transport-related solutions. Consequently, transport systems and networks require new decisions to be continuously made with regard to planning, organization and control of traffic. These decisions entail the necessity of seeking increasingly efficient solutions.

This publication, entitled *Recent Advances in Traffic Engineering for Transport Networks and Systems*, provides an excellent opportunity to become familiar with the latest trends and achievements in the field of contemporary transport systems as well as traffic engineering challenges and solutions. It has been divided into four parts:

- Part 1. Recent Advances in Traffic Engineering and Travel Models,
- Part 2. Safety Analysis in Advanced Transport Networks and Transport Systems,
- Part 3. Determinants of the Development of Transport Systems in European Union,
- Part 4. The Problems of Optimisation of Transport Networks.

The publication contains selected papers submitted to and presented at the 14th "Transport Systems. Theory and Practice" Scientific and Technical Conference organized by the Department of Transport Systems and Traffic Engineering at the Faculty of Transport of the Silesian University of Technology (Katowice, Poland). The topics addressed in the book include the current problems of transport systems, among other subjects discussed. With reference to numerous practical examples, various novel solutions applied in traffic engineering have been proposed in the publication. They are considered to exert significant influence on increasing the functional efficiency of transport systems and networks, and their priorities include well-being and health of people, traffic safety, sustainable development of transport systems and protection of natural environment.

We would like to use this occasion to express our gratitude to the authors for the papers they have submitted and their substantial contribution to the discourse on the multiple challenges facing transport systems and traffic engineering in the

contemporary world as well as for rendering the results of their research and scientific work available. We would also like to thank the reviewers for their insightful remarks and suggestions which have ensured the high quality of the publication.

Readers interested in the latest achievements of traffic engineering and the overall body of problems addressed in this field of expertise may use this publication as an extensive collection of scientific research results, diverse insights and comments as well as new approaches and problem solutions. With the foregoing in mind, we are hoping that all readers will find this book valuable.

September 2017

Elżbieta Macioszek
Grzegorz Sierpiński

Organization

14th Scientific and Technical Conference "Transport Systems. Theory and Practice" (TSTP2017) is organized by the Department of Transport Systems and Traffic Engineering, Faculty of Transport, Silesian University of Technology (Poland).

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