TABLE OF CONTENTS

Part 1

Introduction .................................................................................................................................................................................. 1
Vincent Aguilèra, Fabien Leurent

Index of Papers .............................................................................................................................................................................. 5
N/A

Improving Resource Management of Large Logistics Facilities ........................................................................................................ 12
Zoran Modrag, Christian Tesch, Uwe Clausen

A Stated Preference (SP) Study on Individuals’ Transportation Decisions, Focused on Marmaray Project in Istanbul ............................................................................................................................... 19
S. Cankat Tunriverdi, Shahin Shabibi, H. Onur Tezcan

A Study on Factors Affecting the Effective Eco-driving ................................................................................................................... 27
Ryosuke Ando, Yasuhide Nishihori

An Analysis on Feasibility of Park & Cycle Ride System in a Japanese Local City .................................................................................... 37
Ryosuke Ando, Motohiro Yamazaki, Masashi Havaani, Koji Izuha

A Stochastic Programming Model for Integrated Planning of Re-fleeting and Financial Hedging Under Fuel Price and Demand Uncertainty .......................................................................................... 47
M. Naumann, L. Suhl, M. Friedemann

Modeling Household Residential Location Choice and Travel Behavior and Its Relationship with Public Transport Accessibility ................................................................................................................................. 56
Siti Nurliela, Carey Curtis

A Procedure for an Integrated Network and Vehicle Routing Optimisation Problem ........................................................................ 65
Antonio Polimeni, Antonino Vitetta

Modelling Travel Time Reliability with the Burr Distribution ........................................................................................................ 75
Michael. A. P. Taylor, Susilawati

A Meta-heuristic Algorithm for Solving the Road Network Design Problem in Regional Contexts ......................................................... 84
Mariano Gallo, Luca D’Acienno, Bruno Montella

Structural Equation Modelling for Analysing Passengers’ Perceptions about Railway Services ........................................................................ 96
Laura Eboli, Gabriella Mazzulla

Exploring Land Use and Transport Interaction through Structural Equation Modelling ........................................................................ 107
Laura Eboli, Carmen Forciniti, Gabriella Mazzulla

Modeling and Distribution of Link Travel Times: An Analysis on Istanbul Freeways ........................................................................ 117
Goker Aksoy, Hilmi Berk Celikoglu

Land use, Mobility and Energy Consumption -Poster of Ideas for the Classification of Urban Settlements ........................................................................................................................................................................... 129
Alessandro Sales, Stefano Carrese

Testing the Validity of the MIP Approach for Locating Carsharing Stations in One-way Systems ......................................................................... 138
Diana Jorge, Gonçalo Correia, Cynthia Barnhart

An Assignment and Routing Problem with Time Windows and Capacity Restriction ........................................................................ 149
Aybike Ozdemirel, Burak Gökşür, Deniz Türsel Elyit

Level of Service Estimation at Traffic Signals Based on Innovative Traffic Data Services and Collection Techniques ........................................................................................................................................................................... 159
Steffen Aser, Janine Rohde, Bernhard Friedrich

Inclusion of the Latent Personality Variable in Multinomial Logit Models Using the 16pf Psychometric Test ........................................................................................................................................................................... 169
J. E. Córdoba, G. P. Jaramillo

Effects of Traffic Incident Information on Drivers’ Route Choice Behaviour in Urban Expressway Network ........................................................................................................................................................................... 179
Takahiko Kusakabe, Taku Sharyo, Yasuo Asakura

Generalized Transport Costs in Intermodal Freight Transport ........................................................................................................ 189
Thor-Erik Sandberg Hansen, Terje Andreas Mathisen, Finn Jørgensen

Aircraft Trajectory Planning Under Uncertainty by Light Propagation ........................................................................................................ 201
Nour Elhouda Dowagui, Daniel Delahaye, Marcel Mongeau, Stéphane Puemchmorel

Comparing Effects of Eco-driving Training and Simple Advices on Driving Behavior ........................................................................ 211
Cindie Andrieu, Guillaume Saint Pierre

A Nation-wide Macroscopic Freight Traffic Model ........................................................................................................................................................................... 221
Stephan Müller, Axel Wolfermann, Stefan Huber
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimization of Fuel Consumption in City Bus Transportation: A Case Study for Izmir</td>
<td>231</td>
</tr>
<tr>
<td>The Impact of Telework on Transport Externalities: The Case of Brussels Capital Region</td>
<td>240</td>
</tr>
<tr>
<td>Understanding Travelers' Behavior in Provision of Travel Information: A Bayesian Belief Approach</td>
<td>251</td>
</tr>
<tr>
<td>Integrating BRT Systems with Rickshaws in Developing Cities to Promote Energy Efficient Travel</td>
<td>261</td>
</tr>
<tr>
<td>From a Supplier to a Retail Controlled Supply Chain: What are the Impacts on Transport Demand?</td>
<td>275</td>
</tr>
<tr>
<td>The Effectiveness of Long-distance Haulage in the Context of Market Reforms in Russia</td>
<td>286</td>
</tr>
<tr>
<td>Data Analysis Plan for Traffic Efficiency in TeleFOT Project</td>
<td>294</td>
</tr>
<tr>
<td>A General Phase Transition Model for Traffic Flow on Networks</td>
<td>302</td>
</tr>
<tr>
<td>Within-Day Dynamic Estimation of Pollutant Emissions: A Procedure for Wide Urban Network</td>
<td>312</td>
</tr>
<tr>
<td>Impact of Carpooling on Fuel Saving in Urban Transportation: Case Study of Tehran</td>
<td>323</td>
</tr>
<tr>
<td>CONTSIM–Container Terminal Management with Simulation</td>
<td>332</td>
</tr>
<tr>
<td>Gear Shifting Behavior Model for Ecodriving Simulations Based on Experimental Data</td>
<td>341</td>
</tr>
<tr>
<td>Value of Travel Time Reliability: Two Alternative Measures</td>
<td>349</td>
</tr>
<tr>
<td>A Dynamic Simulation Model of a Flexible Transport Services for People in Congested Area</td>
<td>357</td>
</tr>
<tr>
<td>Multi-agent Architecture with Space-time Components for the Simulation of Urban Transportation Systems</td>
<td>365</td>
</tr>
<tr>
<td>The Significance of the Urban Context for the Sustainability Performance of Intermodal Road-rail Transport</td>
<td>375</td>
</tr>
<tr>
<td>Estimating the Impacts of Water Depth and New Infrastructures on Transport by Inland Navigation: A Multimodal Approach for the Rhine Corridor</td>
<td>387</td>
</tr>
<tr>
<td>Optimal Train Reallocation Strategies under Service Disruptions</td>
<td>402</td>
</tr>
<tr>
<td>Heuristic Approach to Fleet Composition Problem</td>
<td>414</td>
</tr>
<tr>
<td>The Future Demand of Transportation in China: 2030 Scenario based on a Hybrid Model</td>
<td>428</td>
</tr>
<tr>
<td>Informed-user Algorithms that Converge to Nash Equilibrium in Traffic Games</td>
<td>438</td>
</tr>
<tr>
<td>Relevance of Travel Time Reliability Indicators: A Managed Lanes Case Study</td>
<td>450</td>
</tr>
<tr>
<td>Optimal Aircraft Traffic Flow Management at a Terminal Control Area during Disturbances</td>
<td>460</td>
</tr>
<tr>
<td>Retrieving Real-time Information to users in Public Transport Networks: An Application to the Lisbon Bus System</td>
<td>470</td>
</tr>
<tr>
<td>Application of Mixture-Amount Choice Experiment for Accumulated Transport Charges</td>
<td>483</td>
</tr>
<tr>
<td>A Method for Evacuation Route Planning in Disaster Situations</td>
<td>503</td>
</tr>
</tbody>
</table>

Vania Campos, Renata Bandeira, Adriano Bandeira

Elaheh Khademi, Harry Timmermans

David Alves, Luis M. Martinez, José M. Viegas

M. Shafay-Ur Rahman, Paul Timms, Francis Montgomery

Toshihiko Miyagi, Genaro C. Peque Jr.

Sönke Behrends

M. Beuthe, B. Jourquin, N. Urbain, F. Bruinsma, I. Lingemann, B. Ubbels, E. Van Heumen

Sébastien Blandin, Paola Goatin, Benedetto Piccoli, Alexandre Bayen, Daniel Work

Seyedehsan Seyyedabreshami, Amירה Reza Mamdoohi, Ali Barzegar, Sajjad Hasanpour

Olivier Orfila, Guillaume Saint Pierre, Cindie Andrieu

Pasquale Carotenuto, Daniele Monacelli, Giuseppe Raponi, Marco Turco

M. Shafay-Ur Rahman, Paul Timms, Francis Montgomery
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Optimisation Algorithm to Establish the Location of Stations of a Mixed Fleet Biking System: An Application to the City of Lisbon</td>
<td>513</td>
</tr>
<tr>
<td>An Optimization Procedure to Design a Minibus Feeder Service: An Application to the Sintra Rail Line</td>
<td>525</td>
</tr>
<tr>
<td>Transport Issues in Modelling of Subcontracting in a Production and Logistics Network</td>
<td>537</td>
</tr>
<tr>
<td>Stochastic user Equilibrium with Reference-dependent Route Choice and Endogenous Reference Points</td>
<td>547</td>
</tr>
<tr>
<td>Micro-simulation Model Supporting the Management of an Interregional Logistic Platform</td>
<td>557</td>
</tr>
<tr>
<td>Planning of an Integrated Urban Transportation System based on Macro – Simulation and MCDM/A Methods</td>
<td>567</td>
</tr>
<tr>
<td>A Cognitive Learning Model for Dynamic Activity-travel Patterns</td>
<td>580</td>
</tr>
<tr>
<td>Spatial Environmental Analysis on the Effects of a New Navigation System for Freight Transport</td>
<td>589</td>
</tr>
<tr>
<td>Supply Chains in Humanitarian Operations: Cases and Analysis</td>
<td>598</td>
</tr>
<tr>
<td>High-Speed Rail Track Design Using GIS And Multi-Criteria Analysis</td>
<td>608</td>
</tr>
<tr>
<td>Freeway Crashes in Wet Weather: the Comparative Influence of Porous and Conventional Asphalt Surfacing</td>
<td>618</td>
</tr>
<tr>
<td>Freeway Free Flow Speed: a Case Study in Italy</td>
<td>628</td>
</tr>
<tr>
<td>A Proposal of Indicators for Evaluation of the Urban Space for Pedestrians and Cyclists in Access to Mass Transit Station</td>
<td>637</td>
</tr>
<tr>
<td>A Simulation-optimization Approach to Design Efficient Systems of Bike-sharing</td>
<td>646</td>
</tr>
<tr>
<td>Integrated Driver Rostering Problem in Public Bus Transit</td>
<td>656</td>
</tr>
<tr>
<td>Deriving Constructs for Hierarchical Information Integration Experiments in Regional Public Transport</td>
<td>666</td>
</tr>
<tr>
<td>A Modular Soft Computing based Method for Vehicles Repositioning in Bike-sharing Systems</td>
<td>675</td>
</tr>
</tbody>
</table>

**Part 2**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Metaheuristic Dynamic Traffic Assignment Model for O-D Matrix Estimation using Aggregate Data</td>
<td>685</td>
</tr>
<tr>
<td>Cost-benefit Analysis for Traffic Network Reliability Improvement</td>
<td>696</td>
</tr>
<tr>
<td>Impacts of Electric Vehicle Adoption on Driver Behavior and Environmental Performance</td>
<td>706</td>
</tr>
<tr>
<td>ICT Solutions in Transportation Systems: Estimating the Benefits and Environmental Impacts in the Lisbon</td>
<td>716</td>
</tr>
<tr>
<td>A Fuel Distribution Problem – Application of New Multi-item Inventory Routing Formulation</td>
<td>726</td>
</tr>
<tr>
<td>Intersection Modeling using a Convergent Scheme based on Hamilton-Jacobi Equation</td>
<td>736</td>
</tr>
<tr>
<td>A Comparative Study of the Cross Entropy Approach with the State-of-the-art Simulation-based Traffic Assignment Algorithms</td>
<td>749</td>
</tr>
</tbody>
</table>
A Disaggregate Residential Equilibrium Assignment Model .................................................. 758
  Fabien Leurent, Nicolas Coulombel, Alexis Pouliès
A Passenger Traffic Assignment Model with Capacity Constraints for Transit Networks .......... 772
  Fabien Leurent, Ektoras Chandakas, Alexis Pouliès
A Stochastic Model of Passenger Generalized Time Along a Transit Line .................................. 785
  Fabien Leurent, Vincent Benerez, François Combes
Feeder Bus Network Design Problem: a New Metaheuristic Procedure and Real Size Applications .... 798
  Fabien Leurent, E. Cipriani, M. Petrelli
Traffic Equilibrium in a Network Model of Parking and Route Choice, with Search Circuits and
Cruising Flows .................................................................................................................. 808
  Fabien Leurent, Houda Boujah
The Transit Bottleneck Model .............................................................................................. 822
  Fabien Leurent, Ektoras Chandakas

Comparative Analysis of Random Utility Models and Fuzzy Logic Models for Representing Gap-
Acceptance Behavior Using Data from Driving Simulator Experiments ................................ 834
  Rossi Riccardo, Gustald Massimiliano, Gecchele Gregorio, Meneguzer Claudio

Estimation of Annual Average Daily Truck Traffic Volume. Uncertainty Treatment and Data
Collection Requirements ................................................................................................. 845
  Riccardo Rossi, Massimiliano Gustaldal, Gregorio Gecchele, Shinya Kikachi

Optimal Handling of Hazardous Freight in Distributed Supply Chains .................................... 857
  A. Di Februario, N. Sacco, M. Sacedni
An Empirical Analysis of Vehicle Time Headways on Rural Two-lane Two-way Roads .................... 865
  Rossi Riccardo, Gustald Massimiliano

Modelling Passenger Departure Airport Choice: Implicit vs. Explicit Approaches ......................... 875
  Stefano De Luca, Roberta Di Pace
Receivers’ Response to New Urban Freight Policies .................................................................. 886
  Alberto Dominguez, José Holguín-Veras, Angel Beas, Luigi Dell’Olio

Modelling Risk Perception in ATIS Context: A Comparison of Different Fuzzy Logic-Based
Approaches ...................................................................................................................... 897
  Roberta Di Pace, Mario Marinelli, Gennaro Nicola Bifulco, Mauro Dell’Orco

Numerical Solutions to the Logit Lane Assignment Model ...................................................... 907
  M. M. Khoshyaran, J. P. Lebacque
An Analytical Approximation of the Joint Distribution of Aggregate Queue-Lengths in an Urban
Network ............................................................................................................................. 917
  Carolina Osorio, Carter Wang

A Field Trial on Smart Mobility ........................................................................................... 926
  Sven Maerivoet, Frank Daems, Friedl Maertens, Karel Renckens, Philip Van Houtte, Louis Buelens

Quality Management Methods for Real-Time Traffic Information ............................................ 936
  K. Bogenberger, S. Weikl
The Value of Reliability: An Equilibrium Approach .................................................................. 946
  Nicolas Coulombel, André De Palma

New Optimization Model for Road Network Maintenance Management .................................... 956
  Susana Meneses, Adelino Ferreira

Transportation Greenhouse Gas Emissions and its Relationship with Urban Form, Transit
Accessibility and Emerging Green Technologies: A Montreal Case Study ................................ 966
  S. A. H. Zahabi, L. Miranda-Moreno, Z. Patterson, P. Barla, C. Harding

Simple Economics of Electric Vehicle Adoption ..................................................................... 979
  Volodymyr Bilotkach, Mike Mills

Gear Shift Optimization for Off-road Construction Vehicles ...................................................... 989
  Jiali Fu, Gianantonio Bortolin

Modeling and Evolving Human Behaviors and Emotions in Road Traffic Networks ..................... 999
  George Leu, Neville J. Curtis, Hassein Abbass

The Cagliari Airport Impact on Sardinia Tourism: A Logit-based Analysis .................................. 1010
  Gabriele Benedetti, Luca Gobbato, Guido Perboli, Francesca Perfetti

Calibration of a New Microsimulation package for the Evaluation of Traffic Safety Performances ........... 1019
  Vittorio Asturita, Vincenzo Giofré, Giuseppe Guido, Alessandro Vitale

Real-time Modeling and Control Objective Analysis of Motorway Emissions ................................. 1027
  Alfréd Csikós, István Varga

Persistent Visitation with Fuel Constraints ............................................................................. 1037
  Jonathan Las Fargeas, Baro Hyun, Pierre Kabamba, Anouck Girard

Unscented Kalman filter for urban network travel time estimation .............................................. 1047
  Ré-Mi Hage, David Betaille, François Peyret, Dominique Metzel
E-mobility Fleet Management Using Ant Algorithms .......................................................... 1058
Felix-Alexander Döppers, Sebastian Iwanowski

Urban Freight Transport Demand: Transferability of Survey Results Analysis and Models ............................................... 1068
Angel Ibeas, Jose L. Mora, Agustino Nuzzolo, Antonio Coni

Modeling the Oligopolistic and Competitive Behavior of Carriers in Maritime Freight Transportation Networks .......................................................... 1080
Hyangsook Lee, Maria Boile, Sotirios Theocharis, Sangho Choo

Estimation of Safety Performance Measures from Smartphone Sensors .......................................................... 1095
Giuseppe Guido, Alessandro Vitale, Vittorio Astarita, Frank Saccomanno, Vincenzo Pasquale Giofrè, Vincenzo Gallelli

A Methodology for Modeling and Identifying Users Satisfaction Issues in Public Transport Systems Based on Users Surveys ................................................................................. 1104
J. M. Del Castillo, Francisco G. Benitez

Estimating Traffic Flow Profiles According to a Relative Attractiveness Factor .......................................................... 1115
Noelia Caceres, Luis M. Romero, Francisco G. Benitez

Combining Static and Dynamic Models for Traffic Signal Optimization Inherent Load-dependent Travel Times in a Cyclically Time-expanded Network Model .......................................................... 1125
Ekkehard Köhler, Martin Streicher

A Mobile Application for Road Surface Quality Control: UNIquALroad .......................................................... 1135
Vittorio Astarita, Maria Vittoria Caruso, Guido Danieli, Demetrio Carmine Festa, Vincenzo Pasquale Giofrè, Teresa Iuele, Rosolino Vaiana

A Review on Transit Assignment Modelling Approaches to Congested Networks: A New Perspective .......................................................... 1145
Qian Fu, Ronghui Liu, Stephane Hess

On the Potential of Regenerative Braking of Electric Buses as a Function of Their Itinerary .......................................................... 1156
Deborah Perrotta, Bernardo Ribeiro, Rosaldo J. F. Rossetti, João L. Afonso

Flow Expansion on Transportation Networks with Budget Constraints .......................................................... 1168
Amir Elalouf, Ron Adany, Avishai (Avi) Ceder

Suitable Cost Functions for Signalized Arterials and Freeways, in the User Equilibrium Assignment Problem .......................................................... 1176
Gloria Londoño, Angélica Lozano

Effects of Traffic Sensor Location on Traffic State Estimation .......................................................... 1186
Zhan Hong, Daitsuke Fukuda

A Fixed Point Route Choice Model for Transit Networks that Addresses Route Correlation .......................................................... 1197
Louis De Grange, Sebastián Raveau, Felipe González

Reliable Transportation of Humanitarian Supplies in Disaster Response: Model and Heuristic .......................................................... 1205
Masoud Hamedi, Ali Haghi, Saini Yang

Life Cycle Energy and Cost Assessment Method for Modified Asphalt Pavements .......................................................... 1220
Hassan A. Tabatabaei, Hussain U. Bahia

Heuristic Approach to the Airline Schedule Disturbances Problem: Single Fleet Case .......................................................... 1232
Slavica Dožić, Milica Kalic, Obrad Babic

Energy Efficiency of Rubberized Asphalt Concrete Under Low-temperature Conditions .......................................................... 1242
Murat Karacasu, Arzu Er, Volkan Okur

A Microsimulation Model for BRT Systems Analysis .................................................................................. 1250
Vincenzo Ancora, Claudio Nelli, Marco Petrelli

Road Safety Management Using Bayesian and Cluster analysis .................................................................................. 1260
Mario De Luca, Raffaele Mauro, Renato Lamberti, Gianluca Dell’Acqua

A Global Optimization Approach to Solve the Traffic Signal Synchronization Problem .......................................................... 1270
L. Adacher

A new “Smart Parking” System Infrastructure and Implementation .................................................................................. 1278
Yanfeng Geng, Christos G. Cassandras

Recoverable Robustness in Rapid Transit Network Design .................................................................................. 1288
Luís Cadarso, Angel Marin

Heuristic Algorithm for Integrated Allocation and Transportation in Three-Stage Supply Network .......................................................... 1298
Grzegorz Filcek, Jerzy Józefczyk

Modeling User Perception of Public Bicycle Services .................................................................................. 1308
Maria Bordagaray, Angel Ibeas, Luigi Dell’Ollo

Demand Elasticity to Road Charges in Rome Historical Centre .................................................................................. 1317
Gabriele Giustiniani, Paolo Delle Site, Luca Persia

Signal Setting Optimisation with Route Choice Behaviour and Acyclic Profiles of Vehicular Flows in Road Networks .................................................................................. 1330
Filippo A. Marcianò, Giuseppe Musolino, Antonino Vitetta
The Impact of School Safety Zone and Roadside Activities on Speed Behaviour: the Indonesian Case .......... 1339
  Nurul Hidayati, Ronghui Liu, Frank Montgomery

A Stochastic Continuous Cellular Automata Traffic Flow Model with a Multi-agent Fuzzy System ............... 1350
  Özönur Yeldan, Alberto Colomì, Alessandro Luè, Emanuele Rodaro

Economic Evaluation of Future Carbon Dioxide Impacts from Italian Highways ........................................ 1360
  Silvio Nocera, Federico Cavallaro

The Impact of Road Network Structure and Mobility on the National Traffic Fatality Rate ............................ 1370
  Kazimierz Jamroz

Automatic Conflict Solving using Biharmonic Navigation Functions .............................................................. 1378
  Laureline Guys, Stéphane Puechmorel, Laurent Lapasset

A Macroscopic Node Model Related to Capacity Drop ...................................................................................... 1388
  Thomas Monamy, Habib Haj-Salem, Jean-Patrick Lebacque

Author Index