

Curriculum Vitae Jay Przybyla, Ph.D., P.E.

## **Professional Profile**

Dr. Przybyla ("prizz-bee-lah") is a licensed professional engineer and managing engineer at Focus Forensics with experience, education, and training in the fields of civil engineering, forensic engineering, and transportation safety. He holds a Master's and Ph.D. in transportation engineering from the University of Utah and a Bachelor's in civil engineering from Brigham Young University. Specific areas of expertise include vehicle collision reconstruction, commercial vehicle crash investigation and analysis, roadway design and traffic controls, highway-rail grade crossings, intermodal facilities, train collision and automotive safety and design issues.

Dr. Przybyła leads the ongoing engineering research program at Focus Forensics, and manages all projects in the Mountain West and West Regions for the consulting engineering firm, while also providing consulting services to clients nationwide. He has completed the engineering investigation and evaluation of vehicle, driver, and roadway issues in hundreds of cases across the United States.

Dr. Przybyła is a published author in safety engineering literature with a focus on identifying, quantifying, and developing solutions for major transportation related risks. He served as adjunct faculty at Utah Valley University teaching engineering and mathematics courses. He also guest lectured at Brigham Young University and the University of Utah on accident reconstruction and transportation safety.

Prior to his years of work in transportation engineering, Dr. Przybyła served as a state trooper for the Utah Highway Patrol focusing on DUI detection, interdiction, and accident investigations. He completed numerous accident investigations and accident reconstructions as a member of Utah's Multi-Discipline Accident Investigation Team. Dr. Przybyla has extensive experience testifying in civil and criminal cases, including providing expert witness testimony at trial.

## Licensure

Professional Engineer, State of Alabama,	#PE50714
Professional Engineer, State of Arizona,	#79169
Professional Engineer, State of Colorado,	#PE 0055521
Professional Engineer, State of Idaho,	#P-18427
Professional Engineer, State of Illinois,	#62-064663
Professional Engineer, State of Indiana,	#PE 12100608
Professional Engineer, State of Nebraska,	#E15131
Professional Engineer, State of Nevada,	#025858
Professional Engineer, State of New Mexico,	#2840
Professional Engineer, State of Oklahoma,	#31839
Professional Engineer, State of Texas,	#132928
Professional Engineer, State of Utah,	#305145-2202
Professional Engineer, State of Washington	#21020368
Professional Engineer, State of Wyoming,	#PE 17849

MINNEAPOLIS ORLANDO SALT LAKE CITY TALLAHASSEE TAMPA WEST PALM BEACH Please Respond to Administrative Address: 133 East 143rd Avenue Tampa, FL 33613

#### Contact Information

Cell: (312) 320-3248 Jay@focusforensics.com

#### Salt Lake Office

51 West Center Street, Suite #317 Orem, UT 84057

#### Education

University of Utah Salt Lake City, Utah Ph.D. in Civil and Environmental Engineering

University of Utah Salt Lake City, Utah M.S. in Civil and Environmental Engineering

Brigham Young University B.S. in Civil and Environmental Engineering

# Work Experience

Focus Forensics, LLC

Managing Engineer: 2014-Present

Armstrong Forensic Engineers, Inc. Senior Consultant: 2010-2014

Collision Safety Engineering, LLC

Engineer: 2005-2010

University of Utah

Research Assistant: 2009-2013

Utah Valley University

Police Officer: 2006-2010 & 2013-2015 Adjunct Professor: 2009-2010 & 2013

Utah Department of Public Safety State Trooper: 2001-2006

Utah State POST Academy

Instructor: 2002-2004

Roosevelt City Corporation Police Officer: 2002-2004

Salt Lake County Public Works Technician: 1999-2000



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## **Professional Affiliations**

Society of Automotive Engineers (SAE), Member

American Society of Photogrammetry and Remote Sensing (ASPRS), Member

Transportation Research Board Standing Committee on Traffic Law Enforcement (ACS30), Corresponding Committee Member

Transportation Research Board Standing Committee on Transportation Safety Management (ACS10), Friend of the Committee

Transportation Research Board Standing Committee on Work Zone Traffic Control (ACP55), Friend of the Committee

Transportation Research Board Standing Committee on Human Factors of Vehicles (ACH30), Friend of the Committee

#### **Professional Certification**

Accredited Accident Reconstructionist Accreditation Commission for Traffic Accident Reconstruction (ACTAR), #3047

Certified Traffic Control Supervisor American Traffic Safety Services Association (ATSSA), #360701

Work Zone Traffic Control Supervisor Florida Department of Transportation

Motorcycle Operator's License Utah Driver's License Division, DPS

# **Professional Development**

#### **American Traffic Safety Services Association**

- Advanced Work Zone Traffic Control Supervisor Certification, 2013
- Motorcycle Safety: Roadway Hazards and How to Address Them, 2014
- Advanced Work Zone Traffic Control Supervisor Certification, 2017
- Advanced Work Zone Traffic Control Supervisor Certification, 2021

#### **Axiom Forensic**

Motorcycle Collision Reconstruction, 2018

#### **Bendix**

 Comprehensive Air Brake System Training Program in the Operation and Maintenance of Heavy Duty Air Brakes and Components, 2014

## Certify Me

 OSHA Standard 29 CRF 1910, 1926 Certification (Class 7 Powered Industrial Trucks), 2019

## Collision Safety Institute / ARC

- Annual Crash Conference and Full Scale Crash Testing, 2017
  - Full Scale Crash Testing
  - o Photogrammetry of Camera Images
  - Gap Acceptance
  - o NTSB Crash Investigations
  - o Reconstruction of Low-Speed In-line Collision
  - o Pedestrian and Nighttime Recognition
  - UAS Scene Mapping
  - o Braking Performance During Emergency Application
  - Overheating of Heavy Duty Truck Brakes
  - Pedestrian Walking Speeds
  - Pedestrian Crash Reconstruction Methodologies

## **Crash Safety Solutions (Human Factors)**

• IDRR User Forum, 2022

#### Energi

• Risk Management Summit, 2017

## **EKPass**

Web Based Backhoe Operator Training and Certification, 2013

#### **EOS Systems Inc.**

- PhotoModeler 4 Collision Investigation Course and Software Operation Certification, 2002
- PhotoModeler 6 Collision Investigation Course and Software Operation Certification, 2007

# European Association for Accident Research and Analysis

- 27<sup>th</sup> Annual Congress, 2018
  - Traffic Collisions Involving Motorcycles
  - Insurance Fraud
  - o Big Data
  - Open Forum



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# **Professional Development Continued**

#### FARO Technologies Inc.

- FARO Laser Scanner LS Training and Operation Certification, 2009
- FARO Laser Scanner Focus Training and Operation Certification, 2015

#### Focus Forensics, LLC

- Transportation Engineering and Accident Reconstruction Insights, 2022
- Transportation Engineering and Accident Reconstruction Insights, 2024
  - O Human Factors for Driver Response
  - o Traffic Signal Design and Operation
  - Transportation Engineering Sight Distance Standards
  - o Automotive Mechanical Systems and Data Acquisition
  - O Photogrammetric Methods
  - Video Analysis with Telemetry Data
  - LIDAR Scanning and Data Processing
  - O Virtual Crash Applications for Simulation and Animation
  - PC Crash Applications for Steering and Yaw Rate
  - o Expert Testimony Regulations and Standards
  - Commercial Vehicle EDR Data Extraction and Analysis
  - O Vehicle EDR Systems for Toyota and General Motors

#### InnovMETRIC Software Inc.

PolyWorks V11 Training and Operation Certification, 2009

#### Institute of Electrical and Electronics Engineers (IEEE)

 15<sup>th</sup> International Conference on Intelligent Transportation Systems (ITSC), 2012

# **McInnis Engineering Associates**

 PC-Crash 7.3 Software Training and Operation Certification, 2007

## National Academy of Forensic Engineers (NAFE)

- General Topics in Forensic Engineering, 2010
- Advanced Topics in Accident Reconstruction, 2010

## National Academy of Science and Norwood Police Department

• Human Factors of Witness Reliability, 2015

# **North American Training Group**

• Staged Automobile Accidents, 2015

#### Northwestern University Center for Public Safety

- Traffic Accident Reconstruction I, 2002
- Traffic Accident Reconstruction 2, 2003
- Heavy Vehicle Crash Reconstruction, 2004
- Advanced Crash Reconstruction Utilizing Human Factors, 2014

## **OSHA Campus**

 OSHA Compliant Backhoe-Loader Operations Training and Certification, 2013

## **Robert Bosch Corporation**

- Crash Sensing Algorithms: Electronic Sensing for Air Bag Deployment in Front, Side and Rollover Automobile Crashes, 2006
- Driver Assistance and Collision Avoidance, 2007

#### Society of Automotive Engineering (SAE)

- Applying Automotive EDR Data to Traffic Crash Reconstruction, 2013
- World Congress and Exhibition, 2013
- Vehicle Crash Reconstruction: Principles and Technology, 2019
- Accident Reconstruction, The Autonomous Vehicle and ADAS, 2020
- Fundamentals of Vehicle Dynamics, 2021
- Advanced Applications of Heavy Vehicle EDR Data, 2023

#### Transportation Research Board (TRB)

- Conference on Innovations in Travel Modeling (ITM), 2012
- TRB 96<sup>th</sup> Annual Meeting, 2017
  - Traffic Law Enforcement Committee Meeting
  - Emergency Evacuations
  - Emergency Medical Services Safety Subcommittee Meeting
  - o Motorcycle and Rider Behavior
  - Latest Research in Metropolitan Policy, Planning, and Processes
  - O Pavement Condition Evaluation: State of the Art
  - O Traffic Flow Theory and Characteristics
  - Signs, Markings, Signals, Visibility, and Related Technologies
  - Work Zone Safety Evaluations and Operations Management Strategies
  - O Pavement Preservation and Maintenance
  - Law Enforcement and Traffic Safety
  - O Pedestrian Safety Issues
  - Transportation Safety Management Committee Meeting
- TRB 97<sup>th</sup> Annual Meeting, 2018
  - Righting the Wrong Way Driver: Generating Mitigation Measures for Wrong-Way Freeway Collisions
  - o Traffic Law Enforcement Committee Meeting
  - O Traffic Law Enforcement Research
  - Traffic Control Devices
  - Research on Critical Knowledge Gaps: Teenage Driving Risk
  - o Innovations in Work Zone Traffic Control
  - Countermeasures for Wrong-Way Driving
  - NTSB Accident Investigations
  - Transportation Safety Management Committee Meeting
  - o Traffic Flow Theory and Characteristics



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## Transportation Research Board (TRB) Continued

- TRB 98<sup>th</sup> Annual Meeting, 2019
  - Traffic Law Enforcement Committee Meeting
  - Traffic Safety Management Committee Meeting
  - Traffic Control Devices Challenges Hybrid Session
  - Modeling Work Zone Impacts
  - O Pavement Performance Measures and Maintenance
  - o Pavement Surface Properties and Vehicle Interaction
  - SHRP 2 Naturalistic Driving Study
  - Insights on Congestion Pricing and Managed Lanes
  - Human Factors Potpourri: Driver Health, Behavior, Technology and the Environment
  - Innovations in Work Zones
  - TLE: Innovative Tools, Policy, and Countermeasures to Increase Roads and LE Safety
  - o Emergency Response and Data Limitations
  - New Mobility Options
  - The Impact of Advanced Driver Asist Systems on Occupant Safety
  - O Vehicle Automation: Driver and Pedestrian Behaviors
  - O Roadway Lighting, Visibility, and Safety
  - Visibility Issues
  - Highway-Rail Grade Crossing Research
  - Construction, Maintenance, and Operations: Safety Analysis and Planning
  - Recent Advances in Roadside Maintenance and Operations
  - O Understanding Drivers in Naturalistic Environments
  - o Alcohol, Other Drugs, and Transportation
  - Vehicle Dynamics and Traffic Flow Modeling
- TRB 99<sup>th</sup> Annual Meeting, 2020
  - Traffic Law Enforcement Committee Meeting
  - Improved Safety Through Traffic Enforcement Design and Implementation
  - Cannabis: Understanding the Legalities, Attitudes, Economics, and Scientific Challenges
  - Design and Analysis of Pavement Friction and Texture
  - o General and Emerging Pavement Design Practices
  - Advances in Roadside Maintenance Operations
  - O Technology Assisting to Make Better Work Zones
  - Modeling Work Zone Attributes
  - Driver Behavior in Work Zones
  - NTSB Accident Investigations
  - Transportation Safety Management
  - Safety Data, Analysis, and Evaluation: GPS and Naturalistic Driving, Toll
  - Truck and Bus Safety Research
  - o Intersection Safety in Focus
  - Focus on Pedestrian and Bicycle Safety
  - Vulnerable Road Users: Simulator and Virtual Reality Analyses
  - Pedestrian Hybrid Beacons and Enhanced Crosswalk Signage
  - Analyzing and Planning the Pedestrian Environment
  - O Current Research in User Information Systems

- TRB 99th Annual Meeting, 2020 Continued
  - New Trends in Research on Human Factors and Vehicle Factors
  - O New Research in Human Factors and Vehicle Automation
  - Assessing Driver Visibility Through Human Factors Investigations
  - Issues Affecting Public Acceptance of Automated Vehicles
  - Toward Adoption of Vehicle-Highway Automation
- TRB 100<sup>th</sup> Annual Meeting, 2021
  - Traffic Law Enforcement Committee Meeting
- TRB 102<sup>nd</sup> Annual Meeting, 2023
  - Chair's Plenary Session
    - NTSB Chair Keynote Address
    - DOT Secretary Buttigieg Fireside Address
    - DOE Secretary Granholm Fireside Address
  - o Traffic Law Enforcement Committee Meeting
  - Work Zone Traffic Control Updates
  - O Innovation in Traffic Law Enforcement
  - O Impairment in Transportation
  - Advances in Climate Change Resilient Design,
     Operations, and Decision Making
  - A Critical Look at the State of the Automated Vehicles Industry
  - O Pedestrian Behaviors and Travel Patterns
  - o Traffic Control Devices Updates and Research
  - Work Zone Safety and Operations
  - Improving Roadside Safety
  - Driving Behavior Research Methods, Models, and Measures
  - Research on Human Factors of Infrastructure Design and Operations
  - $\hspace{1cm} \circ \hspace{1cm} \text{Signs, Pavement Markings, and Traffic Signals} \\$
  - Design and Performance of Asphalt Mixtures
  - Pavement Surface Properties and Vehicle Interactions
  - Insights into Recent and Potential Future Trends Related to Bicycling
  - Transportation Safety Management Systems from Start to Finish
  - O Highway-Rail Crossing Research
  - Speed, Signals, and Enforcement: Improving Safety and Reducing Crashes
  - O Current Topics of Low-Volume Roads
  - Safety Impacts of Road Users Including Pedestrians, Bicyclists, and Others
  - o Safety Models: New, Evolving, and Refreshed
  - o A Fresh Look at Crash Characteristics
  - o Roadside Barrier System Development
  - o Investigating Pedestrian Safety and Accessibility
  - Traffic Signal Control and Progression

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# **Professional Development Continued**

## **Utah County Sheriff's Department**

Human Factors of Witness Reliability: Kinesics, 2015

## **Utah Department of Public Safety UHP**

- Advanced Accident Reconstruction, 2002
- Accident Scene Investigation and Diagramming, 2003
- Crash Data Retrieval (CDR) System Operator, 2003
- Vehicle Safety Inspections, 2003
- Field Training Officer, 2003
- MAIT Quarterly Accident Reconstruction Training, 2002-2005
- Drug Recognition Expert Certification (DRE), 2005

# **Utah Department of Transportation**

- Utah Traffic Management Systems, 2015
- Crash Reconstruction Using Automated Traffic Signal Performance Measures, 2022

## **Utah State POST Academy**

- Accident Investigation, 2001
- DUI Detection and Enforcement, 2001
- Utah Police Corps, 2001
- Major Crash Investigations, 2015

#### U.S. DOT - FHWA - National Highway Institute

 National Traffic Incident Management Responder Training and Certification, 2015

## **U.S. DOT - Transportation Safety Institute**

• U.S. DOT Motor Carrier Safety Inspector Qualification (396.19), 2012

#### **Vector Solutions**

 Ethics for the Practicing Engineer – Managing Risks Imposed on the Public, 2018

# World Reconstruction Exposition (WREX)

- World Reconstruction Exposition, 2016
- World Reconstruction Exposition, 2023

## **Seminar and Course Presentations**

- "A Transportation Engineer's Perspective on Accident Reconstruction," Nevada State Bar Continuing Education, 2023
- "A Transportation Engineer's Perspective on Motorcycle Accident Reconstruction," Laws Tiger Summit – Phoenix, AZ, 2023
- "A Transportation Engineer's Perspective on Motorcycle Accident Reconstruction", TBI Med Legal, 2021
- "Accident Reconstruction, Transportation Safety, & Criminal Defense" National College for DUI Defense, 2021
- "Special Forensic Application of Civil Engineering", Arizona State University, 2020
- "Red Flag Indicators of Fraud", Florida Insurance Fraud Education Committee Conference (FIFEC), 2019
- "Automotive Fraud Analysis: Going Beyond the Physical Evidence", 27<sup>th</sup> Annual Congress of the European Association for Accident Research and Analysis, 2018
- "Big Data Analysis Combining GPS with Traffic Signal Data Logger Records", 27<sup>th</sup> Annual Congress of the European Association for Accident Research and Analysis, 2018
- "Accident Reconstruction: A Panel Discussion", Energi Risk Management Summit, 2017
- "Maintenance of Traffic and Roadway Design Analysis", World Reconstruction Exposition, 2016
- "How to Document and Preserve a Work Zone Related Crash" W.W. Clyde & Co. Annual Supervisors Training, 2015
- "Accident Scene Preservation" W.W. Clyde & Co., Interchange, 2015
- "Truth or Dare: Is the Insured Telling the Truth or are They Daring to Make a False Claim?" Utah Claims Adjusters Association, 2014
- "10 Important Event Data Recorder Questions Answered" Trystan Smith & Associates — Corporate Law Department State Farm Mutual Automobile Insurance Company, 2014
- "Truth or Dare: Is the Insured Telling the Truth or are They Daring to Make a False Claim?" Geico Auto Insurance Annual Fraud Awareness Day, 2014
- "A Forensic Engineer's Perspective on Work Zone Risk" W.W. Clyde & Co. Interchange, 2014



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## **Seminar and Course Presentations Continued**

"Automotive Accident Reconstruction: An Introduction" Young Lawyers Section of Idaho State Bar, 2013 "Light Bulb Filament Distortion Thresholds by Voltage and Delta-V" Society of Automotive Engineers 2013 World Congress & Exhibition, 2013

"Introduction to Forensic Nuclear Engineering" University of Utah, 2013

"3D Modeling with Laser Scanner Point Cloud Data" Armstrong Forensic Engineers, 2012

"Simplified, Data-Driven, Errorable Car-Following Model to Predict the Safety Effects of Distracted Driving" 15<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (IEEE ITSC), 2012

"Crash Event Modeling Approach for Dynamic Traffic Assignment" 4<sup>th</sup> Transportation Research Board Conference on Innovations in Travel Modeling (ITM), 2012

"Special Forensic Applications of Civil Engineering" University of Utah, 2011

"Handling Large Loss Claims with Limited Information" PLRB Large Loss Conference, 2011

"Spatial – Information Approach to Analyzing and Planning Distributed Transportation Security Systems," *Top 10 Finalist in National Security Innovation Competition*, 2011

"PhotoModeler for Inverse Projects and Scaled Diagramming" Armstrong Forensic Engineers, 2011

"Safety and Accident Investigation" Michels Corporation, 2011

"Information – Theoretic Sensor Location Model for Detecting Origin-Destination Spatial Patterns of Special Nuclear Material Smuggling" 1st National Conference for Advancing Tools and Solutions for Nuclear Material Detection, 2010

"Transportation Safety Concerns in the Urban Transportation Planning Process" University of Utah, 2009

"Case Studies in Accident Reconstruction and Photogrammetry" Collision Safety Engineering, 2005

"Criminal Liability and Accident Reconstructions" Brigham Young University, 2005

"Accident Reconstruction and Perception Reaction Time" Utah Department of Public Safety, MAIT Team Quarterly Training, 2004 "Accident Investigation" Utah Police Officers Standards and Training Academy, Uintah Basin Satellite Academy, 2002-2003

"Accident Reconstruction" U.S. Department of the Interior, Bureau of Indian Affairs Office of Law Enforcement Services, 2003

"Pitfalls in PhotoModeler Photogrammetry When Accident Scene Diagramming" Utah Department of Public Safety, Utah Highway Patrol Section 5, 2003

# Technical Reports and Publications

Rush, T., Przybyla, J., Melcher, D., "A New Source of Collision Evidence: Traffic Signal Data Loggers," American Bar Association, Committee News Commercial Transportation Litigation, 2018

Melcher, D., Przybyla, J., Palframan, K., Rush, T., "Big Data Analysis – Combining GPS with Traffic Signal Data Logger Records," Proceedings of the 27<sup>th</sup> Annual Congress of the European Association for Accident Research and Analysis (EVU), 2018

Przybyla, J., Melcher, D., "Automotive Fraud Analysis: Going Beyond the Physical Evidence," Proceedings of the 27<sup>th</sup> Annual Congress of the European Association for Accident Research and Analysis (EVU), 2018

Przybyla, J., Rush, T., Palframan, K., Melcher, D., "Introduction to Traffic Signal Data Loggers and their Application to Accident Reconstruction," SAE Technical Paper 2018-01-0527, 2018

Montalbano, P., Melcher, D., Keller, R., Rush, T., Przybyla, J., "Testing Methodology to Evaluate Reliability of a "Frozen" Speedometer Reading in Motorcycle/ Scooter Impacts with Pre-Impact Braking." SAE Technical Paper 2016-01-1482, 2016

Melcher, D., Rush, T., Przybyla, J., Keller, R., Montalbano, P., "Photogrammetric Reconstruction Methodology and Engineering Validation for Video-Captured Pedestrian Collisions", Proceedings of the 24th Annual Congress of the European Association for Accident Research and Analysis (EVU), 2015

Przybyła J., Jupe J., Rush T., Keller R., "Glass Debris Field Longevity for Rollover Accident Reconstruction." SAE Technical Paper 2015–01–1427, 2015

Przybyla J., Taylor J., Jupe J., Zhou X., "Estimating Risk Effects of Driving Distraction: A Dynamic Errorable Car-Following Model." Transportation Research Part C, 10.1016/j.trc.2014.07.013, 2014

Rush, T., Przybyla, J., Melcher, D., Sax, C., "Video Analysis and Analytical Modeling of Actual Vehicle/ Pedestrian Collisions." SAE Technical Paper 2014-01-0483, 2014

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# **Technical Reports and Publications Continued**

Przybyla, J., "Enhancing Transportation Safety and Security: A Spatial Multilevel Approach" Ph.D. Dissertation, University of Utah, 2013

Przybyla J., Zhou X., "Learning Transportation Simulation and Modeling: A Case Study-Based Approach Using Open-Source Tools", "Lesson 5: Navigating From Point A to Point B", and "Lesson 8: Big Data Applications" Online Learning Document, <a href="https://www.learning-transportation.org">www.learning-transportation.org</a>, 2013

Przybyla J., Rush T., Melcher D., Robinson S., "Light Bulb Filament Distortion Thresholds by Voltage and Delta-V." SAE Technical Paper 2013-01-0752, 2013

Przybyla J., Taylor J., Jupe J., Zhou X., "Simplified, Data-Driving, Errorable Car-Following Model to Predict the Safety Effects of Distracted Driving." 15<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems Conference (IEEE ITSC), 2012

Przybyla J., Taylor J., Zhou X., Porter R.J., "Crash Event Modeling Approach for Dynamic Traffic Assignment." 4<sup>th</sup> Transportation Research Board Conference on Innovations in Travel Modeling (ITM), 2012

Lang M., Przybyla J., Zhou X., "Loading Containers on Double-Stack Cars: Multi-Objective Optimization Models and Solution Algorithms for Improved Safety and Reduced Maintenance Cost." E-Print Network Record 571, 2011

Przybyla J., Taylor J., Porter R.J., Xhou X., "Modeling Crashes for Evaluating Network-Level Impact of Safety Enhancement Strategies: A Fast Dynamic Traffic Assignment Approach." UDOT Annual Conference, 2011

Melcher D., Keller R., Przybyla J., Rush T., "Applications of GPS Data in Collision Reconstruction." *Collision Magazine*, 2011

Melcher D., Keller R., Przybyla J., Rush T., "Applications of GPS Data in Collision Reconstruction." *Proceedings of the 10<sup>th</sup> ITAI International Conference on Collision Investigation, Interpretation and Reconstruction*, 2011

Zhou X., Przybyła J., "Crash Event Modeling Approach for Dynamic Traffic Assignment." White Paper Submitted to FHWA Project DTFH61-10-R-000013, 2011

Przybyła J., Porter R.J., Nevers B., Zhou, X., "Evaluating Roadway Safety Improvements in a Traffic Assignment Framework." Transportation Research Board, 3<sup>rd</sup> International Conference Roadway Safety and Simulation, 2011 Przybyła J., Taylor J., Zhou X., "What You Don't Know Can Hurt You: The Application of Security Data Visualization Techniques for the Placement of Nuclear Material Smuggling Interdiction Sensors." 2<sup>nd</sup> National Conference for Advancing Tools and Solutions for Nuclear Material Detection, 2011

Przybyla J., Taylor J., "Spatial-Information Approach to Analyzing and Planning Distributed Transportation Security Systems." *National Security Innovation Competition White Paper*, 2011

Taylor J., Przybyla J., Zhou X., "Quantifying Information Gains of Networked Sensor System for Detecting Nuclear Material Smuggling Flow: An Ensemble Filtering Approach." *INFORMS Austin*, 2010

Taylor J., Przybyla J., Zhou X., "Spatial Information Theoretical Approach to Locating Sensors in Transportation Security Applications." *INFORMS Austin*, 2010

Przybyla J., Taylor J., Zhou X., "Locating Sensors for Detecting Source-to-Target Patterns of Special Nuclear Material Smuggling: A Spatial Information Theoretic Approach." *Sensors* 2010, 10, 8070-8091

Przybyla J., Zhou X., "Information – Theoretic Sensor Location Model for Detecting Origin-Destination Spatial Patterns of Special Nuclear Material Smuggling." 1st National Conference for Advancing Tools and Solutions for Nuclear Material Detection, 2010

Przybyła J., Zhou X., "Cell Phone Use While Driving: A Literature Review and Recommendations." White Paper, 2008

# **Journal Reviewer**

IEEE Transactions on Intelligent Transportation Systems
Journal of Traffic and Transportation Engineering
Scientific Reports
Society of Automotive Engineers
Traffic Injury Prevention
Transportation Research Record
Transportation Research Board, Roadway Safety and Simulation
Transportation Research Board, Traffic Law Enforcement
Urban Rail Transit



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# **Awards and Honors**

- Best Paper Award, 15<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (IEEE ITSC), 2012
- Top 10 Finalist, National Security Innovation Competition, 2011
- 2<sup>nd</sup> Place Best Presentation, 1<sup>st</sup> National Conference for Advancing Tools and Solutions for Nuclear Materials Detection, 2010
- Trooper of the Year, Utah County Utah Highway Patrol, 2005
- Commissioner Commendation, Utah Department of Public Safety, 2005
- Medal of Excellence, Utah Department of Public Safety, 2005
- Member of Utah County Officer Involved Shooting Investigation Unit, 2004
- Unit Citation, Utah Department of Public Safety, 2003
- Member of Utah Department of Public Safety M.A.I.T. Team, 2002
- Director's List, Utah Department of Public Safety, 2001
- Eagle Scout, Boy Scouts of America, 1992

# **Appointments and Volunteer Positions**

- Society of Automotive Engineers Student Competition Judge
- Orem City, Utah Transportation Advisory Commission Chairperson
- Society of Automotive Engineers Textbook Stipend Committee