Network Modeling

Transportation Research Record: Journal of the Transportation Research Board Volume 2667 (2017)

ISBN: 978-1-5108-5470-3

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by Transportation Research Board of the National Academies
All rights reserved.

ISBN (Print) 978-1-5108-5470-3
ISBN 2017 Printed Set (All Issues) 978-1-5108-5406-2

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact Transportation Research Board of the National Academies at the address below.

Transportation Research Board
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW
Washington, DC 20001

Phone: (202) 334-2934
Fax: (202) 334-2519

trbsales@nas.edu

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Monitoring Signalized Urban Networks: Dynamic Equilibrium-Free Model Based on a Discrete-Time Optimal Control Formulation 1
Dimitriou, Loukas; Ziliaskopoulos, Athanasios

Maximization of Platoon Formation Through Centralized Routing and Departure Time Coordination 10
Sokolov, Vadim; Larson, Jeffrey; Munson, Todd; Auld, Josh; Karbowski, Dominik

Solving the School Bus Routing Problem by Maximizing Trip Compatibility 17
Shafahi, Ali; Wang, Zhongxiang; Haghani, Ali

Estimation of Time-Varying Origin–Destination Patterns for Design of Multipath Progression on a Signalized Arterial 28
Yang, Xianfeng; Chang, Gang-Len

Ridesharing User Equilibrium and Its Implications for High-Occupancy Toll Lane Pricing 39
Di, Xuan; Liu, Henry X.; Ban, Xuegang (Jeff); Yang, Hai

Characterization of Trip-Level Pace Variability Based on Taxi GPS Trajectory Data 51
Ma, He; Lu, Huapu; Stathopoulos, Amanda; Nie, Yu (Marco)

Online Charging and Routing of Electric Vehicles in Stochastic Time-Varying Networks 61
Jafari, Ehsan; Boyles, Stephen D.

Effectiveness of Predictive Weather-Related Active Transportation and Demand Management Strategies for Network Management 71
Hong, Zihan; Mahmassani, Hani S.; Xu, Xiang; Mittal, Archak; Chen, Ying; Halat, Hooram; Alfelor, Roemer M.

Consistency Between Convergence of Dynamic Assignment and Stochasticity of Microsimulation: Implication for Number of Runs 88
Saxena, Neeraj; Dixit, Vinayak V.; Waller, S. Travis

Reducing the Dimension of Online Calibration in Dynamic Traffic Assignment Systems 96
Prakash, A. Arun; Seshadri, Ravi; Antoniou, Constantinos; Pereira, Francisco C.; Ben-Akiva, Moshe E.

Multiclass, Multicriteria Dynamic Traffic Assignment with Path-Dependent Link Cost and Entropy-Based Risk Preference 108
Yu, Jiangbo Gabriel; Jayakrishnan, R.

Estimating Path Travel Costs for Heterogeneous Users on Large-Scale Networks: Heuristic Approach to Integrated Activity-Based Model–Dynamic Traffic Assignment Models 119
Xu, Xiang (Alex); Fakhrmoosavi, Fatemeh; Zockaie, Ali; Mahmassani, Hani S.

Multiclass Traffic Assignment Problem with Flow-Dependent Passenger Car Equivalent Value of Trucks 131
de Andrade, Gustavo Riente; Chen, Zhibin; Elefteriadou, Lily; Yin, Yafeng

Improved Calibration Method for Dynamic Traffic Assignment Models: Constrained Extended Kalman Filter 142
Zhang, Haizheng; Seshadri, Ravi; Prakash, A. Arun; Pereira, Francisco C.; Antoniou, Constantinos; Ben-Akiva, Moshe E.

User and Operator Perspectives in Public Transport Timetable Synchronization Design 154
Liu, Tao; Ceder, Avishai (Avi)

Author Index