

# **First Transportation and Development Institute Congress 2011**

## **T&DI Congress 2011**

**Chicago, Illinois, USA  
13-16 March 2011**

**Volume 1 of 2**

**Editors:**

**Imad Al-Qadi**

**Scott Murrell**

**ISBN: 978-1-61782-549-1**

**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© (2011) by the American Society of Civil Engineers  
All rights reserved.

Printed by Curran Associates, Inc. (2011)

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

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

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

[www.asce.org](http://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: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

## VOLUME 1

### ADVANCED TECHNOLOGIES IN TRANSPORTATION SYSTEMS

<b>Road Data Collection and Database Establishment in Developing Countries—Three Case Studies</b> .....	1
<i>D. Mihajlovic, I. Jokanovic</i>	
<b>The Effect of Pavement Condition Data Sampling on Project Boundary Selection</b> .....	11
<i>C. M. Dean, G. Y. Baladi, T. A. Dawson, S. W. Haider</i>	
<b>Rapid 1-mm Mapping of Runways in an Integrated Environment</b> .....	22
<i>Kelvin C. P. Wang, Vu T. D. Nguyen, Quintin B. Watkins</i>	
<b>Strategies for Flexible Pavement Rehabilitation Based on Case-Based Reasoning</b> .....	32
<i>Lin Li, Kelvin C. P. Wang</i>	
<b>Gateway Traveler Information System: Regional Traveler Information Services</b> .....	40
<i>Charles Sikaras, John F. Dillenburg, Constance A. Kelly, Jerry Hron, Scott Lee</i>	
<b>High Speed Rail Design through an Urban/Suburban Core</b> .....	50
<i>Genaro Mejia</i>	
<b>Travel Time Reliability Estimation: Use of Median Travel Time as Measure of Central Tendency</b> .....	59
<i>M. Arezoumandi, G. H. Bham</i>	
<b>Systematic Evaluation of a Variable Speed Limit System in St. Louis Missouri</b> .....	69
<i>Khushboo Lall, G. H. Bham</i>	
<b>Use of Micro Unmanned Aerial Vehicles in Roadside Condition Surveys</b> .....	80
<i>W. Scott Hart, Nasir G. Gharaibeh</i>	
<b>The Calculation of the Remaining Service Life Based on the Pavement Distress Data</b> .....	93
<i>G. Y. Baladi, T. A. Dawson, C. M. Dean, S. W. Haider, K. Chatti</i>	
<b>The Remaining Service Life—A Good Pavement Management Tool</b> .....	103
<i>G. Y. Baladi, T. A. Dawson, C. M. Dean, S. W. Haider, K. Chatti</i>	
<b>Optimization of Step-Frequency Ground Penetrating Radar Protocols for Detection of Near-Surface Features</b> .....	112
<i>Michael L. Scott, Satish R. Chintakunta, James R. Mekemson, Nicolas Gagarin</i>	
<b>Adaptive Flow Control for Traffic Data Collection based on Low Bandwidth iDEN Wireless Network</b> .....	122
<i>Liping Zhang, Meng Li, Wei-bin Zhang, Kai Leung</i>	
<b>Reinforcement Learning Agents for Traffic Signal Control in Oversaturated Networks</b> .....	132
<i>Juan C. Medina, Rahim F. Benekohal</i>	
<b>Remote Data Collection for the IQA Delay Estimation Method</b> .....	142
<i>Y. M. Keita, M. Saito</i>	
<b>Evaluating Potential for Integrating Traffic Density with Guidance Information</b> .....	152
<i>Mostafa Reisi Gahrooei, Ryan Fries, Huaguo Zhou</i>	
<b>Identifying Spatial Gaps in Transit Accessibility to Maximize Market Potential</b> .....	162
<i>Srinivas S. Pulugurtha, Venkata Ramana Duddu, Rakesh Mora</i>	
<b>Investigate the Effectiveness of Graphic Route Information Panels through a Survey Study</b> .....	171
<i>Ricardo Jesus Aitken, Guohui Zhang, C. Michael Walton, Alison Conway</i>	
<b>Defining Benefits from Pavement Rehabilitation and Preservation</b> .....	186
<i>T. A. Dawson, G. Y. Baladi, C. M. Dean, S. W. Haider, K. Chatti</i>	
<b>Freight Traffic Crossing the Eastern Continental Divide</b> .....	196
<i>Robert T. Hintersteiner</i>	

### AIRPORT PLANNING AND DESIGN

<b>Wilbur Wright, Hockey, and the History of Flight</b> .....	205
<i>William J. Sproule</i>	
<b>The Collaborative Process for Developing Project Definition Documents for the Metropolitan Washington Airports Authority</b> .....	213
<i>Geoffrey Baskir, William Lebegern</i>	
<b>The Federal Aviation Administration's Unique Approach to the O'Hare Modernization Program</b> .....	224
<i>Christina Drouet</i>	
<b>Case Study for the Planning, Design, and Construction Phase of Runway 13R-31L at John F. Kennedy International Airport</b> .....	234
<i>Guy Zummo, Scott D. Murrell</i>	

<b>Preserving Our Airfield Pavements</b> .....	244
<i>David K. Hein, Brian Aho</i>	
<b>The Benefits of Using a Geospatial Airport Pavement Management System at Denver and Tampa International Airports</b> .....	255
<i>Michael T. McNerney, Katherine A. Keegan</i>	
<b>Airport Planning for Older Air Passengers</b> .....	271
<i>William J. Sproule</i>	
<b>Analysis of Criteria for Closely-Spaced Parallel Runway Approaches: Influences and Capacity Constraints in a Multiple Airport System</b> .....	281
<i>Rafael Fraga, Carlos Müller, Cláudio Jorge Pinto Alves</i>	
<b>Development of a Computer Program for Airport Runway Location, Orientation, and Length Design in Iraq</b> .....	291
<i>Saad Issa Sarsam, Hiba Akram Ateia</i>	
<b>Land-Based Innovations for Stopping Commercial Aircraft</b> .....	301
<i>Hugh K. DeLong III</i>	
<b>Braking Performance of Towbarless Towing Vehicles during Maintenance Tows</b> .....	310
<i>Gordon F. Hayhoe</i>	
<b>Soil Improvement of Runway STRIP and Runway End Safety Area (RESA) through an Innovative Methodology</b> .....	320
<i>M. Crispino, F. Giustozzi, G. Paracchini</i>	
<b>Case Study of the Sustainable Parking Facility at Stewart International Airport</b> .....	329
<i>Dan W. Louie, Joseph A. Calautti, Scott D. Murrell</i>	
<b>The Case to Build End-Around Taxiways at George Bush Intercontinental Airport for Air Quality Benefit</b> .....	339
<i>Michael T. McNerney, David Heinold</i>	
<b>Meeting the Expanding Needs of a Metropolitan Area: The Move from General Aviation to Commercial Aviation</b> .....	353
<i>Saty D. Satyamurti, Antonio Massidda, Stephen Mattingly, Mike Shahan, William A. Retz</i>	
<b>Ground Access for IGI Airport, Delhi: Planning and Challenges</b> .....	363
<i>Dileep Dixit, Phua Chai Teck</i>	
<b>Ground Access Trip Generation Models for Airport Planning</b> .....	374
<i>Geoffrey D. Gosling</i>	
<b>Specification and Data Issues with Airport Ground Access Mode Choice Models</b> .....	386
<i>Geoffrey D. Gosling</i>	

## **PAVEMENTS AND TRANSPORTATION MATERIALS**

<b>Assessment of Permanent Deformation Behavior of Asphalt Concrete by Improved Triaxial Cyclic Compression Testing</b> .....	396
<i>B. Hofko, R. Blab</i>	
<b>Asphalt Concrete Rutting Resistance Assessment by the Flow Number Test</b> .....	406
<i>Alex K. Apeagyei, Brian K. Diefenderfer</i>	
<b>A Study of Effectiveness of Thin Surface Treatments Using Hamburg Wheel Tracking Device</b> .....	418
<i>Md. Shaidur Rahman, Mustaque Hossain, Paul Nelson</i>	
<b>Optimized Design for 4.75-mm NMAS Superpave Mix Thin Overlay</b> .....	428
<i>Farhana Rahman, Mustaque Hossain, Stefan A. Romanoschi, Cliff Hobson</i>	
<b>Mechanical Response of Modified Asphalt Pavements</b> .....	438
<i>S. Anjan Kumar, P. Alagappan, J. Murali Krishnan, A. Veeraragavan</i>	
<b>Characteristics of Mono-Strand Fiber-Reinforced Hot-Mix Asphalt Mixtures</b> .....	449
<i>Pyeong Jun Yoo, Ji Young Choi, Byung-Sik Ohm</i>	
<b>Evaluation of Guss Asphalt Applied to Steel Deck Surfacing</b> .....	462
<i>Jian-Shiuh Chen, Min-Chih Liao, Chien-Chung Huang</i>	
<b>Laboratory Evaluation of Effects of Soaked Duration on Moisture Susceptibility of Warm Mix Asphalt Mix</b> .....	472
<i>Feipeng Xiao, Wenbin Zhao, Serji N. Amirkhanian</i>	
<b>Effect of Test Methods on Viscosity Temperature Susceptibility Characterization of Asphalt Binders for the Mechanistic-Empirical Pavement Design Guide</b> .....	482
<i>S. W. Haider, M. Waseem Mirza, Ashvini K. Thottempudi, Javed Bari, G. Y. Baladi</i>	
<b>Characterizing Temperature Susceptibility of Asphalt Binders Using Activation Energy for Flow</b> .....	493
<i>S. W. Haider, M. Waseem Mirza, Ashvini K. Thottempudi, Javed Bari, G. Y. Baladi</i>	
<b>Study on Frequency Dependency of Sol-Gel Transition of Asphalt</b> .....	504
<i>A. Padmarekha, J. Murali Krishnan</i>	

<b>Detection of Polymers in Asphalt Binders</b> .....	514
<i>Martin McCann, Joseph F. Rovani, Kenneth P. Thomas</i>	
<b>Effects of a Wax-Based Warm Mix Additive on Cohesive Strengths of Asphalt Binders</b> .....	528
<i>N. Wasiuddin, N. Saltibus, L. Mohammad</i>	
<b>Comparison of Pavement Design Using AASHTO 1993 and NCHRP Mechanistic-Empirical Pavement Design Guides</b> .....	538
<i>Daba S. Gedafa, James Mulandi, Mustaque Hossain, G. Schieber</i>	
<b>The Impact of Weigh-in-Motion Measurement Error on Mechanistic-Empirical Pavement Design Guide Reliability</b> .....	548
<i>S. W. Haider, Ronald S. Harichandran</i>	
<b>Comparison of Predicted Distresses between Different Input Levels Using M-E PDG for CRC Pavement</b> .....	558
<i>Mohamed Elfino, Harikrishnan Nair, Gary Crawford, Jagan Gudimetla</i>	
<b>Evaluation of the MEPDG Dynamic Modulus Prediction Models for Asphalt Concrete Mixtures</b> .....	576
<i>S. M. El-Badawy, A. Awed, F. M. Bayomy</i>	
<b>Comparison of Idaho Pavement Design Procedure with AASHTO 1993 and MEPDG Methods</b> .....	586
<i>S. M. El-Badawy, F. M. Bayomy, M. Santi, C. W. Clawson</i>	
<b>Integrating Traditional Characterization Techniques in Mechanistic Pavement Design Approaches</b> .....	596
<i>A. A. Araya, M. Huurman, A. Molenaar</i>	
<b>Effects of Asphalt Pavement Instrumentation on In Situ Density</b> .....	607
<i>Fabricio Leiva-Villacorta, David H. Timm</i>	
<b>Flexible Pavement Quality Assurance Using Ground Penetrating Radar</b> .....	617
<i>Z. Leng, I. Al-Qadi</i>	
<b>Evaluation of the Rolling Wheel Deflectometer as a Structural Pavement Assessment Tool in Louisiana</b> .....	628
<i>Mostafa A. Elseifi, Ahmed Abdel-Khalek, Kevin Gaspard, Zhongjie “Doc” Zhang, Said Ismail</i>	
<b>Evaluation of Recycled Asphalt Shingles in Hot Mix Asphalt</b> .....	638
<i>Shu Wei Goh, Zhanping You</i>	
<b>Structural Coefficients and Life-Cycle Cost</b> .....	646
<i>Kendra P. Davis, David H. Timm</i>	
<b>Impact of Pavement Surface Monitoring Frequency on Pavement Management Decision Making</b> .....	656
<i>S. W. Haider, G. Y. Baladi, K. Chatti</i>	
<b>Thermal Cracking Prediction Model and Software for Asphalt Pavements</b> .....	667
<i>Eshan V. Dave, Sofie Leon, K. Park</i>	

## VOLUME 2

<b>Use of Fractional Order Viscoelastic Models to Characterize Asphalt Concrete</b> .....	677
<i>Samer W. Katicha, Gerardo W. Flintsch</i>	
<b>Disk-Shaped Compact Tension Test for Plain Concrete</b> .....	688
<i>A. Amirkhanian, D. Spring, J. Roesler, K. Park, G. Paulino</i>	
<b>Influence of Alkali-Silica Reactions on Cracking in Concrete Pavements</b> .....	699
<i>R. Breitenbücher, C. Sievering</i>	
<b>Comparative Performance of Concrete Pavements with Recycled Concrete Aggregate (RCA) and Virgin Aggregate Subbases</b> .....	710
<i>Sunghwan Kim, Halil Ceylan, Kasthurirangan Gopalakrishnan, David J. White, Charles T. Jahren, Thang Huu Phan</i>	
<b>Green Initiatives at MnROAD</b> .....	720
<i>Timothy R. Clyne, Benjamin J. Worel, Melissa K. Cole</i>	
<b>Impact of Mixed Nitrogen Dioxide (NO<sub>2</sub>) and Nitrogen Oxide (NO) Gases on Titanium Dioxide Photodegradation of NO<sub>x</sub></b> .....	731
<i>Marion Schmitt, Heather Dylla, Marwa M. Hassan, L. Mohammad, Tyson Rupnow, Earle Wright</i>	
<b>Energy Harvesting from Pavements Using Pyroelectric Single Crystal and Nano-Composite Based Smart Materials</b> .....	741
<i>Sudip Bhattacharjee, Ashok K. Batra, Jacob Cain</i>	
<b>Laboratory Evaluation of Warm Mix Asphalt and Asphalt Mixtures with Recycled Materials</b> .....	751
<i>Qazi Aurangzeb, Jeff Kern, Hasan Ozer, I. Al-Qadi, Thomas G. Zehr, James S. Trepanier, William J. Pine</i>	
<b>Moisture Damage and Fatigue Cracking of Foamed Warm Mix Asphalt Using a Simple Laboratory Setup</b> .....	762
<i>Shu Wei Goh, Zhanping You</i>	
<b>A Field Investigation of the Effect of Pavement Type on Fuel Consumption</b> .....	772
<i>Imen Zaabar, K. Chatti</i>	

<b>Evaluation of Pavement Temperatures of Various Pavement Sections .....</b>	<b>782</b>
<i>Adriana Vargas-Nordbeck, David H. Timm</i>	
<b>Performance Evaluation of Lime and Cement Treated Soil Layers under Laboratory and Full Scale Accelerated Pavement Testing.....</b>	<b>792</b>
<i>Zhong Wu, Gavin Gautreau, Zhongjie Zhang</i>	
<b>Measurement and Modeling of Hydraulic Characteristics of Permeable Friction Course (PFC).....</b>	<b>803</b>
<i>J. Brandon Klenzendorf, Randall Charbeneau, Brad Eck, Michael Barrett</i>	
<b>The Influence of CTE on Jointed Concrete Pavement Performance Based on M-E Rigid Pavement Analysis.....</b>	<b>814</b>
<i>Raphael Kampmann, W. Virgil Ping, Michelle Roddenberry</i>	
<b>Speed and Temperature Effects on Full-Scale Pavement Responses in Non-Conventional Flexible Pavements.....</b>	<b>824</b>
<i>April L. Ellison, David H. Timm</i>	
<b>Effect of Construction Environment on JPCP Performance .....</b>	<b>834</b>
<i>Daba S. Gedafa, Taslima Khanum, Mustaque Hossain, G. Schieber</i>	
<b>Impact of Non-Uniform Aircraft Tire Pressure on Airfield Pavement Responses.....</b>	<b>844</b>
<i>Hao Wang, I. Al-Qadi</i>	
<b>Adhesion Properties of Tar-Containing Antiskid Surface Layers on Runways in Airfield.....</b>	<b>854</b>
<i>Y. Xiao, A. Molenaar, M. F. C. van de Ven, S. P. Wu, M. R. Poot</i>	
<b>Restoration of Data Collection System at Denver International Airport.....</b>	<b>864</b>
<i>Navneet Garg, David Brill, Chuck Teubert, Thomas Weinmann, Keith Johnson</i>	
<b>Flowable Fibrous Concrete for Thin Concrete Inlays .....</b>	<b>874</b>
<i>A. C. Bordelon, J. Roesler</i>	
<b>Estimation of Mechanical Characteristics of Cement Treated Demolition Waste .....</b>	<b>884</b>
<i>Dongxing Xuan, A. Molenaar, Lambert J. M. Houben, Zhonghe Shui</i>	
<b>Performance of Precast Concrete Pavements.....</b>	<b>894</b>
<i>S. Tayabji, N. Buch, D. Ye</i>	
<b>SHRP 2 Project R23—Development of Guidelines for the Design and Construction of Long Life Pavements Using Existing Pavements.....</b>	<b>908</b>
<i>N. C. Jackson, Joe P. Mahoney, Jason Puccinelli</i>	

## **SMART DEVELOPMENT AND SUSTAINABILITY**

<b>Behavioral Housing Search Choice Set Formation: A Hazard-Based Screening Model of Property Value and Work Distance .....</b>	<b>919</b>
<i>Taha H. Rashidi, Abolfazl (Kouros) Mohammadian</i>	
<b>An Analysis of Person-to-Person Car Sharing .....</b>	<b>938</b>
<i>R. C. Hampshire, C. Gaites</i>	
<b>Urban Development and Traffic Congestion.....</b>	<b>948</b>
<i>H. Levinson, J. C. Falcochio</i>	
<b>Relating Land Use and Transport Modeling with Transportation Asset Management .....</b>	<b>957</b>
<i>Luis Esteban Amador-Jiménez</i>	
<b>Case Study: Assessment of the Vulnerability of Port Authority of NY &amp; NJ Facilities to the Impacts of Climate Change.....</b>	<b>966</b>
<i>Brian J. McLaughlin, Scott D. Murrell, Susanne DesRoches</i>	
<b>Vegetated Roof Installations at O'Hare and Midway International Airports.....</b>	<b>977</b>
<i>Gene Peters</i>	
<b>Integrating Sustainability into Highway Projects: Sustainability Indicators and Assessment Tool for Michigan Roads .....</b>	<b>987</b>
<i>Krishna P. Dhakal, Jun S. Oh</i>	
<b>A Case Study of Transit-Oriented Transportation Development and Land Use in China.....</b>	<b>997</b>
<i>Enhui Yang, Yanjun Qiu, W. Virgil Ping</i>	
<b>Insights on the Determinants of Walk Trips Using Large Scale Travel Survey Data .....</b>	<b>1006</b>
<i>Catherine Morency, M. Trépanier, V. Tremblay, E. Poliquin</i>	
<b>Public Private Partnership: A Prospective in the Development of Sustainable Transport Infrastructures and Services in Bangladesh .....</b>	<b>1016</b>
<i>Md. Shoaib Chowdhury</i>	
<b>The Role of Access Management in Sustainable Development .....</b>	<b>1026</b>
<i>Kristine M. Williams, H. Levinson</i>	
<b>Sustainable Design Guideline Development for Infrastructure Projects .....</b>	<b>1036</b>
<i>Susanne DesRoches, Philip Cremin</i>	

<b>Applicability of Decorative Concrete Overlays as a Context Sensitive Solution for Transportation Infrastructure</b> .....	1046
<i>Leslie McCarthy, Jason Riegler, Ryan DaPonte, Aleksandra Radlinska</i>	
<b>Creating Fully Sustainable Walkable Communities with PRT (Personal Rapid Transit)</b> .....	1056
<i>Shannon Sanders McDonald</i>	

## **TRANSPORTATION OPERATIONS AND SAFETY**

<b>From Congestion to Reliability: Expanding the Horizon</b> .....	1066
<i>H. Levinson, R. Margiotta</i>	
<b>An Empirical Investigation of Motorcycle Ownership and Usage</b> .....	1075
<i>Konstantinos Kepaptsoglou, Christina Milioti, Zoi Christoforou, Matthew G. Karlaftis</i>	
<b>Slip Ramp Spacing Design for Truck Only Lanes Using Microscopic Simulation</b> .....	1085
<i>G. H. Bham, Manoj Vallati</i>	
<b>How Effective are “Flashing Yellow Arrow” Signals in Enhancing Safety?</b> .....	1096
<i>Srinivas S. Pulugurtha, Mahesh Agurla, Khamar Salma Chittoor Khader</i>	
<b>A Methodology for Assessing Safety Impacts of Highway Shoulder Paving</b> .....	1105
<i>Zongzhi Li, Sang Lee, Yongdoo Lee, Bei Zhou, Radhika Bamzai</i>	
<b>Opinions of Drivers on Seat Belt Use Based on Voluntary Responses</b> .....	1118
<i>Sunanda Dissanayake, Abhishek Parikh</i>	
<b>Driver Perceptions at Free Right-Turn Channelized Intersections</b> .....	1128
<i>Gregory S. Macfarlane, M. Saito, Grant G. Schultz</i>	
<b>Common or Variable Cycle Length Policy for a More Efficient Network Performance?</b> .....	1138
<i>Ali Hajbabaie, Rahim F. Benekohal</i>	
<b>Evaluation of Wireless Magnetometers for Vehicle Detection at Signalized Intersections</b> .....	1147
<i>Juan C. Medina, Ali Hajbabaie, Rahim F. Benekohal</i>	
<b>Genetic Algorithm Methodology to Optimize Signal Timing for Vehicle and Pedestrian Delays</b> .....	1157
<i>Zengyi Yang, Rahim F. Benekohal</i>	
<b>Comparison of Simulation-Based Dynamic Traffic Assignment Tools for Operations Management</b> .....	1167
<i>Ramachandran Balakrishna, Daniel Morgan, Qi Yang, Howard Slavin</i>	
<b>Comparing Data from Mobile and Static Traffic Sensors for Travel Time Assessment</b> .....	1178
<i>Nicolas Saunier, Catherine Morency</i>	
<b>Simulation and Analysis of Emergency Routing Planning Based on Vulnerability Identification of Urban Transportation Network</b> .....	1188
<i>Shi An, Na Cui, Jian Wang, Hang Yu</i>	
<b>Enhancing the Value of an Incidents Database with an Interactive Visualization Tool</b> .....	1206
<i>Catherine Morency, M. Trépanier, Nicolas Saunier, Jean-Philippe Akélaguélo</i>	
<b>An Exploratory Study of Speed Limit Compliance in Missouri Work Zones</b> .....	1216
<i>Mojtaba A. Mohammadi, G. H. Bham, Hadi Khazraee</i>	
<b>Speed Photo Enforcement Effects on Headways in Work Zones</b> .....	1226
<i>Ali Hajbabaie, Hani Ramezani, Rahim F. Benekohal</i>	
<b>Analysis of Single-Lane Roundabout Slip Lanes Using SIDRA</b> .....	1235
<i>Majed Al-Ghandour, William Rasdorf, Billy Williams, Bastian Schroeder</i>	
<b>An Evaluation of New Jersey Jug-Handle Intersection (NJJI) with and without Pre-Signals</b> .....	1245
<i>Md. Shoaib Chowdhury</i>	
<b>Non-Standard Roundabouts: Analysis of Problems</b> .....	1255
<i>F. Pinna, C. Piras</i>	
<b>Exploring Impacts of Factors Contributing to Injury Severity at Freeway Exit Ramps</b> .....	1266
<i>Zhenyu Wang, Jian J. Lu, Zhao Zhang</i>	
<b>Characteristics of the Work Zone Crashes</b> .....	1286
<i>Sreekanth Reddy Akepati, Sunanda Dissanayake</i>	
<b>Identification of Risk Factors Associated with Injury Severity of Work Zone Crashes</b> .....	1296
<i>Sreekanth Reddy Akepati, Sunanda Dissanayake</i>	
<b>Crash Estimation Models for Intersections</b> .....	1306
<i>Srinivas S. Pulugurtha, Anusha P. Nujjetty</i>	
<b>Geographically-Weighted Regression Models for Improved Predictability of Urban Intersection Vehicle Crashes</b> .....	1315
<i>Zongzhi Li, Yongdoo Lee, Sang Lee, Eirini Valiou</i>	
<b>Comparison of Contributory Causes of Fatal Truck and Non-Truck Crashes Using Bayesian Statistical Analysis</b> .....	1330
<i>Nishitha Bezwada, Sunanda Dissanayake</i>	
<b>Author Index</b>	