SPECIAL ISSUE: Infrastructure Planning, Design, and Management for Big Events
SPECIAL ISSUE EDITORS: Matthew G. Karlaftis and Srinivas Peeta

INTRODUCTION
1 Infrastructure Planning, Design, and Management for Big Events / Matthew G. Karlaftis, Srinivas Peeta

TECHNICAL PAPERS
3 Multiperiod Competition in an Electric Power Network and Impacts of Infrastructure Disruptions / Matthew A. Rigdon, Reetabrata Mookherjee, Terry L. Friesz
12 Temporospatial Analysis of Hurricane Katrina Regional Evacuation traffic Patterns / Brian Wolshon, Ben McArdle
21 Planning for Evacuation: Insights from an Efficient Network Design Model / Georgios Kalafatas, Srinivas Peeta
31 Dynamic Bayesian Network for Predicting the Likelihood of a Terrorist Attack at Critical Transportation Infrastructure Facilities / Manoj K. Jha
40 Integrated Scheme for Olympic Village Traffic and Parking Arrangements / George Yannis, John Goliás, Ioanna Spyropoulou, Adelkis Rogan
50 Preparing an Airport for the Olympic Games: Athens / Amedeo Odoni, Miltos Stamatopoulos, Eva Kassens, Jan Metsovitis
TECHNICAL PAPERS
61 Reliability Estimation for Networks of Reinforced Concrete Bridges / Seth Guikema, Paolo Gardoni

70 Optimization Model for Design and Operation of Transportation Networks in Seismic Regions / Mauricio Sanchez-Silva, David Rosowsky, Seth Guikema


88 GIS-Based Model for Highway Noise Analysis / Manoj K. Jha, Min Wook Kang

95 Methodology for the Determination of Relative Weights of Highway Asset Management System Goals and of Performance Measures / Zongzhi Li, Kumares C. Sinha

106 Evaluation of Water-Repelling Additives for Use in Concrete-Based Sanitary Sewer Infrastructure / Parviz Soroushian, Habibur Chowdhury, Tewodros Ghebrab

111 Using Water Main Break Data to Improve Asset Management for Small and Medium Utilities: District of Maple Ridge, B.C. / Andrew Wood, Barbara J. Lence

120 Transportation Infrastructure Maintenance Management: Case Study of a Small Urban City / Wayne D. Cottrell, Stephen Bryan, Bhargava Rama Chilukuri, Vikram Kalyani, Aleksandar Stevanovic, Junxia Wu

DISCUSSIONS AND CLOSURES
133 Discussion of "Productivity Study of Microtunneling Pipe Installation Using Simulation" / Roy Yu Luo, Mohammad Najafi Ming Lu, Sze-hun Lau, Samuel Ariaratnam

135 Closure / Roy Yu Luo, Mohammad Najafi


137 Closure / M. H. Afshar, M. Akbari, M. A. Marino
TECHNICAL PAPERS
139 Modeling the Deterioration of Inductive Loops / Jun Yao, Hualiang (Harry) Teng, Lester A. Hoel, Ning Wang
149 Vulnerability Assessment of Health Care Facilities during Disaster Events / Carlos A. Arboleda, Dulcy M. Abraham, Jean-Philippe P. Richard, Robert Lubitz
162 Failure Assessment Modeling to Prioritize Water Pipe Renewal: Two Case Studies / Peter D. Rogers, Neil S. Grigg
172 Practical Considerations in Statistical Modeling of Count Data for Infrastructure Systems / Seth D. Guikema, Jeremy P. Coffelt
179 Data Management for Geospatial Vulnerability Assessment of Interdependencies in U.S. Power Generation / Chung Yan Shih, Corinne D. Scown, Lucio Soibelman, H. Scott Matthews, James H. Garrett Jr., Keith Dodrill, Sandra McSurdy
190 Pavement Marking Degradation Modeling and Analysis / William E. Sitzabee, Joseph E. Hummer, William Rasdorf
200 Managing Critical Infrastructure Interdependence through Economic Input-Output Methods / Ping Chen, Corinne Scown, H. Scott Matthews, James H. Garrett Jr., Chris Hendrickson
111 Subway Station Diagnosis Index Condition Assessment Model / Nabil Semaan, Tarek Zayed
232 Generic Methodology for Evaluating Net Benefit of Asset Management System Implementation / Daisuke Mizusawa, Sue McNeil
251 Budgeting Performance-Based Winter Maintenance: Snow Influence on Highway Maintenance Cost / Torbjorn Stenbeck
SPECIAL SECTION: Transportation Infrastructure Planning, Management, and Finance
SPECIAL SECTION EDITORS: Takayuki Ueda, Claus Doll, and Pablo Durango-Cohen

INTRODUCTION
261  Transportation Infrastructure Planning, Management, and Finance / Claus Doll, Pablo L. Durango-Cohen, Takayuki Ueda

TECHNICAL PAPERS
263  Efficient Use of Regional Transport Infrastructure, Communication Networks, and Human Capital / Axel Schaffer, Jochen Siegele
273  Appraising Transport Investments in a Regulatory Regime / Roger Vickerman
278  Road Cost Models for Prefeasibility Studies in Developing Countries / Jamshid Sodikov
290  Optimal Road Capacity Building: Road Planning by Marginal Cost Pricing / Toshinori Nemoto, Yuki Misui, Akira Kajiwara
297  Ten Years of World Bank Action in Transport: Evaluation / Peter N. Freeman
305  Simulating Heterogeneous Traffic Flow on Roads with and without Bus Lanes / V. Thamizh Arasan, P. Vedagiri
313  Optimal Sampling of Infrastructure Condition: Motivation, Formulation, and Evaluation / Rabi G. Mishalani, Liying Gong

OTHER TECHNICAL PAPERS
321  Structural Assessment and Upgrading of Sewers Based on Inspection Results / G. Becker, H. Boduroglu, S. Camarinopoulos, S. Frondistou-Yannas, A. Gedikli, V. G. Kallidromitis, D. Kampranis, C. Sanna
330  Formulation and Optimization of Robust Sensor Placement Problems for Drinking Water Contamination Warning Systems / Jean-Paul Watson, Regan Murray, William E. Hart
340  Typology of Long-Term Port Efficiency Improvement Paths: Malmquist Total Factor Productivity for World Container Ports / SangHyun Cheon, David E. Dowall, Dong-Wook Song
351  Modeling Postearthquake Fire Ignitions Using Generalized Linear (Mixed) Models / Rachel A. Davidson
361  Energy and Greenhouse Gas Emissions Trade-Offs of Recycled Concrete Aggregate Use in Nonstructural Concrete: A North American Case Study / Jamie McIntyre, Sabrina Spatari, Heather L. MacLean
371  Building Infrastructure Functional Capacity Measurement Framework / Michael N. Grussing, Donald R. Uzarski, Lance R. Marrano
378  Risk-Based Model for Pricing Highway Infrastructure Warranties / Nasir G. Gharaibeh, Hamid Shirazi
383  Estimating Infrastructure Condition from a Biased Sample / Gautam Gupta, Jasenka Rakas, Mark Hansen
394  Uncertainty Analysis of Interdependencies in Dynamic Infrastructure Recovery: Applications in Risk-Based Decision Making / Kash Barker, Yacov Y. Haimes
406  Exploring Financial Decision-Making Approaches for Use in Earthquake Risk Decision Processes for Ports / Craig Taylor, Glenn Rix, Fang Liu
417  Green Approach for Coping with the High Cost of Infrastructure Services in U.S. Colonias / Nasir G. Gharaibeh, Brian Valenzuela, Josue Machado, Steve Cook
425  Reviewers
427  2009 Annual Index