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## MPC Wins Re-Competition

The Mountain-Plains Consortium re-competed to be designated as the regional center for Region VIII under the U.S. Department of Transportation’s University Transportation Centers program. The UTC program was renewed under the federal highway bill passed last year. The designation comes with an increase in funding from \$1 million to \$2 million per year.

“MPC’s successful re-competition within the University Transportation Centers Program is both an endorsement of our past success and a challenge to continue to build effective education, research and outreach programs,” notes MPC director Denver Tolliver.

Colorado State University, North Dakota State University, South Dakota State University, the University of Utah and the University of Wyoming collaborate in the consortium. The grant extends the program to 2009 and keeps MPC among the 60 University Transportation Centers operating across the United States to serve as a vital source of leaders prepared to meet the nation’s need for safe, efficient and environmentally sound movement of people and goods.

**New Partner** – South Dakota State University brings unique strengths to the partnership. SDSU is a land grant institution with about 11,000 students. It has a strong engineering program and has about 230 undergraduates and 35 graduate

students enrolled in the civil engineering program. Its Geographic Information Science Center of Excellence is a joint collaboration with the U.S. Geological Survey’s National Center for Earth Resources and Observation and Sciences. SDSU is home to the South Dakota Local Technical Assistance Program (LTAP) and houses a state-of-the-art structural testing facility that can be used to test full-scale bridge sub-assemblages and components. Other facilities include a fluid mechanics laboratory, an asphalt laboratory and a geotechnical laboratory.



Wehbe

Dr. Nadim Wehbe, associate professor of civil engineering, is the MPC program director at SDSU. Wehbe teaches courses in structural theory and dynamics as well as in materials, timber structures and concrete construction. His research interests include reinforced and pre-stressed concrete structures, earthquake-resistant bridges and the use of advanced composites in structural systems. He is coordinator of the J. Lohr Structures Laboratory. He is a member of the American Society of Civil Engineers, the American Concrete Institute and the Earthquake Engineering Research Institute.

**New Focus Areas** – As program directors of the Mountain-Plains Consortium assessed its programs in preparation for re-competition, the Consortium’s focus

(Re-Competition continued on page 2)

(Re-Competition continued)

areas were adjusted to better match with USDOT strategic goals as well as needs within the region. Within the USDOT strategic objective of safety and security, the MPC will focus on high risk rural roads, rural transportation operations, effective safety management, human factors, low-cost safety improvements, work zones, heavy vehicle/commercial trucks, safety of unpaved roads, and hazardous materials.

Within the USDOT strategic objective of mobility and global connectivity, the MPC will focus on real-time traffic management, innovative demand management, freight management, finance and pricing, multimodal policy and investments, and promoting regional freight planning. Within the USDOT infrastructure renewal and environmental stewardship strategic objective, MPC will focus on infrastructure longevity, infrastructure that minimizes environmental impacts, infrastructure safety, and economic impacts. ■

## UGPTI Cooperates to Produce Transportation in America Book

UGPTI researchers have been cooperating with the Eno Transportation Foundation to update the foundation's popular Transportation in America book.

"The book presents statistical data vital to understanding and monitoring transportation in the United States," notes Kim Vachal, the UGPTI advanced research fellow who has been coordinating the effort. "This is a comprehensive reference of transportation data."

This is the 20th edition of the book which was previously published solely by the Eno Transportation Foundation. "We joined with the foundation to provide additional data sources, to provide additional analysis in compiling the information and to update the look and presentation of the material," Vachal says.

Associate research fellow Doug Benson and student Junwook Chi have been instrumental in collecting and organizing data for the book.

Final revisions are in progress and it should be published later this spring. Early orders will receive a discount. For more information, go to [www.ugpti.org/tia2007/](http://www.ugpti.org/tia2007/) ■

## Safety and Security Summit Yields Direction for Center

More than 90 policy makers, elected county officials, emergency planners and responders, and representatives from transportation agencies and private transportation firms attended a Rural Transportation Safety and Security Summit in Bismarck Aug. 23-24.

The conference identified and increased awareness of safety and security risks in the state and region. North Dakota Gov. John Hoeven and Sen. Kent Conrad provided a state and federal overview of transportation safety and security. Representatives from the NDDOT, ND Department of Homeland Security, ND Highway Patrol, ND Aeronautics Commission, Federal Transportation Security Administration, Federal Highway Administration, the Minnesota Department of Transportation, NDSU, and private industry outlined their approaches to transportation safety and security issues.



Vachal

The conference was a launching point for the UGPTI's Rural Transportation Safety and Security Center. "We're taking the input from the summit and using it to refine the center's objectives and develop an outline of research and outreach activities," says Kim Vachal, director of the center. "The participation of so many diverse groups and agencies in the summit will be a real benefit to us in that process."

The conference was sponsored by the Federal Highway Administration, the N.D. Department of Transportation, the UGPTI and NDSU. Presentations and other information from the summit are available at [www.ugpti.org/conf/rtssc/](http://www.ugpti.org/conf/rtssc/) ■

## Advisory Council Sees Changes

Several new members have been named to the UGPTI Advisory Council. Tom Balzer, is managing director of the ND Motor Carriers Association. Balzer replaces LeRoy Ernst who retired from the ND Motor Carriers Association. Balzer was previously the recreation division manager of the North Dakota Parks and Recreation Department.

Sandy Clark represents the ND Farm Bureau. She is public policy director for that organization, focusing on public finance and education, transportation, food labeling, food quality, food safety, national grasslands and rural development. She replaces John Mittleider.

Jay Elkin represents the ND Grain Growers Association. He is in his second term as vice president of that organization and farms near Taylor. He also serves on the domestic policy committee of the National Association of Wheat Growers. Elkin replaced Greg Nelson on the advisory council.

Neal Fisher is administrator of the ND Wheat Commission. His background is detailed in the Advisory Council Profile on page 7. He replaces Judge Barth.

Francis Ziegler is the director of the ND Department of Transportation. He earned his B.S. degree in civil engineering from NDSU in 1970 and has worked for the Department of Transportation since then. Ziegler has served in a number of capacities, including director of the Office of Project Development, west region engineer, assistant chief engineer (operations), construction engineer, and project and

resident engineer. He is a professional engineer with a background in field construction, statewide operations (construction and maintenance), planning and programming of projects, budget, environmental document preparation, and plan development. Ziegler replaced Dave Sprynczynatyk who was named adjutant general of the North Dakota National Guard in August.

**Additional changes possible.** At this writing, the North Dakota Legislature is considering additional changes to the make-up of the UGPTI Advisory Council. At the request of the UGPTI and the council, the Legislature is considering adding two representatives; one each from the North Dakota League of Cities and the North Dakota Association of Counties.

“Counties and cities spend a significant portion of their budget on developing, planning and maintaining our rural transportation infrastructure,” notes UGPTI director Gene Griffin. “Adding this representation will assure that our programs continue to address the challenges and opportunities faced by the rural areas and small communities of our region.”

In addition to the two recommended additions, the North Dakota House Transportation Committee also added a representative from the Lignite Energy Council. The full House passed the legislation and it is now waiting for action by the Senate. The Dakota Transit Association has also asked to have representation because no other agency directly represents transit on the board. ■



Balzer



Clark



Elkin



Fisher



Ziegler

## UGPTI Assumes National and State LTAP Duties

The Local Technical Assistance Program (LTAP) funded by the Federal Highway Administration provides technical training and assistance to cities, counties, states, townships, tribal organizations and other agencies. The UGPTI is expanding to become involved at both the local and national levels.

Last fall, the UGPTI and the American Road and Transportation Builders Association (ARTBA), based in Washington, D.C., were awarded a contract to operate the national LTAP Clearinghouse. The Clearinghouse serves as a repository and source of training and technical material for the 51 LTAP centers and seven Tribal Technical Assistance (TTAP) centers across the country.

As a subcontractor to ARTBA, the UGPTI is primarily responsible for improving and upgrading the Clearinghouse's web site. UGPTI communications coordinator Tom Jirik and UGPTI web manager Patrick Nichols are working with ARTBA and FHWA staff to identify priorities and develop a strategy for improving services offered via the Web.

Julie Rodriguez, director of UGPTI's Transportation Learning Network and Gary Berreth, director of the North Dakota LTAP, will work with the program to develop innovative training and outreach strategies.

At the local level, the UGPTI took over management of the North Dakota LTAP Center. The center was previously managed by the NDSU Civil Engineering Department. The center was moved to Bismarck because of a desire to have the program located close to and affiliated more closely with the NDDOT.

Berreth will continue to be involved in activities of the Transportation Learning Network, the Rural Transportation Safety and Security Center and will serve as director for the ND LTAP. Dave Levi, recently retired from the NDDOT is program manager. Denise Brown was hired as the office administrator.

"There are some real opportunities for synergy," Berreth notes. "Our involvement in the Clearinghouse will give us national perspective and expose us to a broad variety of technical training and outreach programs. We'll be able to put the experience to use almost immediately at the local

level in North Dakota and regionally through the Transportation Learning Network and other programs."

"Conversely, our close working relationship with the NDDOT and other local agencies, our previous involvement in applied training and outreach programs, and depth of experience in transportation research will allow us to make contributions to these programs that will benefit transportation professionals across the country." ■

## Researchers Cooperate with NDDOT to Study Economic Impact of Infrastructure

In conjunction with the NDDOT, UGPTI researchers have completed a study which assesses the economic impact of transportation infrastructure in North Dakota. UGPTI researchers completed the research at the request of the North Dakota Legislative Council.

The researchers integrated three key software models in the analysis: HERS-ST, REMI and Cube. The study comprised an economic analysis of the state's highway, rail, and air networks.

The highway analysis involved the use of HERS-ST to simulate the deterioration and rehabilitation of North Dakota's highway system over a 20-year period. From this baseline analysis, budget constrained analysis was performed to estimate the changes to pavement condition and user costs under the constrained scenarios. From this, the total economic effects were estimated using the REMI software.

A secondary component of the highway analysis developed a GIS network which modeled grain and manufacturing movements across the state system. Building upon this analysis, the benefits and costs of the implementation of spring load restrictions was estimated.

The rail freight service analysis estimated the economic impacts of the branch line and regional railroad system in the state by re-routing the traffic from these systems to the main line track via the highway system. The increased cost to the rail shippers as well as the increased highway impacts were estimated to assess the economic impact.

The airport analysis identified airports within North Dakota that are specially situated to participate in the current and future growth of the state's economy. Recent growth in the air cargo and regional and business jet services illustrates the fact that airports outside of the major passenger terminals in the state have an important role to play in the future of air services in North Dakota, and expansion or preservation of these facilities is necessary in the future.

From these studies, recommendations for transportation infrastructure were presented to the state Transportation and the Economic Development committees in the Legislative Council. At the Economic Development Committee meeting, NDDOT Director David Sprynczynatyk said that "the data in the study shows it is clear that transportation is a good investment." ■

## SURTC Develops Transit Plan for Rolette County and the Turtle Mountain Indian Reservation

SURTC researchers helped Rolette County and the Turtle Mountain Indian Reservation develop a three-phase plan for improving transit services in the area.

The area faces some unique challenges. Turtle Mountain Reservation, in extreme north central North Dakota, is densely populated and has more residents per square mile than Cass County, North Dakota's most populated county. Unemployment in the area is particularly high and income levels are low. Poverty, health issues and educational needs of residents make improved transit a priority. The county's regional hub for shopping, medical services, and interstate transportation is Minot, which is approximately 120 miles away.

SURTC research fellows, Jon Mielke, Gary Hegland, James Miller, David Ripplinger, Carol Wright, Del Peterson, and Jill Hough joined forces with the North Dakota Department of Transportation (NDDOT) and tribal officials to develop and coordinate a transit plan that addresses those issues.

Rolette County is currently served by three transit providers; Nutrition and Support Services which provides the senior meals program and transit for Belcourt; Nutrition United Inc. which provides senior meals and transit for Rolette County; and Royal Coach Transportation, a commercial transit provider. Other than these three systems, there are no forms of commercial or public transportation in the county.

Mielke and Hegland met with the transit providers and other agencies to evaluate current services and to look for duplication and gaps. An advisory committee was formed to provide input into the development plan. The committee identified medical, compliance, and educational-related transportation as priorities, followed by employment-related transportation. The goal of the development plan is to ultimately "expand and improve much needed services to the area," Hegland notes.

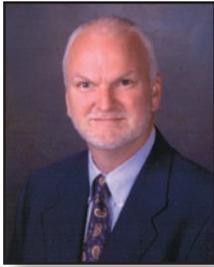
At the committee's first meeting, the SURTC researchers recommended that the existing transit services submit a supplemental funding request for transit monies, administered by the NDDOT. The requests were submitted and they were ultimately provided with an additional \$111,000 in state and federal funding for the budget year of 2006-2007.

The three phases of the transit development plan included:

- Maintain existing levels of service and expanding hours of operation. They also plan to create uniformity in the three existing transit services by creating a transit advisory board and using one name and one phone number for all transit services.
- Develop a fixed route between Dunseith and Rolla and another fixed route to Minot.
- Purchase computer software to computerize scheduling and dispatch, as well as implement a fixed route to major employers and propose a long-term plan for vehicle replacement.

"With this new development plan in place, the ongoing efforts of the area's transit providers and the proposed advisory board will facilitate the development and operation of a fully coordinated transit system that responds to the mobility needs of area residents in an efficient and cost-effective manner," Hegland says. ■

## Investigating Runway Roughness



Johnson

The UGPTI and the North Dakota Aeronautics Commission are pioneering the use of automated highway pavement assessment techniques to measure the roughness of airport runways.

The Federal Aviation Administration requires all general aviation airports to conduct pavement distress surveys every three to four years. In 2005, the North Dakota Aeronautics Commission asked the contractor conducting the surveys to collect roughness information on all surfaced runways in the state. Because of his experience assessing ride quality on the state's highways, Kurt Johnson, director of the UGPTI's Department of Transportation Support Center, was called to help.

The contractor used a specially equipped N.D. Department of Transportation van to collect the data. Then Johnson worked closely with the engineering firm Kadrmass, Lee and Jackson to analyze and interpret that data. Nilesh Paliwal, an NDSU civil engineering graduate student, is also assisting Johnson with the analysis.

When comparing roughness measurements to pavement distress measurements, Johnson found that either method provided a good overview of runway condition. Consequently, he worked with the commission to develop roughness reports for all of the airports measured.

Johnson is working to develop a mathematical relationship between the International Roughness Index and the Pavement Condition Index. Such a relationship might make it possible to use roughness measurements in alternating assessment cycles to meet FAA assessment requirements, making the process faster and cheaper. The challenge will be in gaining FAA approval.

In addition, Johnson is developing roughness performance standards for evaluating various runway rehabilitation strategies and is investigating the impact of roughness on different types of aircraft. ■

## ND LTAP Plans Workshops

The North Dakota Local Technical Assistance Program (ND LTAP) offers workshops on road construction, repair and maintenance to professionals within local units of government.

Upcoming workshops include:

Culvert Installation

- Oakes, April 4
- Stanley, April 11

Asphalt Pavement

- Dickinson, April 24
- Carrington, April 25

Several other topics, including a winter road maintenance workshop, are being scheduled for fall. For updated workshop schedules and registration forms, visit the ND LTAP website at [www.ND.LTAP.org](http://www.ND.LTAP.org) and follow the "Events" link.

The workshops will count toward completion of the ND LTAP Road Scholar Program, and is designed for road and highway practitioners employed by local units of government in North Dakota. It recognizes each participant's achievement of knowledge and skills at various levels in subjects and topics essential to efficient and effective local road maintenance and management.

The Road Scholar Program includes three training levels. Completing five courses (30 hours) from basic workshops qualifies participants for Road Scholar I status. Completing two additional basic courses (12 hours) plus three elective courses (18 hours) qualifies participants for Road Scholar II status. Road Scholar III requires two additional basic courses (12 hours) plus three elective courses (18 hours).

For more information, visit [www.ND.LTAP.org/programs/scholar.php](http://www.ND.LTAP.org/programs/scholar.php) or call 1-800-726-4143. ■

## Traffic Operations Field Study Launched



Smadi

The Advanced Traffic Analysis Center (ATAC) and the city of Fargo are cooperating to evaluate new technology for improving traffic signal operations.

Last winter and spring, traffic signal control technology and communications equipment were installed at the intersection of 12<sup>th</sup>

Ave. N. and 18<sup>th</sup> St. near NDSU. ATAC is collecting data via the city of Fargo's fiber optic network using four Autoscope image processing cameras. The city has access to the data, research findings, and use of a video surveillance camera with a powerful zoom that can support traffic management during special events. Traffic Control Corp. supplied the necessary equipment for the project and NDSU Network Services assisted in design and installation.

The intersection is essentially a real-world laboratory that allows ATAC to collect detailed data on traffic characteristics and traffic signal controller operations in order to explore detection and control improvements. Various detection strategies and traffic controller operations are being evaluated to determine their effects on intersection operation in terms of traffic delay. In addition, traffic data will be collected continuously to determine changes in traffic conditions during typical daily operations and during special events (i.e., NDSU sporting and Fargo Dome events).

"We've seen a tremendous emphasis on transportation system operations. This is very evident in the new federal highway bill, which calls for including operations in metropolitan and statewide planning and developing standards for real-time system management information," notes ATAC director Ayman Smadi. "This is a local step in that direction." The effort is supported by the Federal Highway Administration and the N.D. Department of Transportation. ■

## MPC Sponsors Attendance at RFID Conference

The MPC sponsored a trip for several NDSU faculty and students in October to a national conference on transportation applications for radio frequency identification technology (RFID).

More than 80 experts in transportation, technology and research policy from universities, government, and private industry attended the Washington, D.C., conference. The conference was organized and hosted by the Transportation Research Board of the National Academies of Science.

The presence of a major RFID manufacturing firm in NDSU's Research and Technology Park as well as NDSU's research program into RFID, gives us some unique opportunities as to incorporate the technology into our research and education programs," noted MPC director Denver Tolliver. "The conference allowed us to see how RFID is being viewed on a national scale and how we can contribute to both policy discussions and research direction."

Joseph Szmerekovsky, assistant professor of management at NDSU, attended with support from the MPC. "The best part of the conference for me was the small-group breakouts where we were able to participate in a lot more discussion and a lot more interaction," he says. "Getting a feel for what other people were thinking and doing was very helpful, particularly the need for research on return on investment and cost-benefits. Those are the sort of things that I'm involved in."

Participants at the conference gathered in breakout groups to discuss RFID policy and institutional issues and RFID applications in the supply chain, construction, and operations, safety and security.

The MPC provided funding to support attendance at the conference for additional NDSU faculty and students, including: Ergin Erdem, graduate student in industrial and manufacturing engineering; Jing Shi, associate professor of industrial and manufacturing engineering; David Wells, professor of industrial and manufacturing engineering; and Hai Zeng, Ph.D. student in transportation and logistics. ■

## UGPTI to Co-Sponsor National Ag and Food Truck Summit

The first National Summit on Agricultural and Food Truck Transport will be April 25 and 26 in Washington, D.C. The Upper Great Plains Transportation Institute at North Dakota State University is co-sponsoring the event.

The conference, aimed at discussing critical issues and strengthening commercial trucking for the future success of U.S. agriculture, will be held at the Holiday Inn at 2650 Jefferson Davis Highway in Arlington, VA. U.S. Secretary of Agriculture Michael Johanns will give the opening keynote address at the conference. The other primary sponsor of the event is the American Food Transporters Conference, an organization of the American Trucking Associations.

The national summit will provide a venue for the trucking, ag and food industries, and other interested organizations, to discuss critical issues and development ideas and recommendations. Further program details and registration materials are available at [www.agandfoodtrucking.org](http://www.agandfoodtrucking.org). For additional information, contact UGPTI researcher Kim Vachal at (701) 231-6425 or by e-mail at [Kimberly.Vachal@ndsu.edu](mailto:Kimberly.Vachal@ndsu.edu).

Vachal, one of the conference planners, notes that the trucking industry is diverse and highly competitive. “The industry provides a broad spectrum of services to agricultural and food operations, markets, and interests. The health of the trucking industry has a direct bearing on the competitiveness of agricultural and food interests.”

“Development of legislative and policy initiatives in agricultural and food trucking for possible inclusion in the 2008 Farm Bill, the 2009 Highway Reauthorization Bill, and other appropriate federal legislation will be a key focus of the summit,” notes Dave Schroyer, chairman of the Agricultural and Food Transporters Conference.

The two-day conference will focus on the role of energy costs and environmental issues in the trucking industry; factors that affect driver recruitment, training and retention; the effects of security concerns; and regulatory requirements in agricultural and food transportation, among other topics.

The UGPTI and the American Food Transporters Conference are partnering with several other organizations to sponsor the summit. UGPTI is involved because of its work studying agricultural commodity transportation and trends and in conducting analysis of transportation trends and impacts for communities and regions with economies that rely on agriculture and agricultural product processing. “This effort is an ideal fit with our past agricultural transportation-related research and outreach efforts,” Vachal says.

Additional sponsors include the U.S. Department of Transportation, the U.S. Department of Agriculture, Mountains-Plains Consortium, American Trucking Associations, and other private sector associations/organizations. ■



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AGRICULTURAL and  
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TRANSPORT for the  
FUTURE**  
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## Advisory Council Profile: Neal Fisher

Neal Fisher, administrator of the North Dakota Wheat Commission, represents the interests of the North Dakota wheat industry on the state, national and international level. With agriculture accounting for 40 percent of North Dakota's economy, and wheat accounting for one quarter of that, there's never a shortage of things to do.

Fisher considers chairing the UGPTI advisory board an ideal fit with his agriculture-related responsibilities.

“An efficient, effective marketing and transportation system is critical to agriculture as well as to the rest of the state,” he says. “As we look to the future, the Institute's programs - academic, research and outreach - all will be increasingly important as we allocate hard-won resources to build that infrastructure in a cost-effective and responsible manner.”

Fisher is excited about emerging new opportunities. Demand for North Dakota commodities is growing and prices for livestock, specialty crops, and energy-related natural resources have risen dramatically. Those developments have resulted in nearly unprecedented levels of revenue flowing into the state.

The research, education and training programs offered by the UGPTI will be essential to address future transportation, marketing and service needs that accompany those opportunities, he explains.

“Greater interest in renewable energy production and identity preserved marketing niches will require more attention to intermodal and other innovative transportation systems to accommodate these new and developing industries and services,” says Fisher.

Fisher's perspective is home grown but tempered with international experience. He grew up on a cattle and grain farm north of Tappen and attended school in Pettibone. He is a graduate of NDSU, where he

earned master's and bachelor's degrees in agricultural economics. He also has studied Russian language, culture and history at George Washington University, Washington, D.C., and Russian agricultural technology and cultural practices at the Belorussian Agricultural Institute, Gorki, Belorussia. Fisher joined the Commission in 1978 as a marketing specialist, and has served as administrator since 1998. He and the North Dakota Wheat Commission are involved in policy and trade matters affecting the world wheat market on a daily basis.



Neal Fisher

“The Institute has grown a lot over the last decade,” Fisher observes. “It has taken on a bigger job of servicing communities across the state. The state is fortunate to have at its disposal the academic skills and training of the UGPTI staff to address the research and planning needs of the transportation sector.”

“The Institute's outreach to state and national policy makers is also very important. What we do here has national implications,” he says. “It is becoming more and more expensive to build and maintain transportation infrastructure. Policy makers need to address those infrastructure needs in a way that is most efficient and effective,” Fisher says.

“There are exciting new developments for all facets of North Dakota's economy,” Fisher says. “We need the Institute's research to help us to capitalize on those opportunities by planning for the delivery of our products and services, because effective transportation is crucial to the future of our rural and urban communities.” ■

## Transportation Institute Holds 11th Annual Awards Banquet

More than 250 people attended the UGPTI's 11th Annual Awards Banquet Oct. 5, 2006, at the Fargo Holiday Inn.

The event featured recognition for several individuals who have provided leadership in the transportation industry in the region and have made significant contributions to transportation programs at NDSU.

The Institute's highest award, the Agrey Award, was presented to Lloyd Thompson. Thompson is chairman of the board for Border States Paving, Inc. of Fargo. He founded the company in 1973. Under his direction the company performed some of the first asphalt recycling projects in North Dakota and has done a significant amount of asphalt paving in the region. Thompson was also instrumental in establishing a curriculum in construction management and engineering at NDSU.

The Chairman's Award recognized three individuals who helped develop NDSU's new Masters of Military Logistics program. Lt. Gen. Claude Christianson is director of logistics at the Joint Staff in Washington, D.C. Lt. Gen. Jerry Sinn is military deputy for budget for the Assistant Secretary of the Army. Maj. Gen. Michael J. Haugen is the recently retired adjutant general of the North Dakota National Guard.

The Lifetime Achievement Award was presented to Kenneth Casavant, a professor in agricultural economics at Washington State University and an adjunct professor at NDSU. Casavant earned his B.S. and M.S. degrees in agricultural economics

from NDSU in 1965 and 1967. He is recognized internationally for his expertise in agricultural transportation, marketing and policy.

Scholarship winners were also recognized at the banquet. The \$1,500 scholarships are funded by the Mountain-Plains Consortium through a grant from the U.S. Department of Transportation.

The Transportation Engineering Scholarship recognizes academic performance and interest in the area of transportation. Recipients were Amy Hardy and Jason Mayfield. Hardy is a junior at NDSU, from Ellendale, ND, pursuing a degree in civil engineering. She is an intern at UGPTI's DOT Support Center (DOTSC). Mayfield, of Fargo, is a senior at NDSU majoring in civil engineering. He has worked as an intern with the Ward County, ND Highway Department and with the City of Maplewood in the Minneapolis-St. Paul area.

The Paul E.R. Abrahamson Transportation Scholarship recognizes individuals demonstrating academic achievement and leadership as well as an interest in the areas of agricultural transportation and logistics. The scholarship is given in honor of Paul Abrahamson, a pioneer in the North Dakota Wheat Commission who served as its first administrator. Recipients were Kimberly Spear and Chris Duchsherer. Spear is a senior at NDSU from Drake, ND, majoring in agribusiness and applied economics. Duchsherer is a senior at NDSU from Minot, ND, also majoring in agribusiness and applied economics. ■



Neal Fisher, Lloyd Thompson, Joe Chapman



Neal Fisher, Ken Casavant, Joe Chapman



Neal Fisher, Lt. Gen. Christianson, Maj. Gen. Haugen, Joe Chapman



Sinn



Amy Hardy, Jason Mayfield

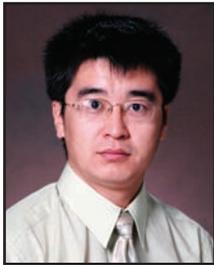


Kimberly Spear, Chris Duchsherer



Masters of Military Logistics Group

## Cao Honored for Outstanding Dissertation



Cao

Xinyu (Jason) Cao recently received the Charley V. Wootan Memorial Award from the Council of University Transportation Centers. Cao is an associate research fellow with the Small Urban & Rural Transit Center.

The national award recognizes a student in transportation for an outstanding Ph.D. dissertation in policy and planning. Before joining SURTC in July, Cao completed his Ph.D. in civil engineering with an emphasis on transportation planning at the University of California-Davis. In addition, he received a University of California Transportation Center Dissertation Fellowship. His dissertation, "The Causal Relationship Between the Built Environment and Personal Travel Choice: Evidence from Northern California," examines the causes behind travel choices made by individuals living in areas with various land-use characteristics.

Cao received the award at the annual Council of University Transportation Centers Awards Banquet in Washington, D.C., on Saturday, Jan. 20. The honor also includes a \$2,000 cash award. The banquet was held during the national meeting of the Transportation Research Board.

Cao is currently investigating transit-oriented development and solutions in small urban and rural areas. ■

## First Class of Master of Military Logistics Students Reach Halfway Point

With the first semester complete, students in the Masters of Military Logistics (MML) program have a different perspective on the program and NDSU than when they entered the program last fall.

Capt. Will Leslie, an Army transportation officer, thought the program would focus more on the military. He was surprised to find that students are totally removed from the military and are encouraged to change their perspectives. It has been a "great opportunity to learn to look at things from the outside," Leslie says.



Leslie



Haffay

Transportation officer, Capt. Chris Haffay says the program has taught her a multifunctional approach to logistics. She says the relationship with the faculty has been exceptional. The fact that so many of the students are military officers could have been intimidating to some of the civilian faculty. "At first, it was hard for them to see we are just people," says Haffay.

In 2006, the U.S. Department of Defense (DOD) chose NDSU for the new program. No where else in the world will you find another program like it. The program launched its three-year pilot run last fall. The inaugural class consists of 17 women and men from across the nation. Some of the students are from the United States Army, and some are civilians working for the Army.

The year-long, 36-credit MML is part of the interdisciplinary Transportation & Logistics Program offered by the College of Graduate and Interdisciplinary Studies. The Colleges of Agriculture, Food Systems, and Natural Resources; Arts, Humanities & Social Sciences; Business

Administration; Engineering & Architecture; and Science & Mathematics. The MML is sponsored and coordinated by the UGPTI. The program's director, Dr. Brian Kalk, is not only hopeful the program will become a permanent degree at NDSU, he says there may eventually be a master's in transportation and urban planning to complement the MML program.

Why a Masters of Military Logistics? When it comes to war, nothing is easy. Making sure supplies are where they need to be is literally a matter of life and death. A plan of action is imperative. The Masters in Military Logistics teaches military officers and DOD civilians how to effectively transport and track everything, not only on the battlefield, but also in time of peace.

In addition to the MML, NDSU, in cooperation with Alien Technology and the University of Alaska, has also been selected by the DOD for the development of defense microelectronics and sensors. Radio frequency identification (RFID) technology is a tool that helps to ensure that equipment and material are delivered efficiently and that they can be readily found when needed. Research and applications of that technology is one of the many aspects of supply chain management integrated into the MML program.

One of the program's civilian students, Sharon Garay-Rodriguez, a general engineer program manager for the Army, was surprised at the diversity the program

offers. Her advice to perspective students: "Don't think it is just about transportation." She says the program offers a variety of classes which could be useful to a plethora of careers.



Garay-Rodriguez

The program teaches logistics from a commercial understanding; it is up to the students to take that knowledge and translate it into military settings. According to Kalk, the "translation issue is something they learn a little bit about in school, but mostly on the job." By and large, the students should walk away with the fundamental knowledge of logistics, enhanced critical thinking skills, and a globally mature perspective, while keeping updated with current technology.

The class of 2007 will figuratively pass the torch to the new class with graduation on Aug. 8, 2007. The program's faculty hopes to see at least as many students enrolled next year with students from other branches of the military. Although the program may have been different than students expected, the learning experience, according to Haffay, has been "priceless." ■

## Master of Military Logistics Students Tour Red River Valley & Western Railroad

Students from the NDSU Master of Military Logistics Program toured the Red River Valley and Western Railroad yard in Breckenridge, MN, in October to observe rail operations first hand.

“This was a tremendous opportunity for students to see in real life the rail operations they have been learning about in textbooks,” notes Denver Tolliver, associate director of the Upper Great Plains Transportation Institute.

The Red River Valley and Western is a regional railroad in North Dakota. It began operations in 1987 over track acquired from the Burlington Northern Railroad. It owns and operates 517 route miles of track and handles 42,000 carloads annually.

The Breckenridge site is the railway’s main rail yard. Students toured the yard including the locomotive service and car repair shop, turnouts, crossovers and wayside signals. They also toured a shuttle train loading facility adjacent to the yard and the interchange where cars from the Red River Valley and Western are exchanged with the BNSF Railway.

“The site visit was of tremendous value to the students and the staff,” says Brian Kalk, program manager for the Master of Military Logistics



Program. “By interacting with professionals in the rail industry, our students gained a better understanding and appreciation of what it takes to move goods by rail.”

At the car repair shop, students saw different freight cars in detail and learned about car components, including truck assemblies and foundation brake rigging, and the operation and mechanisms of covered hopper cars.

Dan Zink, vice president of the Red River Valley and Western, said his company was eager to welcome the students. “Our goal for tours like this one is to contribute to the education and hands-on learning of the logistics students and to better prepare them to go back into the operational forces. Students with this type of experience will make a difference.”

“This was an opportunity to view the rail yard and visualize the movement of inbound and outbound trains. It was a great value to see how trains enter the yard and determine their placing,” said student Nicole Chilson. “This experience will enhance my ability to overcome logistical challenges when managing or just working with a rail yard in the movement of our equipment.” ■



## UGPTI Staff and Ph.D. Student Papers Selected

Papers written by several UGPTI students and staff members were recently selected for presentation at national meetings.



Enyinda

Ph.D. student Chris Enyinda presented “Managing value chain through lean supply chain logistics: A comparison of military and commercial organizations” to the American Society of Business and Behavioral Sciences 14<sup>th</sup> annual conference Nov. 8 in Las Vegas, NV. The paper was also published in the

conference proceedings.

Enyinda returned to Las Vegas in January to present another paper at the Society of Advancement of Management’s 2007 International Business Conference. The paper, “Mitigating and Managing Global Supply Chain Risks and Security: Leveraging RFID Technology,” was also published in the conference proceedings.



Mitra

Ph.D. student Subhro Mitra’s paper, “Analyzing satellite imagery to develop freight generation data” was selected in the American Association of State Highway and Transportation Officials’ Geographic Information Systems for Transportation (GIS-T) 2007 Student Paper Contest. He will present

his paper March 26, at the GIS-T Symposium in Nashville, TN. The paper will also be published on the GIS-T website.

In addition to his GIS-T paper, Mitra was also selected to present his paper, “Analyzing the effects of spring highway load restrictions on North Dakota’s agricultural freight flows” at the 86<sup>th</sup> Annual Meeting of the Transportation Research Board in January in Washington, DC.

The TRB Annual Meeting is the nation’s largest gathering of transportation professionals with more than 2,800 presentations in 500 sessions addressing topics of interest to policymakers, administrators, practitioners, researchers and representatives of government, industry and academic institutions from around the world.

Shawn Birst, associate research fellow with the UGPTI’s Advanced Traffic Analysis Center presented “Comparison of Traffic Simulation Models with HCM 2000 Methodology Using Various Traffic Levels Under Pretimed Signal Control” at the Transportation Research Board meeting. His paper was one of a series of papers that looked at measuring traffic signal control performance and integrating those measures into traffic simulations.



Birst

Associate research fellow Xinyu (Jason) Cao presented three papers at the national TRB meeting. His paper, “Examining the impacts of residential self-selection on travel behavior: methodologies and empirical findings” evaluated various approaches to studying how residents’ predispositions toward various land use configurations and travel modes affect their choice of where to live. The research was conducted to provide improved perspective on how the actual environment influences their travel behavior. His other papers were: “Do changes in neighborhood characteristics lead to changes in travel behavior? A structural equations modeling approach” and “Gender-role based differences in time allocation: A case study of Shenzhen, China.” ■

## New Staff at UGPTI



**Denise Brown** joined the UGPTI as the new LTAP administrative secretary. She has more than 15 years of administrative experience. She was previously with Sheridan County as deputy auditor and most recently with the Office of Management and Budget as

payroll specialist. She is a member of the National Managers Association and is pursuing her bachelor's degree in business administration from the University of Mary.



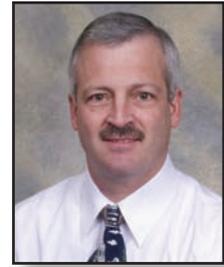
**Xinyu (Jason) Cao** is an associate research fellow with the UGPTI's Small Urban & Rural Transit Center. Cao received a Ph.D. degree in the area of transportation planning and engineering from the University of California – Davis. His dissertation

focused on the causal relationship between the built environment and personal travel choice. Coming from a developing country, Xinyu is aware of the importance of public transit systems, especially to a transportation-disadvantaged population.

**Tracey Dahl** is an accounts and grants technician with the UGPTI. She was previously employed by Lindsay-Ecowater in Moorhead and has operated a small bookkeeping business out of her home for 10 years.

**Kevin Ketcher** is the supervisor for the students in the Department of Transportation Support Center's Information Technology Center. He also works at creating, maintaining and updating programs and maintains the server and network. He has also been involved in developing a dynamic online survey system. He earned his bachelor's degree in computer science from NDSU in 2006 and is working toward a graduate certificate in software engineering from NDSU.

**David Levi** brings more than 24 years of transportation experience to the UGPTI. Levi was previously with the NDDOT. David is the new LTAP program manager. For the past 20 years, his career focus has been to provide technical services to both DOT



employees and local government agencies. Those services included development of departmental construction and maintenance specifications, construction of department facilities, development of maintenance equipment specifications, engineering studies and evaluation of truck size and weight issues. He earned an associate degree in civil engineering technology from the N.D. State College of Science in Wahpeton, ND.

**Dustin Ulmer** is originally from LaMoure, ND. He was hired in January as a Web technician. He was previously a graduate research assistant with SURTC. He earned a bachelor's degree in 2003 from NDSU and is continuing to work on his MBA.



**Carol Wright** joined the staff of the Small Urban & Rural Transit Center as associate director of training and outreach. She has more than 12 years of experience as the executive director of public transportation for a multi-county project in central North Dakota where she managed all aspects of public transit including rural transit, specialized transit, Dial-a-Ride and contracted services. Her responsibilities there included planning, operations and fiscal management and supervision of 57 full- and part-time employees. Wright has also served as an independent consultant in marketing and development for planners, developers, architects and contractors. She has served as a trainer and keynote speaker for national, state and local conferences for the past 17 years. ■

