CREATING ITS IMPLEMENTATION SOLUTIONS FOR ALL COMMUNITIES

2018 National Rural ITS and ITS Arizona Annual Conference + Exhibit
October 21-24, 2018 | We-Ko-Pa Conference Center | Fort McDowell, AZ

Registration Brochure
Register by September 7 to Save $!
Creating ITS Implementation Solutions for All Communities

Experience the Future of Transportation in Arizona this October! Come to the Valley of the Sun

The National Rural ITS and ITS Arizona Annual Conference + Exhibit will provide participants a one-stop resource focusing on intelligent transportation systems (ITS) implementation in local communities and the opportunity to hear new and thoughtful perspectives on a wide variety of ITS topics. ITS improves transportation safety and mobility and enhances productivity by integrating advanced communication technologies into vehicles and infrastructure. In addition to traditional ITS topics of interest to transportation professionals, this event will bring together both traditional and non-traditional users to address such issues affecting rural and small communities including:

- Supporting Tourism and Special Events: Traveler Information, Parking and More...
- Connected Vehicle and Infrastructure Applications
- Rural ITS Weather Applications (Snow, Ice, Fog and Flood and Dust)
- Rural and Small Community Traffic Management Technology – Traffic Signals and More
- Rural Traffic Incident and Emergency Management Strategies
- Freight ITS in Rural Corridors
- What Gets Measured, Gets Done: Performance Metrics
- Next Generation ITS Technology Today
- Big Data – All Communities Large and Small
- Urban | Rural and in between: ITS Planning and Innovative Project Funding
- Technologies to Support More Effective Emergency Response
- ITS Safety Initiatives
- Multimodal Transportation Technology (Light Rail, Bus, Bicycles, Pedestrians, Commuter Rail)
- Developing and Maintaining Public Sector Resources and Work Force
- Using Technology to Solve Tribal Transportation Issues
- Applications to Improve Reliability of Freeways and Arterial Operations
- Educating the Public About Talking Cars

This conference accommodates a multitude of learning styles all designed to enhance and enrich your experience. The many different training and networking opportunities available through this event will provide participants with the tools necessary to effectively plan and deploy ITS technologies within their own jurisdictions.

Come to learn about creative ITS implementation solutions for your community. Public and private transportation, transit, tourism, enforcement, freight industry, public safety and medical service professionals engaged in the operations, maintenance, and use of our transportation system should attend this National Rural ITS and ITS Arizona Annual Conference + Exhibit. Elected and appointed officials, business and community leaders and emergency responders and public safety personnel will contribute to the rich dialogue while learning about the technical challenges facing the transportation community.

Make your plans now to join us in Arizona October 21-24 and join other thought leaders to make the National Rural ITS and ITS Arizona Conference + Exhibit the best ever!

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nritsinfo and @itehq
We have partnered with The YGS Group to sell our exhibit space and sponsorships for this conference. If you have questions about exhibiting or sponsorship, please contact Tima Good at (717) 430-2282 or tima.good@theygsgroup.com. Other questions regarding exhibiting and sponsorship can be directed to Pam Goodell at (202) 464-6228 or pgoodell@ite.org.

For information on becoming an exhibitor or sponsor, please see the 2018 Sponsor and Exhibitor Prospectus. http://bit.ly/NRITSSponsorship2018
AGENDA
Subject to Change

Sunday, October 21
7:00 a.m. – 4:00 p.m.
Exhibit Hall Move In
8:00 a.m. – 12:00 p.m.
NRITS Steering Committee Business Meeting
1:00 – 5:00 p.m.
Workshop: Developing a Plan for Deploying a Connected Vehicle Environment*
Workshop: National SPaT Challenge Workshop: Goals, Concepts and Resources*
6:00 – 7:30 p.m.
Welcome Reception

Monday, October 22
7:30 a.m. – 5:00 p.m.
Exhibit Hall Open
7:30 – 8:30 a.m.
Breakfast in Exhibit Hall
8:30 – 10:00 a.m.
Opening Plenary
10:00 – 10:30 a.m.
Beverage and Networking Break in Exhibit Hall
10:30 a.m. – 12:00 p.m.
Technical Sessions
12:00 – 1:00 p.m.
Lunch in Exhibit Hall
1:15 – 2:45 p.m.
Technical Sessions
2:45 – 3:30 p.m.
Beverage and Networking Break in Exhibit Hall
3:30 – 5:00 p.m.
Technical Sessions

Tuesday, October 23
7:30 a.m. – 3:30 p.m.
Exhibit Hall Open
7:30 – 8:30 a.m.
Breakfast in Exhibit Hall
8:30 – 10:00 a.m.
Technical Sessions
10:00 – 10:45 a.m.
Beverage and Networking Break in Exhibit Hall
10:45 a.m. – 12:00 p.m.
Technical Sessions
12:00 – 1:00 p.m.
Lunch in Exhibit Hall
1:15 – 2:45 p.m.
ITS Arizona 25th Anniversary Plenary
2:45 – 3:30 p.m.
Beverage and Networking Break in Exhibit Hall
3:30 – 5:00 p.m.
Technical Sessions

Wednesday, October 24
7:30 – 8:30 a.m.
Breakfast in Courtyard Plaza
8:30 – 10:00 a.m.
Technical Sessions
10:00 – 10:30 a.m.
Break in Courtyard Plaza
10:30 a.m. – 12:00 p.m.
Closing Plenary
1:00 – 5:00 p.m.
Workshop: Smarter Work Zones*

*Separate Fee Required

Pathways
Pathways are designed to facilitate the identification of plenary and technical sessions, workshops, and technical tours of greatest interest to you. Look for icons designating the following pathways:

F Freight
I Implementation
LM Leadership / Management
TS Operations
PD Planning / Design
S Safety

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nritsinfo and @itehq
The headquarters hotel for the 2018 NRITS/ITS Arizona Conference + Exhibit is the We-Ko-Pa Resort and Conference Center, 10438 North Fort McDowell Road, Fort McDowell, AZ. Located only 20 minutes east from the Phoenix Sky Harbor International Airport, the property features spectacular views of Arizona’s majestic Four Peaks and iconic Red Mountains alongside the free-flowing Verde River.

**Hotel Reservations:**

**Group Rate:**

Meeting attendees are eligible to receive the specially negotiated group rate of $145. These rates are exclusive of applicable fees. A limited number of rooms have been reserved at the prevailing government rate.

For reservations, call 480-789-5300 or visit http://www.nationalruralitsconference.org/event/2018-event-info/acommodations. Please identify yourself as part of the 2018 NRITS conference to ensure you receive the low contracted group rate.

---

**ACCOMMODATIONS**

National Dialogue on Highway Automation

Attendees at the Annual Conference + Exhibit are welcome to attend the National Dialogue on Highway Automation that will follow the conference the afternoon of Wednesday, October 24 and Thursday, October 25. The Federal Highway Administration (FHWA) is initiating a national conversation with partners and stakeholders, as well as the public at-large, to receive broad input on key areas of interest and prepare FHWA programs and policies to incorporate automation considerations. The meeting will be held to facilitate information sharing, identify key issues and prepare the infrastructure and the broader transportation community to safely and efficiently integrate automated vehicles into the road network. The focus of this meeting is operations and will survey the range of operations challenges from highway automation and initiate a discussion on what further research is necessary to address them. These challenges may include incident management and system inefficiency that may have implications on traffic patterns and roadway capacity. For more information see: https://ops.fhwa.dot.gov/automationdialogue/index.htm
Please join us this fall in Fort McDowell, Arizona for the National Rural ITS / ITS Arizona Annual Conference + Exhibit. We are pleased to be partnering with the ITS Arizona this year to create a truly welcoming atmosphere for attendees to learn and network. This partnership is particularly special this year as it is ITS Arizona’s 25th Anniversary and we look forward to celebrating this milestone as part of this conference.

The National Rural ITS / ITS Arizona Annual Conference + Exhibit offers an exciting and strong technical program and the diversity of delegates that is sure to surprise you. If you haven’t attended NRITS for a while, come and experience our new energy. Those who typically attend the annual ITS Arizona conference will have the opportunity to experience national conference, attendees, and exhibitors.

This year’s program will showcase a wide range of topics, tours and workshops impacting our profession both today and tomorrow. Hear about the latest in ITS technology innovation applied to rural and small communities as well as topics of interest to Arizona professionals. Come prepared to contribute your ideas and share your passion so that transportation technology continues to play an integral role in the development of safe and reliable transportation systems for communities of all sizes.

We hope you find your annual conference experience to be fun, memorable and, most importantly, informative and that you enjoy the opportunity to catch up with colleagues and make new friends.

We look forward to seeing you in Arizona in October.

Steve Albert
Chair National Rural ITS Steering Committee

Kim Carroll
President, ITS Arizona

Opening Plenary Session,
Monday, October 22,
8:30 – 10:00 a.m.

Our keynote speaker is Mr. John Halikowski, Director of the Arizona Department of Transportation. John will share his perspective on the promise of advanced ITS technologies and the challenges to our organizations to lead and deploy them in a meaningful way in collaboration with the private sector. Appointed in 2009, John is one of the longest tenured leaders of a State DOT. He leads an agency responsible for planning, building and maintaining the State’s multimodal transportation system, managing transportation revenue, and providing motor vehicle title, registration, and driver license services. Prior to his executive role with Arizona DOT, John refined his transportation policy expertise during 12 years as the director of research at the Arizona House of Representatives, where he researched, presented and drafted major transportation-related legislation in collaboration with constituencies most affected by policy changes. John put this experience to work for the State through an additional six years of leadership with the Arizona DOT Motor Vehicle Division, driving executive team decision-making to achieve exceptional customer service as deputy director and operations chief. In addition, he has served in technical leadership roles with the Transportation Research Board and American Association of State Highway and Transportation Officials.

ITS Arizona 25th Anniversary Plenary,
Tuesday October 23,
1:15 – 2:45 p.m.

ITS Arizona was founded in 1994 by a team of transportation professionals with the vision and dedication to improving our transportation system operations and safety. Our membership has grown to over 300 members, including public agencies, private corporations and academic institutions. We are excited to be celebrating our 25th Anniversary at this year’s 2018 joint conference with NRITS. As part of this event, we will recognize the dedication and leadership of ITS Arizona past presidents and present board, our members, exhibitors/sponsors, volunteers, and those who have contributed to ITS Arizona foundation and growth. Join us well we stroll down memory lane - where we came from, where we are, and where are we going.

Closing Plenary,
Wednesday, October 24,
10:30 a.m. – 12:00 p.m.

Be sure to stay to the end of this year’s meeting for an engaging conversation between Maricopa County Director Jennifer Toth and a special guest, as they discuss the implications of advanced technology on the future of transportation safety. What are the key factors that influence fatalities on our roadway system? What can we do now to drive fatality numbers down? What role will technology play in eventually eliminating fatalities altogether? These and other questions will be part of this provocative and forward-looking discussion.
Supporting Tourism and Special Events: Traveler Information, Parking and More...

Learn more about the examples of events managed by rural states and supporting ITS technologies that enable safe and efficient operations for the public.

- TransView Traveler Information System
  * Paul Casertano, Transportation Program Administrator, Pima Association of Governments, Tucson, AZ
  * Josh Pope, GIS Manager, Pima Association of Governments, Tucson, AZ

- How ITS Helps Music Bring Millions to a Rural Florida Community
  Susan O’Rourke, O’Rourke Engineering & Planning, Inc., Stuart, FL

- Major Event Management in the North/West Passage States
  * David Huft, Program Manager, South Dakota DOT, Pierre, SD
  * Cory Johnson, ITS Program Engineer/Traffic Research Director, Minnesota DOT, Roseville, MN

Utilizing ITS for Rural Road Safety

Is your agency looking for innovative solutions to your most common transportation safety challenges? Are you interested in using technology, but not sure which one best fits the needs of your rural area? Or maybe you’ve considered ITS before, but are afraid they are too expensive or only applicable in an urban setting? This session provides an overview of the 42 topics in the newly released Rural Intelligent Transportation System (ITS) Toolkit.

Facilitator:
Natalie Villwock-Witte, Assistant Research Professor/Research Engineer, Western Transportation Institute, Bozeman, MT

Roundtable on Rural ITS

This session will provide attendees with an overview of strategic issues facing the development and implementation of ITS rural and small communities as well as transferable lessons learned and a forward look at achievable outcomes.

Facilitator:
Steve Albert, Director, Western Transportation Institute, Bozeman, MT

When Cars Talk to the Road: Connected Vehicle and Infrastructure Applications

With technology applications to connect vehicles to roadway infrastructure advancing at a rapid rate this session provides perspective on the status and real world deployment.

- Keeping Up with the Rapid Evolution of CAV
  Stephen Kuciemba, National ITS Practice Leader, WSP, Baltimore, MD

- The Case for Improving Work Zone Management and Communications in a Highly Automated Driving World
  Eli Sherer, Director, Customer Projects North America, GEWI, Madison, CT

- Preparing for Connected Vehicle Deployment
  Robert Rausch, Vice President, Transcore, Richmond, TX

*Indicates invited speaker
**TECHNICAL PROGRAM**

**Monday, October 22**
1:15 – 2:45 p.m.

**Technologies to Support More Efficient Emergency Response**

Emergency responders rely on technology for their own safety and to improve outcomes for the people they serve. The session explores the connected technologies to improve emergency response.

- **Integrating Devices, People, Processes in Real Time**
  *Jack Jachner*, Vice President Cloud, Alcatel-Lucent Enterprise, Agoura Hills, CA

- **The Future of 511 Phone in the North/West Passage States**
  *Tony Ernest*, Travel Services Coordinator, Idaho Transportation Department, Boise, ID

- **Traffic Incident Management; Using ITS to Bridge the Gap Between Transportation Engineering and First Responders**
  *Rita Brohman*, Project Manager, Parsons Transportation Group, Roseville, CA
  *Major Tom Gallagher*, Emergency Transportation Operations Specialist, Parsons Transportation Group, Las Vegas, CA

**Addressing Rural Road Safety Using ITS Applications**

This session highlights rural safety projects where ITS has played a core role in supporting or measuring the success of safety outcomes.

- **Rural Safety Projects: Side Street Entrance, Curves, Icy Conditions, Bridge Decks**
  *Kevin Hanson*, Territory Manager, Idaho and Montana, Western Systems, Everett, WA

- **Statewide/Rural Safety Applications of Probe Data - Making a Difference in the Real World**
  *Rick Schuman*, Vice President, Public Sector, INRIX, Apopka, FL

- **Implementing Rural ITS in a Maintenance Environment**
  *Dennis Mitchell*, Senior ITS/Transportation Engineer, DKS Associates, Portland, OR

- **Using Urban Traffic Solutions to Manage Rural Queues**
  *Randy Johnson*, KC Scout Manager, Missouri DOT, Lee’s Summit, MO

**Educating the Public About Talking Cars (and Other ITS Technologies)**

Our profession is in the midst of a sea change of technologies that affect the planning, design, construction and operations of the transportation system. The session explores how we, as a profession, can discuss technology advances in a meaningful way with the public.

Facilitator:

*Mike Pina*, Program Manager Communications, ITS Joint Program Office, Washington, DC

**Highway Automation: What Do You Plan For?**

With terms like smart cities and smart communities dominating conference agendas and on-going press coverage, the world is becoming increasingly focused on the next generation of technology integration. This discussion panel will be centered on a subset of those concepts, one practical for transportation engineers and planners, the idea of smart infrastructure or highway automation. Furthermore the proliferation of automatic driving systems causes infrastructure owners to consider high-level planning and policy decisions, digital infrastructure and data approaches, infrastructure design and multimodal safety, operations, and freight accommodation. This session will build on input received through the FHWA national dialogue and supplement it with views from practicing professionals.

Facilitator:

*Eric Rensel*, Vice President, Gannett Fleming, Harrisburg, PA

Speakers

*John Corbin*, Transportation Specialist, Federal Highway Administration, Brookfield, WI
*Joseph Sagal*, Director, Office of CHART and ITS Development, Maryland State Highway Administration, Hanover, MD

*Mike Geertsen*, Industry Solutions Manager, Public Sector, Microsoft, Bellevue, WA
*Steven Olmsted*, Innovative Programs Manager, Environmental Planning, Arizona DOT, Phoenix, AZ
*Steven Latoski*, Director, Department of Public Works, Mohave County, Kingman, AZ

*Indicates invited speaker
Monday, October 22  
3:30 – 5:00 p.m.  

**Urban | Rural and In Between: ITS Planning and Innovative Project Funding**

This session explores key factors in advancing ITS projects to construction such as the development of master plans and system architectures.

- **Active Traffic Management in Michigan**  
  Jennifer Foley, Traffic and Operations Engineer, Michigan DOT, Jackson, MI  
  Stephanie Palmer, Traffic, Safety and Operations Engineer, Michigan DOT, Jackson, MI

- **2018 Arizona Statewide ITS Architecture**  
  *Sarah Simpson*, President, United Civil Group Corp., Phoenix, AZ  
  *Reza Karimvand*, System Technology Development Manager, Arizona DOT, Phoenix, AZ

- **Maricopa County Intelligent Transportation System Communication Master Plan**  
  Michael Wendtland, Founder, Redhawk Solutions, LLC, Phoenix, AZ  
  *LeShawn Charlton*, ITS Communications Specialist, Maricopa County DOT, Phoenix, AZ

**Rural Traffic Incident and Emergency Response Strategies**

This session highlights incident and emergency response approaches that have been implemented to improve outcomes in rural environments.

- **Successful Traffic Incident Management (TIM) Techniques – A Case Study The I-5/Joint Base Lewis-McChord Joint Operations Group (JBLM JOG) and I-5/Amtrak Train Derailment**  
  Tony Leingang, Freeway Operations Manager, Washington State DOT, Tacoma, WA

- **The Importance of Traffic Incident Management on Rural Roads**  
  Barbara Hauser, TMC Coordinator, Maricopa County DOT, Phoenix, AZ  
  Mark Brown, Incident Management Specialist, Maricopa County DOT, Phoenix, AZ

- **GDOT Rural and Coastal Georgia Incident and Emergency Management Strategies**  
  Roderick Ware, ITS Supervisor, Georgia DOT, Atlanta, GA

**Using Technology to Solve Tribal Transportation Issues**

This session provides an opportunity for a roundtable discussion between tribal transportation leaders, rural transportation agencies and consultants/industry representatives to connect needs, goal, and objectives to potential matching transportation technology resources.

**Multimodal Transportation Technology (Light Rail | Bus | Bicycles | Pedestrians | Commuter Rail) Part 1**

This session offers presentations on a variety of transit service and technology projects aimed at improving accessibility.

- **Improving Transit Operations Through Three Communities for PCTA and UMASS Transit**  
  *John Diaz*, Vice President, Greenman-Pedersen, Inc., Wilmington, MA  
  *Colin White*, Project Engineer, Greenman-Pedersen, Inc., Wilmington, MA

- **Phased Development of the Automated Demand Response Feeder Transit System in Rural Areas**  
  Amirreza Nickkar, Graduate Research Assistant, Morgan State University, Baltimore, MD

- **Wyoming Intercity Bus Service Study: Finding and Filling the Gaps in in Rural Areas**  
  David Kack, Program Manager, Mobility and Public Transportation, Western Transportation Institute, Bozeman, MT

*Indicates invited speaker

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nritsinfo and @itehq
TECHNICAL PROGRAM

Tuesday, October 23
8:30 – 10:00 a.m.

Rural and Small Community Traffic Management Technology -- Traffic Signals and More Part 1

In this session participants will learn about innovative applications of traffic signal control technology to improve safety and operations on rural roads.

• Preparing an Intersection for Variable Lane Use
  James Sellards, Senior Engineering Technician, Fehr & Peers, Sacramento, CA

• Evolution in the Use of Adaptive Signal Control Technology for Smaller Scale Applications
  Joseph Herr, Senior Engineering Manager, VHB, Watertown, MA
  Nicolette Hastings, Senior Transportation Engineer, VHB, Watertown, MA

• Intersection Conflict Warning Systems
  Eric Minge, Principal, SRF Consulting Group, Minneapolis, MN

• US 21 at Gilead Road Intersection Improvements: Improving Vehicular Capacity Through Innovative Improvements While Enhancing Multimodal Connections and Pedestrian Safety
  *Alex Wiseman, Engineering Specialist, STV, Inc., Charlotte, NC
  *Justin Carroll, Engineering Director - Transportation, STV, Inc., Charlotte, NC

Multimodal Transportation Technology (Light Rail | Bus | Bicycles | Pedestrians | Commuter Rail) Part 2

This session offers presentations on a variety of pedestrian and mobility technology projects aimed at improving safety and personal accessibility.

• Mobility on Demand Sandbox Project
  *Scott Miller, Transit Planning Section Manager/Associate Vice President, HDR, Phoenix, AZ
  *Carol Ketcherside, Deputy Director of Planning, Valley Metro, Phoenix, AZ

• Pedestrian Behavior at Highway-Rail Grade Crossings: An Observational Study of Factors Associated with Violations, Distraction, and Walking Speeds During Train Crossing Events
  Brendan Russo, Assistant Professor, Northern Arizona University, Flagstaff, AZ

• Addressing Bicycle-Vehicle Conflicts with Alternate Signal Control Strategies
  Edward Smaglik, Professor, Northern Arizona University, Flagstaff, AZ

What Gets Measured Gets Done: Performance Metrics

Performance management is an integral element to the MAP-21 national performance goals for the Federal highway programs administered by State DOTs and Metropolitan Planning Organizations (MPOs). This has an update on the guidance and discussion of the performance management tools that agencies are implementing.

• MAP-21 Visual Analytics to Support Performance Reporting
  Nikola Ivanov, Deputy Director, University of Maryland CATT Lab, College, Park, MD

• ATSPM Rural Applications – Arizona Experiences
  Jeffrey Jenq, Director, ITS Planning Operations and Research, OZ Engineering, Tempe, AZ
  April Wire, ITS Project Manager, Maricopa County DOT, Phoenix, AZ

• Update on Performance Management Guidance from the Federal Highway Administration
  Rich Taylor, Transportation Specialist, Federal Highway Administration, Washington, DC

Connected Vehicle Technology Pilot Program Overview and Open Source Apps

This session provides an overview of the Connect Vehicle Pilot Program with a focus on the Wyoming DOT rural deployment case which focuses on improving safety and travel reliability during extreme weather conditions on the freight corridor, I-80. In addition, there will be information presented on the open source app development such as Pikalert, ODE, and Github.

Facilitator:
Kate Hartman, Chief of Research, Evaluation and Management, Connected Vehicle Pilot Deployment Program Manager, ITS-Joint Program Office, USDOT, Washington, DC

*Indicates invited speaker

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nrirtsinfo and @itehq
Tuesday, October 23
10:45 a.m. – 12:00 p.m.

Rural and Small Community Traffic Management Technology – Traffic Signals and More Part 2

In this session participants will learn about innovative applications of traffic signal control technology to improve safety and operations on rural roads.

• Traffic Signal Upgrades in Rural Communities
  *Scott Beck*, Operational Traffic and Safety Manager, Arizona DOT, Phoenix, AZ

Adaptive Signal Control Technology for Rural Applications
- Lessons Learned from the Bell Road ASCT Project
  *April Wire*, ITS Project Manager, Maricopa County DOT, Phoenix, AZ

Alternative Energy at the Intersection
*Ryan Bullock*, Vice President, Cabinet Product Management, Econolite, Anaheim, CA

MIDAS: Proactive Traffic Control System for Diamond Interchanges
*Viswanth Potluri*, Research Associate, Arizona State University, Tempe, AZ

Freight ITS in Rural Corridors

This session explores the need and application of technology to improve freight safety, operations and information in rural areas. Much of the material in this topic area is in the domain of logistics companies and freight operators. However, with information, transportation agencies can assist these companies in meeting the objectives.

• Central Data Repository for Traffic Data Collection in Rural Areas and Corridors Supporting Freight Mobility
  *Michael Wieck*, Vice President ITS Data Solutions, International Road Dynamics, Centennial, CO

• Advanced Solutions for Truck Traveler Information and Parking
  *Matt Hanson*, Freight Research Project Manager, CalTrans, Sacramento, CA

Big Data -- All Communities Large and Small

Data, lots of it, is available through all of the devices we personally use or those our organizations deploy. This session explores approaches to make that data information to impact decision-making and outcomes for safety and operations.

• Beyond Roadside Traffic Counters: Breaking Big Data’s AADT Barrier
  *Laura Shewel*, President, Streetlight Data, San Francisco, CA

• Enhancing Traffic Safety and Mobility by Leveraging Big Data and Analytics
  *Farhad Pooran*, Vice President System Product Management, Econolite, Anaheim, CA

• Vehicle Trajectories for Improved Operations
  *Nikola Ivanov*, Deputy Director, University of Maryland CATT Lab, College, Park, MD

• Big Traffic Data and What You Should Know
  *John Shearer*, Sales Director, Eberle Design Inc., Phoenix, AZ

Connected Vehicle Technology into State’s Traffic Management Center (TMC) Daily Operations

Wyoming DOT successfully demonstrated to the USDOT and the media how messages from connected vehicles can be received by Wyoming’s TMC in Cheyenne and integrated into its traffic management and information dissemination activities. In addition, lessons learned from the development and demonstration will be shared.

Facilitator:
*Kate Hartman*, Chief of Research, Evaluation and Management, Connected Vehicle Pilot Deployment Program Manager, ITS-Joint Program Office, USDOT, Washington, DC

*Indicates invited speaker

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nritsinfo and @itehq
Technical Program

Tuesday, October 23
3:30 – 5:00 p.m.

Applications to Improve Reliability of Freeways and Arterial Operations

Freeways and arterial streets are the core of the National Highway System. This session will provide examples of applications to improve travel time reliability in these corridors.

- Optimizing Traffic Signals Using Multi-Source Data
  Xiaofeng Li, Graduate Research Assistant, University of Arizona, Tucson, AZ
  Yao-Jan Wu, Assistant Professor, University of Arizona, Tucson, AZ

- Transportation Systems Management & Operations (TSMO) in Rural Areas
  Joseph Gregory, Program Manager, SHRP2 Organizing for Operations, FHWA, Washington, DC

- MAG Systems Management and Operations Plan
  *Sarath Joshua, Senior Program Manager ITS And Safety, Maricopa Association of Governments, Phoenix, AZ
  Lisa Burgess, Vice President, Kimley-Horn, Phoenix, AZ

Using TSM&O to Successfully Integrate and Utilize Emerging Technologies: Panel Discussion of DOT Leaders

This panel session addresses ways in which transportation agencies can utilize the adoption of a holistic TSM&O program as a vehicle for also operating in a world in which connected and automated vehicles, and other emerging technologies, are fast becoming a reality.

Brent Cain, Division Director, TSM&O Division, Arizona DOT, Phoenix, AZ
Joseph Sagal, Director CHART & ITS Development, Maryland State Highway Administration, Hanover, MD
Tony Kratofil, Metro Region Engineer, Michigan DOT, Southfield, MI
Matthew Schiemer, Vice President Transportation Operations, Gannett-Fleming, Austin, TX

Rural ITS Weather Applications (Snow, Ice, Fog, Flood, and Dust) Part 1

Weather in all its forms affects the safety and reliability of the transportation system. This session provides participants with a mix of ITS application topics to improve conditions for the traveling public.

- Rural ITS Weather Application: Virginia’s I-77 Variable Speed Limit System for Low Visibility Conditions
  *Christopher D McDonald, Regional Operations Engineer, Virginia DOT, Salem, VA

- Bringing Automated RWIS Info to the Motorist
  *Todd Foster, Vice President of ITS Engineering, Ver-Mac, Inc., Saint Paul, MN

- Enhancing Highway Safety by Actively Warning Traffic of Adverse Road Conditions
  *Deniada Nikollari, Lead ITS Engineering, WSP, Detroit, MI
  *Garrett Dawe, Region Operations Engineer, Michigan DOT, Gaylord, MI

- Plow Camera and Location Sharing Practices
  Tony Ernest, Travel Services Coordinator, Idaho Transportation Department, Boise, ID

Integrating Connected Vehicle Technology into State Operations

Several State DOTs have started to implement CV technology into their TMC operations. Representatives from the Colorado, Nevada, Utah and Wyoming DOTs will share their experiences with respect to integrating the CV technology into the TMC operations, and discuss the different approaches and the roles of TMCs.

Facilitator:
Kate Hartman, Chief of Research, Evaluation and Management, Connected Vehicle Pilot Deployment Program Manager, ITS-Joint Program Office, USDOT, Washington, DC

*Indicates invited speaker

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nrirtsinfo and @itehq
Wednesday, October 24
8:30 – 10:00 a.m.

Developing and Maintaining Public Sector Resources and Work Force

Human resources and business processes are what allows an organization to meet its goals and objectives. This session explores a cross section of elements from education of the next generation to cyber security.

• Job Description Templates for TSMO Positions
  Lisa Burgess, Vice President, Kimley-Horn, Phoenix, AZ
  *Reza Karimvand, System Technology Development Manager, Arizona DOT, Phoenix, AZ

• TSMO Education in the Heartland
  Randy Johnson, KC Scout Manager, Missouri DOT, Lee’s Summit, MO

• Cost Effectiveness and Cyber Security—Improving Transportation Device and Application Security
  Lynne Randolph, Staff Engineer, Southwest Research Institute, San Antonio, TX

Next Generation ITS Technology Today

The session explores the opportunities and examples of the next generation of ITS technology across a variety of new and evolving application environments.

• ITS Solutions and the Real World
  *James Gilbert, Director of Operations, GBA Systems Integrators, LLC, Lenexa, KS

• Reading the Signs at MnDOT: Generating Roadwork Reports Automatically from GPS-Equipped Arrow Boards at Work Sites for Situational Awareness and Traveler Information
  *Kristen Virshbo, Chief Executive Officer, Castle Rock Consultants, Portland, OR
  *Jeremy Schroeder, Transportation Engineer, Athey Creek Consultants, Tacoma, WA

• Utah’s Smart Work Zone System Implementation
  David Haines, Project Manager, Kimley-Horn and Associates, Mesa, AZ
  Deanna Haase, Project Engineer, Kimley-Horn and Associates, Mesa, AZ

• Next Generation Mobility Management
  Robert Sheehan, Program Manager, Multimodal ITS Research and Deployment, ITS-JPO, Washington, DC
  *Murat Omay, Transportation Engineer, Federal Transit Administration, Washington, DC

Rural ITS Weather Applications (Snow, Ice, Fog, Flood, and Dust) Part 2

Weather in all its forms affects the safety and reliability of the transportation system. This session provides participants with a mix of ITS application topics to improve conditions for the traveling public.

• Caltrans Aviation Weather Information (AWI) from Surface Transportation and Concept to Aviation and Implementation
  *Douglas Galarus, Assistant Professor, Utah State University, Logan, UT
  *Derek Kantar, Aviation System Planner, Caltrans, Sacramento, CA

• Eastern Oregon Prioritizes ITS Solutions to Improve Safety Along a Rural Interstate
  Jim Peters, Principal/National Director for Transportation Technology

• Can A.I. Take Over Winter Road Condition Reporting?
  Sinclair Stolle, Traffic Management Systems Engineer, Iowa DOT, Ames, IA

• Arizona Pathfinder
  Mark Trennepohl, Statewide Road Weather Manager, Arizona DOT, Phoenix, AZ

Talking to Each Other: Connected Vehicle and Infrastructure Applications

This session presents focuses on the connected technology beyond vehicle to vehicle (V2V) to the extension to infrastructure (V2I) and the associated communications implications.

• Cloud-based Dynamic Warning System
  *Mohammad Smadi, Associate Research Fellow, North Dakota State University, Fargo, ND
  *Bradley Wentz, Program Director, North Dakota State University, Fargo, ND

• Quality of Service Protocol for Traffic Management in Vehicular Ad-Hoc Networks
  *Faezeh Mesbahi, Graduate Student, Florida Polytechnic University, Lakeland, FL

• The 5 Areas to Know and Prepare for V2V, V2I and I2V Communications
  *Darryl Keeton, President, Black Diamond Business Solutions, Phoenix, AZ

*Indicates invited speaker

For more information: http://www.nationalruralitsconference.org/. Follow us online at @nritsinfo and @itehq
**Technical Tours**

(separate fee required)

**Monday, October 22**
1:00 – 5:00 p.m.

**SmartDrive Test Bed**

The Maricopa County Department of Transportation, Arizona Department of Transportation and the University of Arizona have established a test bed in Anthem, Arizona to operationally field test connected and automated vehicle (CAV) technologies. The tour will showcase the connected vehicle technologies deployed at the test bed and demonstrate integrated transit, emergency and freight vehicle prioritization applications at traffic signals through communication between connected vehicles and Systematically Managed ARTerial (SMART) traffic systems to reduce delays and improve safety.

The tour will also feature the demonstration of a smartphone pedestrian application that informs pedestrians when to cross, and provides alerts that support the user to remain aligned within the crosswalk based on real-time traffic signal information.

Registration Fee: $40
Maximum number of participants: 35

**Wednesday, October 24**
1:00 – 5:00 p.m.

**Maricopa County DOT Traffic Management Center and Arizona DOT Traffic Operations Center**

The Maricopa County DOT Traffic Management Center and the Arizona DOT Traffic Operations Center are within a short distance of each other. This tour brings the opportunity to visit both for a behind the scenes look at how transportation and public safety are managed in a real time environment. Tour participants will hear about the operational approach to managing area transportation systems, an overview of the funding mechanisms and future plans.

Registration Fee: $40
Maximum number of participants: 35

---

**Workshops**

(separate fee required)

**Sunday, October 21**
1:00 – 5:00 p.m.

**Developing A Plan for Deploying A Connected Vehicle Environment**

This four-hour workshop is the third in a series of Connected Vehicle (CV) courses offered by the ITS JPO Professional Capacity Building program. The overall goal of the course is to teach participants how to develop an action plan in collaboration with regional partners to improve readiness for CV deployment. Participants will learn more about the safety, mobility, and applications and will gain an overview of three CV pilot sites in Wyoming, New York City, and Tampa. They will also learn how to identify funding sources for CV projects. Lastly, they will be made aware of recent activities supported by the ITS Joint Program Office and resources available from the US DOT-sponsored CV research program.

Registration fee: $50
Maximum number of participants: 30

**National SPaT Challenge Workshop: Goals, Concepts and Resources**

The National Signal Phase and Timing (SPaT) challenge goal is to encourage state or local agencies throughout the United States to deploy Dedicated Short Range Communications infrastructure with broadcasts of SPaT at approximately 20 intersection locations in each state by January 2020, typically in a corridor or network setting. Working with industry leaders through the Cooperative Automated Transportation Coalition, the SPaT Challenge Tactical Working Group with the National Operations Center of Excellence is providing this workshop to inform, communicate and share knowledge to the rural ITS community. The workshop will provide an overview of the challenge; resources for concept of operations, lessons learned, design, procurement and implementation and ways for participants to be able to encourage the deployment of Connected Vehicle applications in their organizations by starting with the broadcast of SPaT messages.

Registration fee: $50
Maximum number of participants: 30

**Wednesday, October 24**
1:00 – 5:00 p.m.

**Smarter Work Zones**

Stemming from the FHWA Every Day Counts initiative, Smarter Work Zones (SWZ) offer tools for effective traffic management during construction and are necessary to ensure motorist and worker safety, minimize travel delays, maintain access to local businesses and residences, and complete road work on time. This workshop will present technology applications such as queue management and speed management that involve deployment of Intelligent Transportation Systems (ITS) for dynamic management of work zone traffic. In addition, this workshop will provide an overview of the Work Zone Impacts and Strategies Estimator (WISE) software as well as other key aspects of different types of SWZ technology applications such as: Dynamic Lane Merge, Incident Management, Entering/Exiting Construction Vehicle Notification, and Performance Measurement.

Registration fee: $50
Maximum number of participants: 30

For more information: [http://www.nationalruralitsconference.org/](http://www.nationalruralitsconference.org/). Follow us online at @nritsinfo and @itehq
Registration is available online at http://www.nationalruralitsconference.org/.

Full payment must accompany your registration. Please make all checks payable to Institute of Transportation Engineers. If paying by credit card, register online or fax this form to +1 202-785-0609.

Full Registration includes access to all of the technical sessions and the Sunday Welcome Reception, continental breakfast Monday, Tuesday, and Wednesday, lunch on Monday and Tuesday, and networking breaks on Monday, Tuesday, and Wednesday.

Complete and return this registration form with the full amount required to register online. Incomplete forms will not be accepted, and discounted fees will not be honored for forms received after the indicated discount registration deadlines.

Mail this form along with payment to:
Institute of Transportation Engineers, Inc.,
P.O. Box 791493,
Baltimore, MD 21279-1493.

Questions? Please email sdollins@ite.org or + 202-785-0060 ext 149.

Federal Tax ID#: 53-0232732

Registration Cancellation Policy: If you cancel by September 7, ITE will refund the fee less a 25% administrative fee. No refunds will be made for cancellations received after September 7.

☐ Check here if you need to make special arrangements due to a disability and/or food allergies and/or dietary restriction. Please describe below:

Name ____________________________
Address ____________________________
City/State/Zip/Country ____________________________
Email ____________________________

Payment Information
Payment must accompany fully completed registration form. All remittances are due in U.S. dollars. ITE does not accept Discover Card.

☐ Check payable to Institute of Transportation Engineers
☐ American Express ☐ MasterCard ☐ Visa

TOTAL FEE INCLUDED:
CARD NUMBER ____________________________
SECURITY CODE ____________________________
EXPIRATION DATE ____________________________
NAME ON CARD ____________________________
BILLING ADDRESS ____________________________
CITY/STATE/PROVINCE/ZIP/COUNTRY ____________________________

SIGNATURE ____________________________

Meeting support services provided by the Institute of Transportation Engineers
COME TO THE VALLEY OF THE SUN

The National Rural ITS and ITS Arizona Annual Conference + Exhibit will provide participants a one-stop resource focusing on Intelligent Transportation Systems (ITS) implementation in local communities and the opportunity to hear new and thoughtful perspectives from a wide variety of ITS topics. ITS improves transportation safety and mobility and enhances productivity by integrating advanced communication technologies into vehicles and infrastructure. In addition to traditional ITS topics of interest to Arizona transportation professionals, this event will bring together both traditional and non-traditional users to address such issues affecting rural and small communities.