Contents

Sustainable Transportation Development

Cost Benefit Analysis of Freeway Service Patrol Programs: A Case Study in Florida .......................................................... 1
Pei-Sung Lin, Aldo Fabregas, and Hongyun Chen

San Leandro 2010 Bicycle and Pedestrian Master Plan Update ............................................................. 9
Reh-Lin N. Chen, Carol R. Levine, Keith R. Cooke, and Uche Udemezue

China’s Transportation Balancing Development Strategy Discussion ..................................................... 16
Rui Geng

Comprehensive Evaluation Model for Programming Projects of Traffic Infrastructure Based on Rough Set .................................................. 22
Shan Jiang, Weiming Liu, and Ling Shi

Travel Characteristics of Different Social Groups in Large Scale Residential Areas in the Periphery of Shanghai: A Case Study of Jinhexincheng .................................................. 29
Jinping Guan

The Research of the Eco-Port Group’s Assessment System Based on ANP .................................................. 38
Cui-lian Liu, Jian-mei Liu, Tiao-lan Yu, and Bao-jun Gong

Mechanism of Urban Spatial Structure Evolution under the Influence of Port Function Upgrading: A Case Study of Dalian .................................................. 47
C. Liang and N. Wang

Chongqing Urban Traffic Congestion Solution Method and Strategy .................................................. 55
Xingzhong Gao

TOD Mode and the Interface between the Urban Groups .................................................. 60
Jin Nan

The Social Cost of Traffic Congestion and Countermeasures in Beijing .................................................. 68
Li-zeng Mao, Hong-ge Zhu, and Li-ren Duan

An Analysis of Airport Runway Designs to Maximize New Airport Throughput to Meet China’s Long-Term Air Travel Demand .................................................. 77
William F. Yim

Comparison of Software Packages for Life Cycle Cost and Benefit Analysis of Highway Projects .................................................. 85
Yi Jiang, Guangyuan Zhao, and Shuo Li

Coordination between Comprehensive Transportation and Social Development at the Regional Level in China .................................................. 101
Jing Shi, Nian Zhou, and Zhaozhang Wu

Service Excellence: Road Tunnel Safety .................................................. 110
William Cheung
City Development and Public Transportation Planning: A Case Study of Taichung City .............................................................. 119
Chao-Fu Yeh and Ying-Chih Lu

Car Parking in China—Issues and Solutions .................................................. 130
Vincent Au

Low Carbon Emissions and Energy Saving in Transportation
Evaluation of Construction Equipment Fleets through Fuel Use and Emissions Inventories ................................................................. 138
Phil Lewis and Apif Hajji

Developing a Sustainable Freight Transportation Framework with the Consideration of Improving Safety and Minimizing Carbon Emissions .................................................. 146
Rita Neff and Yong Bai

Application of the Theory of Minimum Rate of Energy Dissipation to River Regulation .................................................. 154
Jun-hong Zhang, Guo-xiang Gong, Jia-an Luo, and Yang-fci Ou

Low Carbon Management Concepts in TOD Planning .................................. 160
Chia-Nung Li

Characteristics of Fuel Consumption and Vehicular Operation of Buses in Taipei’s Exclusive Bus Lanes .................................................. 168
Y. C. Hu, W. T. Lin, G. P. Chen, and Y. W. Yang

Developing a Time-Based Model for Buses for Integration with Planning Model for Greenhouse Gas Analyses .................................................. 176

Multi-Model Transportation System
A Sustainable Multi-User Multi-Criteria Transportation Network Equilibrium Model .................................................. 184
Wenjun Hu and Xizhao Zhou

Transfer Mode Selection of High-Speed Rail Passengers Based on Travel Time Variability .................................................. 193
Ling Jiang, Shijun Yu, and Yandong Zhu

Miami Intermodal Center: Airport Connection for the Future ................. 201
L. David Shen

Driverless Medium-Capacity Transit As an Airport Connector: Taipei’s Experience .................................................. 209
Jian-Jia Hsa and L. David Shen

Research on Urban Bus Stop Parking Capacity Reliability ...................... 217
Chenghui Chen, Cong Cong, and Yongneng Xu

The Planning Strategy of Combination Mode of Slow Traffic Ways in Central City of Chongqing .................................................. 226
Xia Chen, Wei Liu, Dan Huang, and Jianjie Gao

Comparison of BRT Systems in Four Chinese Cities: Foshan, Shenzhen, Xiamen, and Jinan .................................................. 233
Ying-Chih Lu, S. K. Jason Chang, and Ming Yu

Research on Travel Behaviors of High Speed Trains’ Frequency and Distance of Trip .................................................. 241
Xin Zou, Wang Ji Feng, and Hongbin Zhao

Fleet Size Metamodel for Dial-a-Ride Services with Tiered Pricing ........ 247
Ying Luo and Paul Schoenfeld

Development of Intercity through Train Services between China and Hong Kong .................................................. 253
Carmen Li

Intelligent Transportation
Chongqing Intelligent Transport System Plan ............................................. 261
F. Yan

A Practical Intelligent Method to Quickly Screen Pedestrian Potential Conflicts with Motor Vehicles .................................................. 268
F. Qiao, P.-H. Kuo, and L. Yu

Spatial Approaches for Conflating GIS Roadway Data with BRT Route Information .................................................. 276
Yingfeng Li, and Chuxiao Liu

Bus and Metro Integration Improvements in Beijing and Shanghai .......... 284
Mingzheng Sun, Lijing Song, Feng Chen, and Kai Lu

An Iterative Procedure for the Estimation of Dynamic Traffic Signals and Level-of-Service on Toll Facilities .................................................. 292
Jinghua Xu and Steven Ruegg

Experience of Radio Taxis in Algeria .................................................. 299
H. Bencherif and F. Boubakour

Advancements in Traffic Control
Vehicle Speed Determination Based on Front Windshield .................................................. 307
Chuanjiao Sun, Jie Zhang, and Xiaojing Ban

The Timing to Retime and Maintain Traffic Signal Systems Based on Traffic Flows and Stationary Stream .................................................. 315
Pei-Sung Lin, Aldo Fabregas, and Hongyun Chen

Assessment of a Flashing Yellow Arrow Signal Implemented in a Highway ........................................................................ 323
Pei-Sung Lin, Aldo Fabregas, and Enrique Gonzalez

Traffic Signal Control of Fuzzy Neural Network-Based CRP System Based on Traffic Flow Measurements Involving a Queue Formation .................................................. 331
Xue Li, Bao-chuan Li, and Yi Li

Study of Carpool User Behaviors and Route Characterization Using Traffic Data from a Bisphonic Multi-mode Multi-criteria System .................................................. 339
W. L. Chung, J. Y. Jeng, Z. Y. Lee, and June-Shian Lin
Comparison of BRT Systems in Four Chinese Cities: Beijing, Changzhou, Xiamen, and Jinan .......................... 234
Ying-Chih Lu, S. K. Jason Chang, and Ming Yu
Research on Travel Behaviors of High Speed Trains' Passengers Based on Frequency and Distance of Trip .......... 248
Xin Zou, Wang Ji Feng, and Hongbin Zhao
Fleet Size Metamodel for Dial-a-Ride Services with Time Constraints ......................................................... 257
Ying Luo and Paul Schonfeld
Development of Intercity through Train Services between Mainland China and Hong Kong ............................... 268
Carmen Li

Intelligent Transportation Systems

Chongqing Intelligent Transport System Plan ........................................... 274
Fu Yan
A Practical Intelligent Method to Quickly Screen Pedestrian Related Potential Conflicts with Motor Vehicles .............. 282
F. Qiao, P.-H. Kuo, and L. Yu
Spatial Approaches for Conflating GIS Roadway Datasets......................... 290
Yingfeng Li, and Chunxiao Liu
Bus and Metro Integration Improvements in Beijing ........................................... 299
Mingzheng Sun, Lijing Song, Feng Chen, and Kai Xian
An Iterative Procedure for the Estimation of Dynamic Toll Demand, Toll, and Level-of-Service on Toll Facilities .......... 308
Jinghua Xu and Steven Ruegg
Experience of Radio Taxis in Algeria ........................................... 316
H. Bencherif and F. Boubakour

Advancements in Traffic Control Technologies

Vehicle Speed Determination Based on Front Windshield Glass Rupture Area ....................................................... 324
Chuanjiao Sun, Jie Zhang, and Xiaojing Ban
The Timing to Retime and Maintain Traffic Signal Systems ....................................................... 332
Pei-Sung Lin, Aldo Fabregas, and Hongyun Chen
Assessment of a Flashing Yellow Arrow Signal Implementation Using Gap Acceptance Measures ..................... 341
Pei-Sung Lin, Aldo Fabregas, and Enrique Gonzalez-Velez
Traffic Signal Control of Fuzzy Neural Network Based on Line Length of Cars in Waiting ................................. 349
Xue Li, Bai-chuan Lu, and Yi Li
Study of Carpool User Behaviors and Route Characteristics in Taiwan ....................................................... 356
C. L. Chung, J. Y. Jeng, Z. Y. Lee, and June-Shian Lee