International Conference on Transportation and Development 2020

Planning and Development

Selected Papers from the International Conference on Transportation and Development 2020

Seattle, Washington, USA 26 – 29 May 2020

Editor:

Guohui Zhang

ISBN: 978-1-7138-2205-9

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© (2020) by American Society of Civil Engineers All rights reserved.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact American Society of Civil Engineers at the address below.

American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 USA

Phone: (800) 548-2723 Fax: (703) 295-6333

www.asce.org

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

Contents

Emergency Response and Other Traffic Safety Equity Perceptions in Hawaii
Disadvantages Business Enterprise Lessons Learned on Design-Build Contracts11 Dawn M. McIntosh and Bobby Forch
Discovering the Commuters' Assessments on Disaster Resilience of Transportation Infrastructure
Syed A. Morshed, Mahmoud Arafat, Md. Ashraf Ahmed, and Rajib Saha
Characterization of Resilience of Networks to Uncertain Disruptions: A Case Study of Houston Road Network during Hurricane Harvey
Traveler Perception of Transportation System Performance Using Kernel Density Estimation to Prioritize Infrastructure Investments
Research on Start-Up Behavior and Capacity at Signal Intersection in Vehicle Interconnection Environment
Exploring the Effects of Traffic-Related Air Pollution on Public Health in Census Tract Level
Using the 2017 National Household Travel Survey Data to Explore the Elderly's Travel Patterns
Inferring Travel Modes from Trajectory Data Based on Hidden Markov Model95 Meng Li and Shen Zhang
Travel Time Modeling Using Non-Linear Multi-Objective Fuzzy Optimization Approach
Freeway Link-Level Travel Time and Reliability Thresholds
How Much Transportation Investment Is Needed for Expected Accessibility Enhancement Goal

Location and Development of Light Rail Stations under Demand Uncertainty: A Real Options Based Framework
Dynamic Vehicle OD Flow Estimation for Urban Road Network Using Multi-Source Heterogeneous Data
Estimation of Trip Behaviors in Walking Areas Using Big Data173 Kazushige Endo, Ryuichi Imai, Takato Uehara, and Yosuke Hino
Layout Planning Methods of Tourism Road Considering Tourism Value and Traffic Demand186
Zhen-Guo Liu and Tian-Tian Zhang Research on Travelers' Daily Activity-Travel Behavior Based on Competing Risk Model
Wanying Li, Hongzhi Guan, Yan Han, and Haiyan Zhu A Case Study of Quantitative Cost and Schedule Risk Assessment and Risk
Management over the Life of a Major Transportation Project
Modification of SIDRA Model for Delay Estimation of Roundabouts under Mixed Traffic Condition
Making a Case for Accessibility-Oriented Transportation Planning: Evaluation of Economic Benefits from Accessibility Improvement in the Process of Project Programming
Ming S. Lee and Xia Jin A Customizable Metric to Provide a Comprehensive Picture of the Mobility
Potential of a Location
A Review of Different Charging Stations Optimal Localization Models and Analysis Functions for the Electric Vehicle Charging Infrastructure262 Nashid K. Khadem, Amirreza Nickkar, and Hyeon-Shic Shin
Technological Advances and Sustainable Workforce Development through Enhanced Collaboration for Sustainability of Transport Infrastructure277 Adewole S. Oladele

"Centralized" Taxi Services in Big Metropolitan Areas: Evidenced by
Chicago Data287
Tianyi Li, Xiatian Wu, Xuegang Ban, and Yinhai Wang
Digital Financing Model for Bridges in Washington State
Investigation and Modeling of Financial Risks Associated with PPP Road Projects in India
Rutuja K. Kagne and Gayatri S. Vyas
Investment Valuation of UFT Systems under Construction Cost Uncertainties319 Seyed Ehsan Zahed and Mohsen Shahandashti
A Lane-Based Congestion Pricing Model for Expressway Toll-Lane Management332 Shou-Ren Hu, Chih-Peng Chu, and Ting-Wei Wu
Energy Consumption Analysis for Parallel PHEVs with Identifying Working Modes Based on Real-World Longitudinal Travel Data345 Lu Yu and Hao Li
Designing Transit Agency Job Descriptions for Optimal Roles: An Analytical
Text-Mining Approach356
Ahmadreza Mahmoudzadeh, Zachary Elgart, Sara Arezoumand, Todd Hansen, and Subasich Das