



# 21<sup>st</sup> Annual Conference

Changing the Way We Travel



## CONFERENCE CHAIR MESSAGE

Dear ITS Arizona Members:

First and foremost, I would like to welcome everyone to the 2014 ITS Arizona Annual Conference. This is the 21<sup>st</sup> consecutive year we have held an annual conference. This conference could not have been possible without the support of sponsors, exhibitors, speakers, volunteers and most importantly **YOU** the attendees, who help make this conference a success.

The volunteers on the Conference Committee have put forward a wonderful program with presentations from academic as well as professional domains. The exhibitors are showcasing the latest and greatest products in the industry. I encourage each and every one of you to make the most of the conference by visiting the Exhibitor Showcase, as well as networking with conference attendees. The conference presents an excellent opportunity to network with a variety of participants from the public, private and academic sectors.

Please note that your 2014-2015 membership to ITS Arizona has been included in the conference registration fee. Enjoy this year's conference and please be on a look out for an evaluation form via email and provide us with your suggestions and feedback to make our conference even better for upcoming years. I'd like to personally thank everyone who has worked so hard to make this conference happen – from the ITS Arizona Conference Committee to the Board of Directors. Most of all, I want to thank all of you for attending today and supporting ITS Arizona. Thanks everyone – have a great Conference!

Regards,

Khamchanh Ratsavong— Vice-President and Conference Chairman, ITS Arizona

### ACHIEVEMENTS

#### Past Presidents' Awards

The awards ceremony will highlight some of the outstanding statewide ITS projects completed during the last year. Awards will be given in the categories of "Best ITS Planning Project," "Best ITS Implementation Project" and "Best New or Updated ITS Industry Product." In addition, the ITS Arizona Member of the Year will be honored at this event.

### LEADERSHIP

#### ITS AZ Board

Jeff Jenq, President  
Khamchanh Ratsavong, Vice-President  
Jamie Blakeman, Secretary  
Scott Clark, Treasurer  
Kiran Guntupalli, Past President  
Yung Koprowski, Board  
Tom Buick, Board  
Scott Miller, Board  
Mike Sutton, Board  
Pete Yingling, Board Alternate

September 24-25, 2014 | Mesa, Arizona | Mesa Convention Center

## Day 1—September 24, 2014

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**11:30AM-12:30PM REGISTRATION AND LUNCH**

**12:30PM – 12:40PM WELCOME**

- John S. Halikowski, Director of Arizona DOT
- John Hauskins, Director of Maricopa County DOT

**12:40PM – 1:10PM WHAT IS CONNECTED VEHICLE? – USDOT’S PERSPECTIVE**

- Greg Winfree, Assistant Secretary for Research and Technology, US DOT

**1:10PM – 1:40PM CONNECTED VEHICLE APPLICATIONS – NATIONAL FOOTPRINT ANALYSIS**

- Jim Wright, American Association of State Highway and Transportation Officials

**1:40PM – 1:50PM BREAK**

**1:50PM – 2:20PM NATIONAL CONNECTED VEHICLE TEST BED ARCHITECTURE**

- Greg Krueger, Leidos

**2:20PM – 2:30PM ARIZONA CONNECTED VEHICLE TEST BED DEVELOPMENT**

- Faisal Saleem, Maricopa County DOT
- Reza Karimvand, Arizona DOT

**2:30PM – 2:40PM BREAK**

**2:40PM – 3:20PM DEMONSTRATION - CONNECTED VEHICLE TECHNOLOGY BUILDING BLOCKS, ARIZONA APPLICATION**

- Dr. Larry Head, University of Arizona

**3:20PM – 4:00PM AUTOMOBILE INDUSTRY’S PERSPECTIVE**

- Tom Schaffnit, Vehicle Infrastructure Integration Consortium (VIIC)

**4:00PM – 7:00PM ADJOURN / SOCIAL HOUR**

## Day 2—September 25, 2014

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**7:30AM – 8:30AM REGISTRATION AND CONTINENTAL BREAKFAST**

**8:30AM – 9:15AM OPENING SESSION**

- Opening Remarks – Jeff Jenq, ITS Arizona President
- Keynote Speaker – Greg Winfree, Assistant Secretary for Research and Technology, US DOT

## Day 2 Continued—September 25, 2014



Greg Winfree originally came to the U.S. Department of Transportation's Research and Innovative Technology Administration (RITA) in March, 2010 and was sworn in as its fourth Administrator on October 23, 2013. As directed in the Omnibus Bill of 2014, RITA was elevated to the newly-created Office of the Assistant Secretary for Research and Technology, and on January 23, 2014, Mr. Winfree was sworn in as the Assistant Secretary. During his tenure, Mr. Winfree has also served as the agency's Chief Counsel, Deputy Administrator, and Acting Administrator, and as chairman of the Department of Transportation's Innovation Council.

### **9:15AM – 10:00AM BREAK AND VENDOR SHOWCASE**

### **10:00AM – 11:30AM BREAKOUT SESSIONS (SEE PAGE 4)**

### **11:30AM – 1:00PM LUNCH**

- Program Speaker—Jeffrey A. Kramer, Maricopa County DOT
- ITS AZ Election Results – Jeff Jenq, ITS AZ President, OZ Engineering
- Past Presidents' Awards Ceremony – Scott Miller, ITS AZ Board Member and Kiran Guntupalli, ITS AZ Past President



Jeffrey A. Kramer is currently the Roadway Operations Division Manager for the Maricopa County Department of Transportation, appointed to that position in August 2012. Previously he served as Director of Municipal Services in charge of Transportation and Infrastructure for Arcadis-US, and as the Transportation Director for the City of Mesa. Kramer received his Bachelor of Science in Civil Engineering from the University of Arizona in 1986, is a registered professional engineer in Arizona, Nevada and New Mexico, and has received credentials as a Certified Public Manager, Certified Construction Manager, and Certified Traffic Control Supervisor. He actively supports the public works and public service professions through membership in multiple professional organiza-

tions, including CMAA, ASPA, AACPM (where he served on the national board of directors, including as their 2011 President), and APWA (where he was named a Public Works Leadership Fellow in 2013).

### **1:00PM – 1:30PM BREAK AND VENDOR SHOWCASE**

### **1:30PM – 2:45PM BREAKOUT SESSIONS (SEE PAGE 5)**

### **2:45PM – 3:00PM SNACK TIME**

### **3:00PM – 4:15PM BREAKOUT SESSIONS (SEE PAGE 6)**

### **4:15PM – 4:30PM CLOSING SESSION**

- Student Paper Contest Results – Khamchanh Ratsavong, Annual Conference Chair, City of Scottsdale
- ITS AZ Prize Giveaway – ITS AZ President Elect



**10:00AM-11:30AM BREAKOUT SESSIONS—#1 (DAY 2)**

**• SESSION 1A – INTEGRATED CORRIDOR MANAGEMENT**

Moderator – Toni Whitfield, FHWA

- **AZTech Loop 101 ICM Implementation** – Reza Karimvand, ADOT, Faisal Saleem, MCDOT, James Minton, ADOT, and Steve Ramsey, City of Scottsdale
- **Update on the Application of Advanced Simulation Modeling to Develop Integrated Corridor Management Strategies** – Eric Nava and Sarath Joshua, MAG
- **Dallas Integrated Corridor Management - Operational Values and Lessons Learned** - Ahmad Sadegh, Schneider Electric and Todd Plesko, Dallas Area Rapid Transit
- **ICM – Next Generation** - Koorosh Olyai, Stantec

**• SESSION 1B – GREEN TRANSPORT**

Moderator – Wulf Grote, Valley Metro

- **Better Transit ITS Investment Decisions** – Scott Miller, HDR
- **City of Phoenix Bike Sharing Program** – Joseph Perez, City of Phoenix
- **Bike Loop Detection** – Matt Zinn, EDtraffic
- **Transit Traffic Signal Priority Performance Evaluation** – Kathryn Born, Valley Metro

**• SESSION 1C – ITS PLANNING**

Moderator – Erik Guderian, Town of Gilbert

- **Phoenix ITS Strategic Plan – Connecting Intelligence** – Bruce Littleton, City of Phoenix and Deanna Haase, Kimley-Horn
- **Emergency Vehicle Preemption Best Practices Study** – Micah Henry, MAG
- **Bell Road Adaptive Signal Control Technology - Project Update** – Paul Porell, MCDOT and Dave Bruggeman, Lee Engineering
- **MAG Strategic Transportation Safety Plan - Improving Road Safety via Traffic Operations and ITS Solutions** – Margaret Boone, MAG



**1:30pm-2:45pm BREAKOUT SESSIONS—#2 (DAY 2)**

**• SESSION 2A – INNOVATIVE APPLICATIONS**

Moderator – Avery Rhodes, City of Mesa

- **AZTech Regional Information System** – Faisal Saleem, MCDOT and Tomas Guerra, OZ Engineering
- **ADOT DMS Retrofit Project** – Jake Fousel, Rudy Quintela, and Reza Karimvand, ADOT TTG
- **Arterial Travel Time Data Collection using Low Cost Bluetooth Sensors** – Dr. Yao-Jan Wu, University of Arizona
- **Travel Time Modeling and Forecasting Using WiFi Data** – Sanjay Paul and Reza Karimvand, ADOT TTG

**• SESSION 2B – MONITORING TRAFFIC PERFORMANCE**

Moderator – Dana Chamberlin, City of Avondale

- **Automated Traffic Signal Performance Measures** – Mark Taylor, Utah DOT
- **Trap Based Recording for Today's Performance Driven Traffic Controllers** – John Meusch, Northwest Signal
- **Video Detection v.s. Loops** – Dan Nall, Iteris
- **Next Generation Video Detection for the Mandatory Reliability of Adaptive Traffic Management** – John Hensen, Northwest Signal and Bob Sudar, Peek Traffic

**• SESSION 2C – ITS RESEARCH**

Moderator – Paul Basha, City of Scottsdale

- **MMITSS Arizona Connected Vehicle Research** – Dr. Larry Head, University of Arizona
- **An Evacuation Planning Tool for Contraflow Scheduling** – Dr. Yingyan Lou, Arizona State University
- **A “Field-Ready” Hardware-in-the-Loop Traffic Signal Simulation Framework for Innovative Signal Control Strategies Development** – Dr. Peng-Fei Li and Dr. Pitu Mirchandani, Arizona State University
- **Incentive-based Active Traffic and Demand Management - Experiences and Insights** – Dr. Yi-Chang Chiu and Mario Salomon, Metropia

## 3:00PM-4:15PM BREAKOUT SESSIONS—#3 (DAY 2)

### • SESSION 3A – SMART INFRASTRUCTURE

Moderator – Catherine Hollow, City of Tempe

- **Innovative DMS Communications** – Andy Murray and Reza Karimvand, ADOT TTG
- **Wireless-enabled Traffic Signal Maintenance** – Arthur Dock, City of Mesa
- **"Future Proof" ITS Network** – Marty Huff, MSI Tec, Inc.
- **Traffic and Transportation Safety through Battery Back Up Systems** – Brian Hanson, Alpha Technologies

### • SESSION 3B – ACTIVE TRAFFIC MANAGEMENT

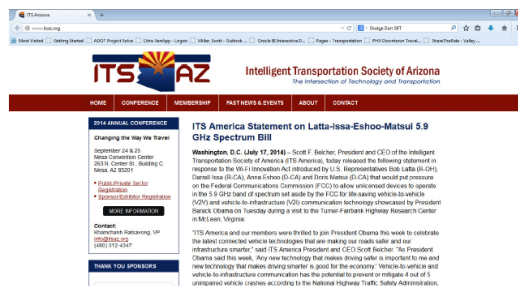
Moderator – Steve McKenzie, City of Peoria

- **Optimizing Traffic** – Marshall Riegel, City of Phoenix and Bo Gao, Stanley Consultants
- **Active Traffic Management in Colorado** – Lou Davenport, Apex Design
- **NDOT ATM in Las Vegas** – Deanna Haase, Kimley-Horn
- **Real-time Monitoring of Urban and Rural Corridors for Incident Response** – John Hansen, Northwest Signal

### • SESSION 3C – STUDENT PAPER CONTEST FINALISTS

Moderator – Dr. Pitu Mirchandani, Arizona State University

- **A Real-Time Adaptive Signal Phase Allocation Algorithm in a Connected Vehicle Environment** - Yiheng Feng, University of Arizona
- **How Much Traffic Data is Enough for Investigating Travel Time Reliability?** - Shu Yang, University of Arizona
- **A Simulation Platform for Test and Evaluation of Signal Control Applications in a Connected Vehicle Environment** - Mehdi Zamanipour, Yiheng Feng, Shayan Khoshmagham, University of Arizona



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