

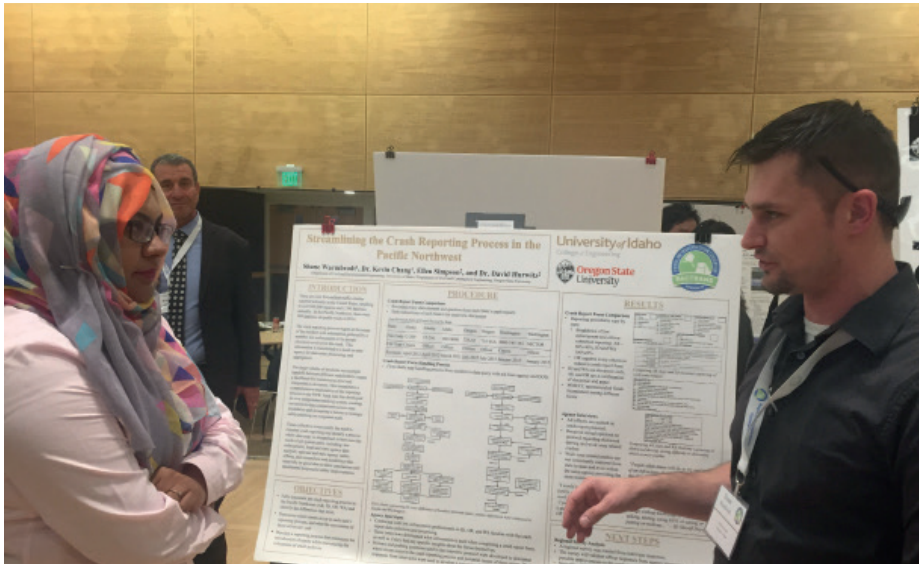
A NEWSLETTER FROM THE
NATIONAL INSTITUTE FOR ADVANCED TRANSPORTATION TECHNOLOGY

University of Idaho
College of Engineering



Moscow, ID had its first snow of the season on October 13th this year

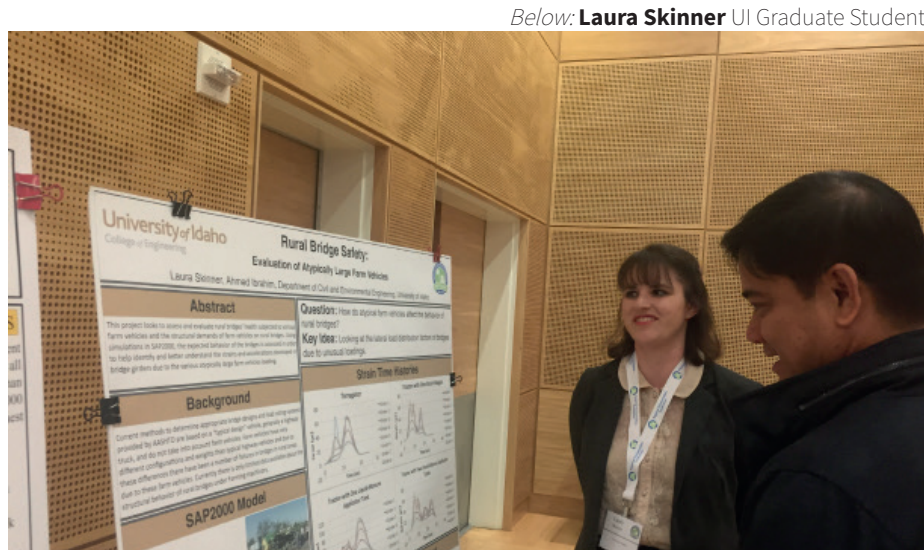
NIATT Students present their research at the 2017 PacTrans Regional Conference



Above: **Sabreena Nasrin** UI Graduate Student
Shane Warmbrodt UI Graduate Student



Above: **Denise Dunn** USDOT
Angel Gonzalez UI Graduate Student



Below: **Laura Skinner** UI Graduate Student

On October 6 & October 7, 2017, over a dozen NIATT students and faculty attended the 2017 PacTrans Regional Transportation Conference at the University of Washington in Seattle. The conference included speakers that covered topics ranging from current PacTrans research, including NIATT's own Dr. Axel Krings, Technology Transfer, and Workforce Development. On Saturday the Student Conference featured poster presentations of current PacTrans research projects. Next year's Conference will be held at the University of Alaska, Fairbanks.

NIATT Posters this year included:

Rural Bridge Safety: Evaluation of Atypically Large Farm Vehicles

Laura Skinner and Ahmed Ibrahim

Safety of Idaho Rural Highways Under 129K Trucks

Nicholas Saras, Ahmed Ibrahim, Ahmed Abdel-Rahim, and Richard Nielsen

Improving the Safety of Left-Turn Operations at Signalized Intersections for High-Risk Groups

Meagan Larrea, Angel Gonzalez, and Ahmed Abdel-Rahim

Modeling the Effects of Horizontal and Vertical Curvature on Driver Passing Choice

Regan Hansen and Kevin Chang

Streamlining the Crash Reporting Process in the Pacific Northwest

Shane Warmbrodt, Ellie Simpson, David Hurwitz, and Kevin Chang



NIATT Faculty presents cyber-security research at the 2017 PacTrans Regional Conference



Dr. Axel Krings gave a presentation on his connected vehicle research entitled **Connected Vehicles: The Impact of Data Manipulation on DSRC Safety Applications.**

Connected vehicles using Vehicle-to Vehicle (V2V) and Vehicle to Infrastructure (V2I) communication are starting to be a reality as the 2017 Cadillac CTS Sedans with their standard safety technologies based on Dedicated Short Range Communications (DSRC) demonstrate. The driving factor is improved safety through DSRC Safety Applications. However, there will be a large amount of data broadcast wirelessly and a sophisticated attacker does not have to manipulate much of this data to potentially cause safety applications to fail. Dr. Krings' talk addressed how content and timing manipulations can be used to attack safety applications and what it would take to design such applications so they can survive attacks. The stakes are high, as any demonstration of malicious act causing accidents could result in the loss of the public's trust in the underlying technologies.



Above: **Dr. Axel Krings**, UI Faculty



The experts want to meet YOU — the future leaders of our industry!



www.TRB.org/AnnualMeeting

Join more than 13,000 transportation experts from all over the world to learn about transportation issues and research.

**TRB Student Affiliate
Advance Registration Fee is \$110!***

*Advance registration fee for Student Affiliate Members is \$110. Fees increase after November 30, 2017.

Upcoming Events:

January 7-11, 2018
Transportation Research Board
97th Annual Meeting
Washington, DC

Date TBA
NIATT Advisory Board Meeting
University of Idaho
Moscow, ID

April 27, 2018
25th Annual Engineering Design
EXPO
University of Idaho
Moscow, ID

New Affiliate Faculty



Dr. Sameh Sarour

Assistant Professor

Electrical and Computer Engineering

Sameh Sorour is an assistant professor in the area of computer, network and communication engineering. He received his bachelor's and master's degrees in electrical engineering from Alexandria University in 2002 and 2006, respectively. He then completed his doctorate in electrical and computer engineering from University of Toronto in 2011. His research interests lie in the board disciplines of computer networking and communication engineering, with strong emphasis on the areas of network coding, device-to-device communications, internet of things (IoT) and its applications, cloud storage networks, femtocaching and fog networking, management of dense cellular networks and indoor positioning. He is also interested in using diverse mathematical tools (e.g. graph theory, stochastic modeling and optimization, game theory, machine learning, stochastic geometry, ... etc) in modeling, optimizing and smartening the operation of various engineering systems, such as transportation networks, power grids, charging of plug-in electric vehicles and e-health services.



Dr. Mohsen Guizani

Department Chair

Electrical and Computer Engineering

Mohsen Guizani (S'85-M'89-SM'99-F'09) received the bachelor's (with distinction) and master's degrees in electrical engineering, the master's and doctorate degrees in computer engineering from Syracuse University, Syracuse, NY, USA, in 1984, 1986, 1987 and 1990, respectively. Previously, he served as the Associate Vice President of Graduate Studies, Qatar University, chair of the Computer Science Department, Western Michigan University, chair of the Computer Science Department, University of West Florida. He also served in academic positions at the University of Missouri-Kansas City, University of Colorado-Boulder, Syracuse University and Kuwait University. His research interests include wireless communications and mobile computing, computer networks, mobile cloud computing, security and smart grid.



Dr. Emad Kassem

Assistant Professor

Civil and Environmental Engineering

Emad Kassem joined the Department of Civil & Environmental Engineering as an assistant professor in August 2015. Before joining UI, he was an associate research scientist at the Texas A&M Transportation Institute. His area of research is materials and pavements engineering and focuses on characterization of pavement materials, tire-pavement interaction, microstructure analysis of composite materials, non-destructive evaluation of pavements, multifunctional materials, and analytical and computational modeling of infrastructure materials. He received the Texas A&M Transportation Institute/Trinity New Researcher Award in 2011 and the Engineers' Council Outstanding Engineering Achievement Merit Award in 2016.

Coral Sales Scholarships

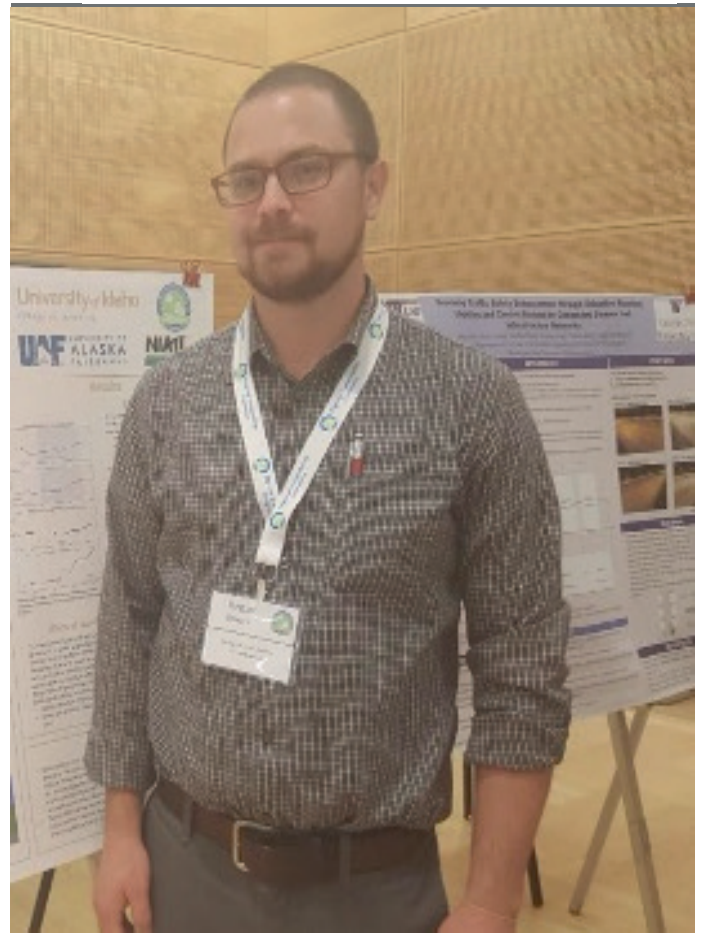
For the last 6 years, the Coral Sales Company of Portland, Oregon has provided University of Idaho students with two scholarships every year. These scholarships are awarded to one female student and one male student studying Civil or Construction Engineering. Recipients must intend to pursue a career in Highway Engineering or Construction in the Pacific Northwest, have lived in the Pacific Northwest for a minimum of six years, demonstrate outstanding leadership qualities and participate in extracurricular activities outside the classroom.

NIATT is proud to introduce this years winners:



Catherine Feistner

Catherine Feistner is a junior in her civil engineering studies while already having a major in Spanish. She's lived in Walla Walla, Washington for the past 10 years before moving to Moscow, Idaho. On campus she's involved in the Humanitarian Engineering Corps as well as the Ultimate Frisbee club team. Outside of her studies, she enjoys hiking, ultimate Frisbee, rock climbing, photography and traveling.



Reagan Hansen

Reagan Hansen was born and raised in Firth, Idaho. He will graduate in December 2017 with a Master of Science in civil engineering (transportation emphasis). His research has involved using driving simulation to investigate passing behavior on rural two-lane highways. He is passionate about using "Big Data" to answer questions about traffic safety and operations. When he is not busy with his research or teaching assistantship, Reagan enjoys spending time in the woods hiking, reading, or napping in his hammock.

NIATT

NATIONAL INSTITUTE FOR ADVANCED TRANSPORTATION TECHNOLOGY

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