

Sunday, January 11, 2015, 9:00 am to 12:00 pm (noon), Convention Center, Washington D.C.

### **Sensing Technologies for Transportation Applications**

Colin Brooks, Michigan Tech Research Institute (MTRI), presiding

*Co-Sponsored by the Committee on Information Systems and Technology (ABJ50) and the Committee on Geographic Information Science and Applications (ABJ60)*

This workshop continues a series on practical uses of sensing technologies for transportation planning, management, and operations. Technologies to be covered include both remote sensing and in-situ sensors, and from satellites to vehicle cameras. The workshop brings together researchers and practitioners to share results of their efforts with broader communities and discuss future research needs and applications. Presentations will focus on the broader application of these developing tools.

#### ***Speakers, affiliations, talk titles, and co-authors:***

1. Yuanchang Xie, University of Massachusetts Lowell, [yuanchang\\_xie@uml.edu](mailto:yuanchang_xie@uml.edu) - "Identification of Hanging-Ties Using 'Moving Deflection Spectrum'". Co-Authors: Xuecheng Bian, Yin Gao, Hai Huang.
2. Linbing Wang, Virginia Tech, [wangl@vt.edu](mailto:wangl@vt.edu) - "Self-Powered Sensing of Pavement Responses".
3. Richard Dobson, Michigan Tech Research Institute (MTRI), [rjdobson@mtu.edu](mailto:rjdobson@mtu.edu) - "Demonstrations for implementation of the Unsurfaced Road Condition Assessment System" Co-Authors: Colin Brooks, Chris Roussi, Tim Colling, David Dean, Joe Garbarino, David Banach, Valerie Lefler.
4. Srinivas Pulugurtha, The University of North Carolina at Charlotte, [sspulugurtha@uncc.edu](mailto:sspulugurtha@uncc.edu) - "Decision Support and Visualization Tools for Reliable Transportation Systems Planning". Co-Authors: Venkata R. Duddu, Kamalkannan Elangovan.
5. Jarlath O'Neil-Dunne, University of Vermont, [Jarlath.ONeil-Dunne@uvm.edu](mailto:Jarlath.ONeil-Dunne@uvm.edu) - "Commercial Unmanned Aerial Systems for Transportation Decision Support". Co-Authors: Sean MacFaden, Adam Zylka, Zachary Borst, James Sullivan, and Amanda Hanaway-Corrente
6. Thomas Oommen, Michigan Technological University, [toommen@mtu.edu](mailto:toommen@mtu.edu) - "Sustainable Geotechnical Asset Management along the Transportation Infrastructure Environment Using Remote Sensing". Co-Authors: Rudiger Escobar-Wolf, Hachemi Bouali, Daniel Cerminaro, Rick Dobson, Adrian Bohane, Colin Brooks, Stan Vitton, Keith Cunningham, and Pasi Lautala.
7. Keith Cunningham, University of Alaska Fairbanks, [kwcunningham@alaska.edu](mailto:kwcunningham@alaska.edu) - "Optical and infrared imaging with UAVs to monitor permafrost thaw & soil stability in Alaska".
8. Brian Bruckno, Virginia Department of Transportation, [brian.bruckno@vdot.virginia.gov](mailto:brian.bruckno@vdot.virginia.gov) - "Integration and Delivery of Interferometric Synthetic Aperture Radar Data Into Transportation Planning" - Co-Authors: Edward Hoppe, Scott Acton, Andrea Vaccari, Elizabeth Campbell.
9. Ye (Sarah) Sun, Michigan Technological University, [yes@mtu.edu](mailto:yes@mtu.edu) - "Self-powered vibration measurement for bridge scour monitoring." Co-Authors: Andrew Swartz, Ting Bao, and Zhen Liu.
10. Randy Hanson, International Road Dynamics, Inc. (IRD), [randy.hanson@irdinc.com](mailto:randy.hanson@irdinc.com) - "VectorSense Sensor Suite 5<sup>th</sup> Generation In-Road Technology".

Session Type: Workshop (W)

TRB 2015 workshop page: <http://pressamp.trb.org/conferences/programs/default.asp?event=766>

Subject Areas: Data and Information Technology

Note: Each talk is 15 minutes in length.

*Subcommittee webpage is located at:* <http://www.abj50.org/subcommittees/sensing-technologies/>