

Monday 25 August 2014

Morning Sessions I

<p>8:00-8:45 am Keynote Address <i>The Use of Sensing Technology and Applications to Improve the State of Good Repair of the United States Highway Infrastructure</i> Butch Waidelich, Federal Highway Administration</p>		
<p>Assessment of Fiber Reinforced Concrete Materials Chair: H. Wiggerhauser, BAM</p>		
<p>Pavement Evaluation I Chairs: H. Azari, The University of Texas at El Paso</p>		
<p>9:00 am</p>	<p>Non-Destructive Assessment of FRP-Concrete Bond R. Sen, G. Mullins, D. Winters, J. Aguilar, University of South Florida</p>	<p>Integration of GPR and Core Data Laboratory Testing to Determine the Causes of a Premature Pavement Failure C. Amer-Yahia, T. Majidzadeh, Resource International Inc.</p>
<p>9:30 am</p>	<p>Quality Control of Steel Fiber Reinforced Concrete Elements Using Electric Magnetic Methods S. Garrett, J. Popovics, University of Illinois</p>	<p>The Vibrations of a Highway Pavement Slab Y. Gong, X. Wang, Henan University</p>
<p>10:00 am</p>	<p>Composite Structural Components Using NDT Techniques U. Halabe, J.Kavi, H GangaRao, West Virginia University</p>	<p>Health Monitoring of Transportation Infrastructure Systems: Case Studies H. Ceylan, Iowa State University</p>
<p>10:30-10:45 am Break</p>		

Monday 25 August 2014 Morning Sessions II

	<p>In-Situ Assessment Methods: Chair: M. Sanayei, Tufts University</p>	<p>Bridge Structural Health Monitoring Chair: F. Moon, Drexel University</p>
11:15 am	<p>Embedded Ultrasound Sensors for Monitoring Concrete Monolithic Objects H. Wiggerhauser, J. Wolf, F. Mielentz, BAM</p>	<p>SHM to Support Preventive Maintenance of Transportation Structures J. Duke, Virginia Tech</p>
11:45 am	<p>Development of Nonlinear Acoustic Methods for In-Situ Assessment of Concrete Bridges P. Rivard, S. Kodjo, F. Moradi-Marani, University of Sherbrooke</p>	<p>Development and Validation of a Rapid Global Structural Assessment System J. DeVitis, D. Masceri, A. Aktan, F. Moon, Drexel University</p>
12:15 pm	<p>Comparison of Automated and Manual Methods for Correcting GPR Data to Compensate for Signal Amplitude Effects Caused by Rebar Depth Variation F. Romero, Romero NDT&E, C. Barnes, AMEC Environmental and Infrastructure</p>	<p>Structural Health Monitor of the US Grant Bridge M. Norouzi, V. Hunt, A. Helmicki, University of Cincinnati</p>
12:45-1:45 pm Lunch on own		

Monday 25 August 2014
Afternoon Sessions I

	<p>Innovative Methods for Civil Infrastructure Inspection Chair: G. Washer, University of Missouri</p>	<p>Role of NDE in Quality Assurance of Construction I Chair: S. Alampalli, New York State Department of Transportation</p>
1:45 pm	<p>Multispectral Aerial Imaging for Infrastructure Evaluation A. Ellenberg, S. Ye, F. Khan., E. Aktan, F. Moon, A. Kotsos, A. Pradhan, I. Bartoli, Drexel University</p>	<p>Monitoring and Inspecting Precast Piles with Carbon Fiber Reinforced Polymer (CFRP) Prestressing Cables during Cold-weather Casting J. Tanks, S. Sharp, C. Ozyildirim, VCTIR</p>
2:15 pm	<p>Concrete Inspection with Phased Array and Nonlinear Penetrating Radar D. Huston, D. Burns, J. Razinger, T. Xia, University of Vermont</p>	<p>Nonintrusive Inspection of a Hospital Foundation in Galle, Sri Lanka E. Niederleithinger, R. Feldmann, BAM; M. Seidel, GITEC Consult GmbH</p>
2:45 pm	<p>EScan: Detecting Grouting Defects in External PT and UScan: Detecting PT Anchorage Flaws S. Schorn, Advitam Inc.</p>	<p>Bracing Stiffness Assessment of Composite Bridges During Construction by Nondestructive Vibration Tests H. Mehri, A. Sjöström, D. Bard, E. Frühwald, R. Crocetti, Structural Engineering Lund University</p>
<p>3:15-3:30 pm Break</p>		

Monday 25 August 2014 Afternoon Sessions II

	<p>Recent Innovations in Noncontact Sensors Chair: J. Popovics, University of Illinois Urbana Champaign</p>	<p>Reliability of Inspection and Optimization Techniques Chair: J. Duke, FHWA/Virginia Tech</p>
3:30 pm	<p>Ultra-High Accuracy Laser Measurements on an Adjacent Box Beam Bridge P. Fuchs, Fuchs Consulting Inc.; S. Chase, University of Virginia; Y. Zhou, URS Corporation</p>	<p>Target Reliability Model S. Ghasemi, A. Nowak, Auburn University</p>
4:00 pm	<p>Visualization of Internal Damage in Full-scale Reinforced Concrete Columns Subjected to Dynamic Loads H. Choi, J. Popovics, University of Illinois Urbana Champaign</p>	<p>Application of NDE Technologies in Risk-Based Inspection (RBI) G. Washer, M. Nasrollahi, University of Missouri Columbia</p>
4:30 pm	<p>Fully Contactless Ultrasonic System to Characterize Concrete Structure with Guided Wave Approach and Energy Attenuation S. Ham, J. Popovics, University of Illinois Urbana Champaign</p>	<p>Evaluation of NDE Survey Effectiveness based on Sampling Frequency B. Pailles, N. Gucunski, Rutgers University</p>
5:00 pm	<p>Comparison of Ground-Coupled and Air-Launched Ground Penetrating Radar Methods for Bridge Deck Condition Evaluation K. Maser, E. Guarino, Infrasense; N. Martino, Roger Williams University; R. Roberts, Geophysical Survey Systems Inc.</p>	<p>Optimal Sensor Placement for Condition Assessment of a Cantilever Truss Bridge N. Dubbs, Intelligent Infrastructure Systems; M. Yarnold, Tennessee Tech University</p>

Tuesday 26 August 2014
Morning Sessions I

	<p>Reliability of Detection Chair: G. Washer, University of Missouri</p>	<p>Role of NDE in Quality Assurance of Construction II Chair: M. Brown, Virginia Center for Transportation Innovation and Research</p>
8:00 am	<p>Performance of NDE Technologies in Condition Assessment of Prestressed Concrete Girders N. Gucunski, C. Mazzotta, S. Kee, B. Pailes, Rutgers University; SK Lee, SK Lee and Associates; R. Zobel, Federal Highway Administration</p>	<p>SlotStress: In-Situ Concrete Investigations S. Schorn, Advitam Inc</p>
8:30 am	<p>Validation and Comparison of High-Resolution Ground-Coupled and Air-Launched (Horn) GPR Data with other NDTE Maps, Repairs, and Cores F. Romero, Romero NDT & E; C. Barnes, AMEC</p>	<p>Feasibility of 3D in Non-Contact Quantification of Constructed Civil Structural Deflection F. Dai, E. Rogers, H. Chen, West Virginia University</p>
9:00 am	<p>An Investigation of Correlation between Condition Assessment Based on Visual Inspection and NDE of Reinforced Concrete Bridges F. Masoumi, F. Akgül, Middle East Technical University</p>	<p>Field Survey on the Construction Quality of Prestressed Concrete Box Girder W. Wu, Southeast University China</p>
<p>9:30-10:00 am Break</p>		

Tuesday 26 August 2014

Morning Sessions II

	<p>Pavement Evaluation II Chair: S. Boone, FDH Engineering</p>	<p>Role of NDE in Assessing Prestressed and Post-Tensioned Members Chair: A. Ghorbanpoor, University of Wisconsin-Milwaukee</p>
10:00 am	<p>Pavement Moduli and Condition Assessment with Light Weight Deflectometer and Surface Waves NDE L. Olson, P. Miller, Y. Tinkey, Olson Engineering Inc.</p>	<p>Grouting Defects Localized by Ultrasonic Testing Including Phase Evaluation S. Schulze, Hupfer Ingenieure; M. Krause, B. Redmer, H. Wiggerhauser, BAM; K. Mayer, University of Kassel</p>
10:30 am	<p>NDT Based Inverse Analysis Tool for Rapid Condition Assessment of Iowa Pavement Systems H. Ceylan, Iowa State University</p>	<p>A Corrosion Monitoring System for Post-Tensioned Structures by Guided Ultrasonic Waves S. Salamone, A. Farhidzadeh, University at Buffalo</p>
11:00 am	<p>Inexpensive Pavement Condition Assessment System M. Jahanshahi, Jet Propulsion Laboratory; Y. Chen, P. Manjunatha, S. Masri, B. Becerik-Gerber, University of Southern California</p>	<p>Determination of Grouting Defects in "Deep" PT Ducts using Gamma Rays M. Mariscotti, P. Thieberger, M. Ruffolo, T. Frigerio, J. Boselli, THASA</p>
11:30 am	<p>Effect of Surface Moisture on GPR Signal Collected from Asphalt Pavement I. Al-Qadi, P. Shangguan, University of Illinois Urbana Champaign</p>	<p>Nondestructive Testing of Post Tensioned Anchor Rods B. Lindyberg, FDH Engineering, Inc.</p>
<p>12:00-1:30 pm Lunch in the Exhibit Hall</p>		

Tuesday 26 August 2014
Afternoon Sessions I

	<p>Evaluation of Steel Elements Chair: B. Via, Virginia Department of Transportation</p>	<p>Recent Innovations in Analysis Techniques I Chair: M. Miceli, Miceli Infrastructure Consulting, LLC</p>
1:30 pm	<p>Ultrasonic Stress Measurements in Plates G. Washer, S. Brooks, University of Missouri; P. Fuchs, Fuchs Consulting Inc.</p>	<p>Full-Field Visualization Techniques for High Density Ultrasound Measurements C. Ferraro, University of Florida</p>
2:00 pm	<p>Applications of PAUT to Save Costs and Improve Inspection Reliability P. Furr, M. Davis, C. Dickinson, University of Ultrasonics</p>	<p>Damage Detection of Bridges with the Moving-Window Least Squares Fitting Method Z. Lin, Y. Huang, North Dakota State University; M. Fakharifar, G. Chen, Missouri University of Science and Tech; Z. Wang, Hefei University of Technology</p>
2:30 pm	<p>Time of Flight Diffraction for Inspection of Butt and Transition Butt Weld Connections P. Haldipur, Federal Highway Administration</p>	<p>Dynamic Response Simulation of Steel Bridges under Truck Load G. Zhao, C. Fu, Y. Ye, University of Maryland College Park</p>
<p>3:00-3:30 pm Refreshment Break in the Exhibit Hall</p>		

Tuesday 26 August 2014
Afternoon Sessions II

	<p>Innovative Sensors for Civil Infrastructure Chair: A. Maher, Rutgers University</p>	<p>Substructure Evaluation Chair: H. Azari, The University of Texas at El Paso</p>
3:30 pm	<p>Structural Damage Detection using Ambient Vibrations J. Tadros, Kansas State University</p>	<p>Quantifying NDT Test Results for Structural Piling D. Holt, FDH Engineering, Inc.</p>
4:00 pm	<p>Development of an Integrated Structural Health Monitoring System for Pairing Fatigue Damage Estimations with FHWA Condition Ratings T. Saad, C. Fu, University of Maryland</p>	<p>Development of Methodology for Inspecting Bridge Foundation using Sonic Echo S. Rashidyan, A. Maji, T. Ng, University of New Mexico; M. Mann, NMDOT</p>
4:30 pm	<p>A new Integrated Eddy Current Sensor for Crack Monitoring in SHM Applications B. Revaz, Sensima Inspection</p>	<p>Laboratory Development of a Borehold Ultrasound NDT Method to Evaluate Bridge Foundations J. Coe, L. Sybrandy, Temple University; B. Kermani, The Pennsylvania State University</p>
5:00 pm	<p>Corrosion Monitoring of Steel Rebar by Long Period Fiber Grating Sensors Coated with a Thin Fe-C Layer G. Chen, Y. Chen, F. Tang, V. Bao, Y. Tang, Missouri University of S&T</p>	<p>Microwave SAR Imaging for NDE of Mechanically Stabilized Earth Walls G. Chen, M. Ghasr, K. Ying, Y. Bao, R. Zoughi, Missouri University of S&T</p>

Wednesday 27 August 2014

Morning Sessions I

	<p>Scout Evaluation and Underwater Monitoring Chair: S. Boone, FDH Engineering</p>	<p>Recent Innovations in Analysis Techniques II Chair: M. Miceli, Miceli Infrastructure Consulting, LLC</p>
8:00 am	<p>Reliability of Underwater Acoustic Imagine and Underwater Ultrasonic Testing T. Browne, R. Forsyth, Collins Engineers Inc.; T. Consi, University of Wisconsin Milwaukee</p>	<p>A Fast Damage Detection Method of City Viaduct Based on Long-Guage FBG Data Under Nominal Moving Vehicle Loads S. Li, Z. Xu, S. Wang, Z. Wu, F. Yuan, C. Wan, Southeast University</p>
8:30 am	<p>Semi-active Smart Rocks for Bridge Scour Monitoring G. Chen, Y. Tang, A. Radchenko, B. Schafer, Y. Chen, D. Pommerenke, Missouri University of S&T</p>	<p>Use of Stochastic Subspace Identification in Bridge Health Monitoring, and Statistical Analysis of Effects of Temperature Fluctuations on Frequencies S. Xing, McDermott Inc.; M. Halling, Utah State University</p>
9:00 am	<p>A New Method of Scour Inspection, Monitoring and Warning: FRA Case Study C. Kavars, SENSR, Inc.; M. Miceli, Miceli Infrastructure Consulting, LLC</p>	<p>System Identification of a Concrete Bridge by Forced-Vibration Testing N. Zolghardri, M. Halling, P. Barr, N. Foust, Utah State University</p>
9:30-10:00 am Break		

Wednesday 27 August 2014
Morning Sessions II

	<p>Combined NDE Methods and Data Fusion Chair: N. Gucunski, Rutgers University</p>	<p>Institutional Barriers to Implementation of NDE and SHM Chair: M. Halling, Utah State University</p>
10:00 am	<p>Integration and Verification of NDT Technologies for Condition Assessment of Concrete Bridge Decks: A Case Study M. Celaya, K. Tabrizi, Advanced Infrastructure Design; T. Schumacher, University of Delaware; G. Bitsko, Cherry Weber & Associates; P. Shokouhi, FIMR</p>	<p>Challenges Faced by State Transportation Agencies: Backgrounds and Solutions N. Choy, D. Speer, J. Gramlick, California Department of Transportation</p>
10:30 am	<p>Multi NDE Technology Condition Assessment of Concrete Bridge Decks by RABIT™ Platform N. Gucunski, B. Basily, S. Kee, H. La, R. Lim, H. Parvardeh, A. Maher, Rutgers University; H. Ghasemi, Federal Highway Administration</p>	<p>Development of NDE Training for Civil Infrastructure T. Browne, Collins Engineers, Inc.</p>
11:00 am	<p>Lessons Learned from Nondestructive Testing of Concrete Structures with Complementary Stress Wave-Based Methods H. Azari, S. Nazarian, The University of Texas at El Paso</p>	<p>Challenges to Successful Implementation of SHM N. Dubbs, J. Weidner, Intelligent Infrastructure Systems; M. Yarnold, Tennessee Tech University</p>
11:30 am	<p>Enabling Robotic Structural Inspection Through Computer Vision D. Lattanzi, George Mason University</p>	<p>Sense and Cents from Sensors P. Vanderzee, LifeSpan Technologies</p>
<p>12:00-1:30 pm Lunch on own</p>		

Wednesday 27 August 2014
Afternoon Sessions I

	<p>Cable Evaluation Chair: A. Agrawal, City College of New York</p>	<p>Assessment of Structural Concrete Materials Chair: C. Ferraro, University of Florida</p>
1:30 pm	<p>Long Term Maintenance of the Main Cables of Anthony Wayne Suspension Bridge D. Nims, University of Toledo</p>	<p>Simulating the Attention of Field Collected GPR Signals of Carious Reinforced Concrete Bridge Decks N. Martino, Roger Williams University; K. Maser, Infrasense, Inc.; R. Birken, Northwestern University</p>
2:00 pm	<p>Construction Control of Steel Truss Tied Arch with Suspended Cables Tensioning Measurements D. Yang, S. Chen, D. Lu, Harbin Institute of Technology</p>	<p>Evaluation of the Q-factor as a Metric for Distributed Damage in Concrete R. Livingston, A. Amde, University of Maryland; N. McMorris, University of Technology Jamaica</p>
2:30 pm	<p>NDE of Stay Cable Anchorage Zones S. Wyatt, C. Ligozio, A. Ciolko, KPFF</p>	<p>Corrosion Monitoring of a Massive Concrete Structure Exposed to Marine Environment using Embedded Corrosion Sensors S. Lee, SK Lee & Associates Inc.; J. Ahn, K. Kim, B. Jang, Korea Water Resources Corporation</p>
<p>3:00-3:30 pm Break</p>		

Wednesday 27 August 2014
Afternoon Sessions II

	<p>Evaluation of Highway Infrastructure Chair: F. Ansari, University of Illinois at Chicago</p>	<p>Evaluation of Bridge Decks Chair: H. Ghasemi, Federal Highway Administration</p>
3:30 pm	<p>Evaluation of Fatigue Prone Details Using Low Cost Thermoplastic Stress Analysis S. Chase, A. Yaw, University of Virginia; P. Fuchs, FCI Consulting</p>	<p>NDE vs. NBI: Implications for Deck Maintenance and Rehabilitation K. Maser, A. Carmichael, Infrasense ; J. Stevenson, NTH Consultants Ltd.</p>
4:00 pm	<p>Visual Image Correlation for Bridge Displacement Measurement E. Bell, University of New Hampshire; J. Peddle, SPS New England</p>	<p>A Probability-Based Definition for Non-Destructive Bridge Deck Deterioration Evaluation T. Zou, C. Moen, Virginia Tech</p>
4:30 pm	<p>Condition Assessment of Concrete Piers with Tomographic Imaging P. Fisk, K. Holster, NDT Corporation</p>	<p>Field Evaluation of Bridge Coating Using Active Thermography S. Chase, University of Virginia; P. Fuchs, FCI Consulting</p>
5:00 pm	<p>NDE of Concrete Barriers for Internal Defects and Corrosion N. Rende, Wiss Janney Elstner Associates WJE</p>	<p>Collecting Bridge Deck Condition Data Using Optical and Thermal Cameras from a Single Vehicle Platform at Near Highway Speeds R. Dobson, T. Ahlborn, C. Brooks, Michigan Tech University; J. Ruohonen, G. Howard, BridgeGuard Inc.</p>