



### FAA AIR TRANSPORTATION CENTER OF EXCELLENCE ESTABLISHED AT UNIVERSITY OF ALASKA FAIRBANKS

The University of Alaska Fairbanks, a TransNow consortium university, has been selected to work with Embry-Riddle Aeronautical University in a new FAA Air Transportation Center of Excellence for General Aviation. Other centers will be located at Wichita State University, the University of North Dakota, and Florida A&M.

UAF's cooperative agreement with the FAA allows the center to share as equal technical and fiscal partners in support of general aviation safety-related research and development programs. UAF graduate engineering student Jim Buckingham has worked with the aviation community to develop a prototype weather observation camera with which pilots can view weather conditions via the web before deciding whether to fly. The FAA operates 18 cameras at different locations in Alaska. "The weather observation project is an example of the kinds of things that can be done to improve aviation infrastructure," said Tom George, Alaskan Aviation Safety Foundation's Northern Regional Representative. "This center is important to pilots and benefits the general public, which has to use air traffic to get around the state of Alaska."

"The goal of the FAA is to create a world-class safety consortium, ready to address the needs of the national airspace system," said Patricia Watts, FAA Centers of Excellence Director. UAF will also work with the aviation program at the University of Alaska, Anchorage, which is already involved with the FAA on developing a radar-like prototype that uses new technology for monitoring locations and separation of aircraft in areas of Alaska without radar coverage.

"UAF's cooperation with UAA's program will create a strong partnership, with the ability to put research projects forth that meet aviation needs statewide, and strengthen the competitive proposal process," said Chancellor Marshall Lind. Researchers at UAF are also working on a prototype for acoustic aircraft counters that could have broad implications for general aviation. Another UAF researcher is looking at icing forecast issues specific to the far north, where weather-related aviation accidents are common.

"We expect to be able provide expertise in the areas of engineering and atmospheric sciences relating to air transportation," said Steve Mattingly, UAF Asst. Professor of Civil and Environmental Engineering and principal investigator for the project. "The university will work with the aviation community to identify specific projects that can also be extended to other parts of the country as well."

The award represents a long-term commitment from the FAA, but the center will strive to become self-supporting over the next decade. "We're optimistic that the award will eventually result in significant long-term funding," said Mattingly. 🏔️

Contact Information: Steve Mattingly, 907-474-7977

### TRANSNOW/WSDOT INTERNSHIP PROGRAM WINS NATIONAL RECOGNITION FROM ITS AMERICA

The TransNow Internship program, in partnership with the Washington State Department of Transportation (WSDOT), was selected as one of 25 finalists in 7 award categories for the ITS America's 2002 Best-of-ITS Awards Program. The internship program nomination falls under the Education and Training Category. ITS America, which is a non-profit organization, promotes development and deployment of intelligent transportation systems and serves as a federal advisory committee to the USDOT. Its more than 600 members include government agencies, private industry, academia, and trade groups. ITS America CEO Neil Schuster said that the nominations covered a wide variety of surface transportation issues and noted that many of the projects evaluated in the awards program have homeland security-related applications. Awards will be presented during the Society's annual meeting at Long Beach, CA, April 29-May 2. 🏔️

### TRANSNOW ESTABLISHES ITS GROUP

The TransNow ITS Group was founded in March 2001 in response to the increasing demand for ITS research and development. The objectives of the ITS Group are to conduct top-level research and support graduate and undergraduate



education in this rapidly emerging area. TransNow's ITS Group is a multi-disciplinary team comprised of faculty and students from different specialty

fields. Current research in the TransNow ITS Group includes Advanced Traffic Management Systems (ATMS), Advanced Traveler Information Systems (ATIS), Global Positioning Systems (GPS), Geographic Information Systems (GIS), video image processing, vehicle tracking, and traffic safety. Dr. Yin Hai Wang, a member of the TransNow research faculty, serves as the leader of the TransNow ITS Group and organizes a weekly seminar for ITS research.

For more information about the ITS Group please visit: <http://www.transnow.org/itsgroup/> 🏔️

## TRANSNOW STUDENT OF THE YEAR IS FROM OSU

Michelle Alexander of Oregon State University (OSU) was awarded the 2001 Outstanding Student of the Year Award for USDOT, Federal Region Ten, on January 14, 2002. Ellen Engleman, Administrator for the Research and Special Programs Administration of the USDOT, presented the award during the Transportation Research Board Annual Meeting in Washington D.C. Pictured from left to right are: Mary Peters, Administrator, FHWA; Michelle Alexander; Jenna Dorn, Administrator, FTA; and Ellen Engleman.



Ms. Alexander holds a BA/BS in Civil Engineering from OSU with a minor in Spanish. She is currently working toward her MS degree. Ms. Alexander won

poster contests at the OSU Aviation Conference and at the NW Transportation Conference, and was a member of OSU's ASCE Steel Bridge Team. She is currently employed by Innovative Transportation Concepts in Corvallis, OR. Other interests include coaching girls' basketball and volleyball teams. ☞

## UW GRAD STUDENT RECEIVES CH2M/TRANSNOW AWARD



Andrew Barash received the CH2M Hill/TransNow Award for Excellence in Transportation Studies, which was accompanied by a cash award of \$4,000. Pictured from left to right are: Scott Rutherford, Chair of CEE at UW; Kathy Cox-Czosnyka, Regional Technology Manager for CH2M Hill; Andrew Barash; and Nancy Nihan, Director of TransNow. ☞

## TRANSNOW WELCOMES THREE NEW FACULTY MEMBERS



**Tom Sanchez, PSU**, Associate Professor in the School of Urban Studies and Planning, received his Bachelor's degree from U.C. Santa Barbara in 1984, Master's degree from Cal Poly, San Luis Obispo in 1986, and PhD in City Planning from Georgia Tech in 1996. His research interests focus on the social and spatial impacts of transportation activities. His research has been published in journals such as the Journal of the American Planning Association, Journal of Planning Education and Research, Transportation Research Record, Journal of Urban Affairs,

Housing Policy Debate, Urban Studies, and the Journal of Public Transportation. Dr. Sanchez's recent research has concentrated on the connection between public transportation, employment, and welfare reform.

**Jennifer Dill, PSU**, Assistant Professor of Urban Studies and Planning, teaches courses in urban planning, transportation policy and planning, and planning theory. Her research interests focus on transportation and environmental planning, travel behavior, air quality, and transportation-land use interactions. Dr. Dill received a PhD in City and Regional Planning from UC Berkeley (2001), an MA in Urban Planning from UCLA (1989), and a BS in Environmental Policy Analysis and Planning from UC Davis (1987). Dill has also worked as an environmental planner for the Bay Area Air Quality Management District, and the US EPA.



*New Faculty continued on page 5*

## TRANSNOW-FUNDED STUDENTS FOR 2001/2002

### *Oregon State University*

**Michelle Alexander (MS)** is the 2001 UTC Outstanding Student for Region Ten. She received her BS from OSU last year and is currently doing an internship with ITC.

**Sarah Dammen (MS)** works as an RA for Prof. McMullen and is interested in transportation economics.

**Amy East (BS)** is interested in structural and transportation engineering.

**Lauren Hunt (BS)** is a Fellowship student and is receiving both a Dean's and a Smith scholarship.

**Shuan Quayle (MS)** received a Presidential Scholarship and is interested in transportation and business administration.

**Kelsy Taylor (BS)** received a Presidential Scholarship and will be graduating in June.

**Mikayel Vandanyan (PhD)** is an RA for Prof. McMullen, and is interested in industrial organization.

**Hyungho Youn (PhD)** is an RA for Prof. McMullen, and is interested in industrial organization.

### *Portland State University*

**Paul Bender (MURP)** is interested in GIS and continues as a Fellowship student.

**Theresa Carr (MURP)** is a Fellowship student and a GRA recipient.

**Baotu Ho (MSCE)** is currently working as an intern at WSDOT in Vancouver, WA.

**Shimon Israel (MURP)** is an RA for Prof. Strathman and is interested in public transit efficiency.

### *University of Alaska Fairbanks*

**Mary Bingham (BS)** works as an RA for Prof. Mattingly.

### *University of Washington*

**Timothy Bailey (BS)** is an intern at WSDOT. He hopes to graduate in the summer of 2002 and start work on his MS in Geotechnical Engineering.

**Andrew Barash (MS)** completed his BSCE at UW in June 2001 and is continuing his internship at CH2M Hill.

**Linsay Baynes (BS)** continues her internship at WSDOT and will receive her BS in the summer of 2002.

**Kevin Chang (PhD)** works as Prof. Nihan's TA and is interested in freight mobility and logistics.

*Students continued on page 5*

**Nicole Conrad (MSCE)** received her BS from UW in 2001 and is a Coral Sales Scholar as well as an intern at Mirai Associates.

**Michelle Dewey (BS)** is an intern at WSDOT and will be receiving her degree in the summer of 2002.

**Edward Egan (BS)** is a 2001 Coral Sales Scholar.

**Colin Forsyth (BS)** is an RA on Prof. Vernez Moudon's project.

**Richard Hutchinson (BS)** is currently interning at Transportation Solutions, Inc.

**Naveen Juvva (MS)** received his Bachelor's degree from the Indian Institute of Technology and is currently working as an RA with Prof. Nihan.

**Owen Kehoe (MS)** received his BS from the UW in 2001 and is interning with King County's Metro Transit.

**Pasko Kesovija (BS)** is currently interning with WSDOT.

**Adam Kirk (MS)** will graduate in the summer of 2002 and is currently interning at CH2M Hill.

**Mary Ann Krug (MS)** is an RA with Prof. Kolko.

**Jacob McCann (BS)** continues as an intern at WSDOT and will be graduating in the summer of 2002.

**Steve Muench (PhD)** is the RA with Prof. Mahoney.

**Michael Oreiro (BS)** is graduating in the summer of 2002 and is currently working as an intern at WSDOT.

**Kristin Pedersen (MS)** is currently an intern with Sverdrup Civil, Inc.

**Monica Reyes (MS)** received a WTS Scholarship in 2001 and is currently interning at WSDOT.

**David Rosen (MSCE)** is a Valle Scholarship and Scandinavian Exchange Program Scholar.

**Kevan Shafizadeh (PhD)** is an RA with Prof. Turkiyyah.

**Preston Stiefel (BS)** is interning with WSDOT and is interested in contract law and structural engineering.

**Hidemi Tsuru (BS)** joined TransNow in Winter Quarter 2002 and is graduating in March 2002.

**Mark Voth (MS)** hopes to graduate in June 2002 and is interning with WSDOT.

**Karl Westby (PhD)** is a TransNow fellowship student who is interested in freight mobility.

**Xiaoping Zhang (PhD)** continues to work as an RA with Prof. Nihan.

**Jiayang Zheng (MS)** is working as an RA on a TransNow/Forestry combined project. 🏔️



**Jim McManus, UW**, joined the University of Washington in 1992, where he is currently Coordinator of the TransNow Professional Development Program and is also a lecturer in the Civil and Environmental Engineering Department at the UW. Mr. McManus received his engineering education at City College of San Francisco, San Jose State University, and University of California, Berkeley, and holds a

lifetime teaching credential in Engineering Technology for California Community Colleges.

Since joining UW nearly ten years ago as the UW Director of Transportation Professional Development Programs, he has developed a comprehensive program in partnership with the Federal Highway Administration, Washington Department of Transportation, local agencies, and the private sector. Today the program offers approximately 50 workshops per year at various locations throughout the state of Washington and in Idaho and California. This program offers a full range of transportation engineering classes in extended education and training for the practitioners in federal, state, local, and private sectors. Since 1993, about 8,000 participants have been trained in Design, Traffic, Construction, Program and Project Management courses. He has also been actively involved as Principal Investigator for the UW in transportation research conducted for the National Cooperative Highway Research Program (NCHRP). Prior to joining the University, Jim spent nearly 40 years with the California Department of Transportation (CALTRANS), retiring as Chief Engineer of the 20,000-person transportation department. Over the years, Jim has received several awards and recognitions for his engineering work in highway design and transportation management, including an award from the League of California Cities and California County Engineers Association for developing and leading developments of major partnerships between CALTRANS and local government transportation programs. 🏔️

## NW TRANSPORTATION CONFERENCE AND POSTER COMPETITION

The NW Transportation Conference was held at OSU February 5-7, 2002. Over 350 transportation professionals from the Pacific Northwest participated in the conference. The theme for the 2002 conference was Sustainable Transportation. Sessions included bicycle and pedestrian transportation, innovations in mobility, recycled materials in road construction, fish passage, water quality, and vegetation management. Over 30 vendor displays were open throughout the conference.

The conference banquet featured Charlie Hales, Portland City Commissioner, as Keynote Speaker. Wednesday's luncheon included student poster award presentations and a slide show on the history and scheduled restoration of St. John's Bridge.

The NW Transportation Conference has been held approximately every two years since 1949. The conference has served as a forum for engineers, designers, builders, operators, planners, and other transportation officials. This year it incorporated the annual meeting and conference of the ITS America, Oregon Chapter. Sponsors



Students from OSU and PSU participated in the poster competition.

included OSU, PSU, ODOT, Benton County Public Works, FHWA, and the US Forest Service.

A student poster competition offered cash prizes. First Place (\$250) went to PSU graduate student Monica Teresa Leal. Second Place (\$150) was awarded to PSU graduate student Shazia Malik. Other students from PSU and OSU who received awards in the poster contest were Michelle (Shelly) Alexander (OSU), Amy East (OSU), Shaun Quayle (OSU), Ahmed El-Geneidy (PSU), and Sutti Tantiyanugulchai (PSU). 🏔️

## NEW PROJECTS (2001 - 2002)

TransNow funds a variety of research and education projects conducted by consortium universities in Region Ten. Below are the new projects funded for 2001-2002. A more complete description can be found on the TransNow Web Page at <http://www.transnow.org>

**The Use of Transit Vehicles as Speed Probes for Traffic Management and Traveler Information in Addition to Performance Monitoring, UW.** The goal of this project is to leverage an existing transit automatic vehicle location (AVL) system, currently used primarily for command and control purposes, as an additional, important data source in traveler information and performance monitoring. Dan Dailey, 206-543-2493, [dan@its.washington.edu](mailto:dan@its.washington.edu)

**Content Management and Electronic Dissemination Strategies for Multiple Types of Traveler Information, UW.** This project develops and initiates a content management strategy for design and electronic delivery of multiple types of public traveler information. The results of this research will enable the WSDOT to integrate coherently a wide range of available transportation-related information and effectively disseminate that information to the public. Beth Kolko, 206-685-3809, [bkolko@u.washington.edu](mailto:bkolko@u.washington.edu)

**Improved System for Collecting Real-Time Truck Data from Dual Loop Detectors, UW.** This project identifies the major problems with the current WSDOT dual-loop detection system; proposes "quick-fix" adjustments where possible to the existing system; and is developing an algorithm to provide accurate, real-time truck data for diverse on-line applications. Nancy L. Nihan, 206-543-8255, [nihan@u.washington.edu](mailto:nihan@u.washington.edu)


**Development of Multimedia Web-based Transit Databases, UW.** The goal of this project is to develop, test, and deploy a web-based multimedia database to allow broad access to images, video, and other information related to transit facilities and technology. The database will be accessible to remote users, and will have text-based and map-based front-ends that connect it to a powerful

specialized search engine. George Turkiyyah, 206-543-8741, [george@ce.washington.edu](mailto:george@ce.washington.edu). Scott Rutherford, 206-685-2481, [scottrut@u.washington.edu](mailto:scottrut@u.washington.edu)

**Pedestrian Safety and Transit Corridors, UW.** The purpose of this project is to document the significance of the relationships between collisions involving pedestrians (PMVCs), transit routes and ridership, route functional classification, road conditions, and the presence of attractors/generators of pedestrian travel. Anne Vernez Moudon, 206-685-4057, [moudon@u.washington.edu](mailto:moudon@u.washington.edu)

**An Analysis of Motor Carrier Marketing Strategies, Information Technologies, and Productivity, OSU.** The overall objectives of this project are to: 1) calculate productivity and efficiency measures for general freight motor carriers using a Malmquist Index, 2) determine the relationship between the above measures of efficiency and productivity and firm marketing strategy, 3) determine which information technologies are associated with the largest increases in efficiency and productivity, and 4) determine whether the 1996 preemption of intrastate motor carrier regulation led to efficiency gains for truckers in the affected states. B. Starr McMullen, 541-737-1480, [s.mcmullen@orst.edu](mailto:s.mcmullen@orst.edu)

**Using Archived Data to Measure Operational Benefits of ITS Investments, PSU.** The objectives of this project are to: 1) use existing ITS data sources to the extent possible to develop evaluation program for operational investments, 2) develop two case studies, including ODOT Region One's Incident Management Program and Ramp Metering Program, 3) demonstrate benefits of archiving ITS data, and 4) establish a framework for future evaluations. Robert L. Bertini, 503 725 4249, [bertini@pdx.edu](mailto:bertini@pdx.edu)

**Analysis of Transit Service Reliability, PSU.** The project will analyze Tri-Met's archived transit operations data to identify the determinants of service reliability. Based on the analysis, alternative means of improving service reliability will be assessed. James G. Strathman, 503-725-4069, [strathmanj@pdx.edu](mailto:strathmanj@pdx.edu). 

## PROJECTS IN PROGRESS: FOCUS ON WSU

### **2002 Statewide Freight Origin-Destination Survey Gets**

**Underway:** As part of the Strategic Freight Transportation Analysis (SFTA), truck traffic from selected weigh stations and ports of entry throughout Washington will be asked to participate in a quick survey to measure freight movements and identify key highway corridors within and across the state. SFTA, a statewide research and implementation effort designed to analyze existing conditions and recommend enhancements to the freight mobility transportation system in Washington State, follows the very successful Eastern Washington Intermodal Transportation Study (EWITS), which implemented the first Origin-Destination (O-D) truck survey in 1994. Nearly 29,000 truckers were interviewed at 30 sites across the state, obtaining valuable freight information and data regarding trip origin, destination, vehicle configuration, commodities hauled, and routes utilized. Data collected from the 2002 surveys will be added to the earlier 1994 database and geocoded into a Geographic Information System for future analyses and investigations and allow for strategic coordinated investment decisions involving the multimodal transportation infrastructure.

WSU Professor Ken Casavant and Assistant Professor Eric Jessup are Principal Investigator and Project Director for the implementation of SFTA and the O-D Freight Survey through WSU. Local service clubs will also participate in the implementation of truck surveys, providing a localized labor force. Actual survey work will begin in April 2002 and conclude January 2003, with separate surveys conducted for spring, summer, fall, and winter seasons. For additional information and background related to SFTA or the upcoming O-D survey, please refer to the SFTA web page at [www.sfta.edu](http://www.sfta.edu)

**The Role of Rural Airports:** "Time is Tissue" was a statement by one of the users of a rural airport in the state of Washington, speaking about how to move body replacements between hospitals. In a study recently completed by Ken Casavant and Jon Newkirk in the Department of Agricultural Economics at WSU, many benefits of rural airports were identified.


The economic benefits of major airports are well known and acknowledged; less well known is the benefit to the state and rural communities provided by rural airports. The rural airport system and its users are caught on the horns of a dilemma. The need for local airport services has never been more critical, but the vitality of the rural Washington airport system and the capability to support that

system doesn't mirror the past rigor of the state economy. Policy makers and local officials need to understand the structure and type of benefits of rural airports as they make choices about investment and support for the rural airports.

This study, working with the Aviation Division of WSDOT, used qualitative research techniques combined with a case study setting to expect differences (all benefits aren't applicable to all airports), but look for commonalities or diversity and the reasons for such differences. The case study rural communities were Forks, located in the northwest corner of Washington, the Omak area in Okanogan County in north central Washington and the Goldendale/Dallesport area in Klickitat County which borders on the Columbia River and Oregon in south central Washington. The study didn't examine the traditional multipliers of economic activity, but instead documented the reason and benefits of the flights into and out of the airport.

It was found that the role of airports in economic development and maintaining the economic level of activity is pronounced. The importance of having an airport for quality health care is much like having the airport box checked for economic development. Without an airport, the technology and highly trained medical professionals available at the handful of medical centers located in urban centers are not readily available to rural residents. Rural airports are used to support many activities of fire fighting operations, police agencies and natural disaster response.

Further, with the increasing specialization of American business and life, access to the expertise and markets found in urban areas takes on an increasing importance to rural communities, far more than was initially expected. Flights from rural airports touch almost every sector in life in the local communities. Taken individually, each activity may seem inconsequential, but viewed as a whole the airport does enhance the quality of life.

The benefits to rural communities, as identified in this research effort, include the following: 1) enhanced quality of life; 2) access to needed professional services; 3) improved quality of healthcare; 4) effective and timely response to disasters, emergencies and fires; 5) support for local businesses including agriculture and timber businesses; 6) improved ability to petition government; 7) enriched community life; 8) critical asset for economic development; and 9) an improved sense of wellbeing. 

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## TRANSNEWS

**University of Idaho:** A Controller Interface Device (CID II) developed at the University of Idaho helps improve traffic signal timing. The CID is a communications device that allows traffic engineers to link a traffic simulation program like CORSIM directly to a NEMA or 170 traffic controllers. The CID was unveiled at the FHWA booth during the 81st Annual Meeting of the Transportation Research Board in Washington, DC in January 2002.

**University of Idaho:** The Traffic Signal Summer Workshop is scheduled for August 11-17, 2002. The Traffic Signal Summer Workshop provides a fun and productive way for students (junior or senior engineering students or graduate students) to spend five days, working with traffic controllers, video detection, loop detectors, and controller interface devices. Application forms and a look at the previous Traffic Signal Summer Workshops (previously called Camps) are available at <http://www.its.uidaho.edu/niatt>

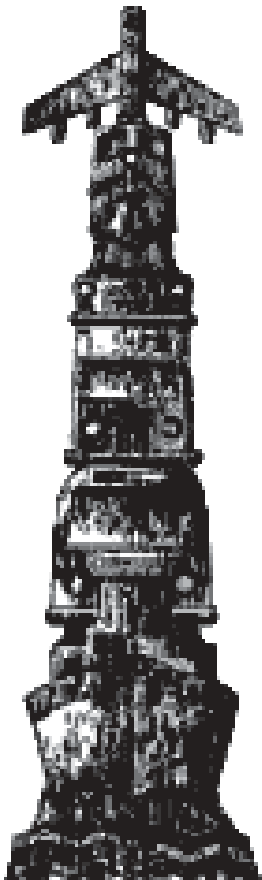
**University of Idaho:** For the second year in a row, University of Idaho students captured first place in the Institute of Transportation Engineers (ITE) Traffic Bowl competition.

**University of Idaho:** UI's Clean Snowmobile Team took first place overall with four trophies and \$10,500 in prize money, in the Society of Automotive Engineers Clean Snowmobile Challenge in Jackson Hole, WY, March 23-30.

**University of Washington:** The College of Engineering received a \$20.5 million grant from Paul Allen and the Bill and Melinda Gates Foundation for construction of a new Center for Computer Science and Engineering.

**University of Washington:** Rhonda Young, UTC Outstanding Student for 1999, has accepted the position of Assistant Professor of Civil Engineering at the University of Wyoming, beginning Autumn 2002.

**University of Washington:** PI Scott Rutherford (Chair, CEE, UW) traveled to Washington DC in February to serve on a panel reviewing the USDOT Bureau of Transportation Statistics' three major surveys of personal travel and commodity movements. Dr. Rutherford was selected as Chair of the UW CEE Department in February 2002. 🏔️



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