University Transportation Centers
Program

Fifth Annual
Student of the Year Awards

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University Transportation Centers Program
Students of the Year

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Region I

The Massachusetts Institute of Technology (Lead)
Harvard University
University of Connecticut
University of Maine
University of Massachusetts
University of New Hampshire
University of Rhode Island
University of Vermont

John L. Bowman is an Eisenhower Fellow and candidate for the doctoral degree in transportation at the Massachusetts Institute of Technology, studying under Professor Moshe Ben-Akiva. He received the master of science degree in transportation at MIT in May 1995. He has held positions at Cambridge Systematics, where he participated in demand modeling projects for New York and Los Angeles metropolitan organizations, and at Boston's Central Transportation Planning office, where he researched the data and modeling requirements of the Intermodal Surface Transportation Efficiency Act. Mr. Bowman began his studies in transportation at MIT in 1992 after 14 years in systems development, product development, and management for an insurance and financial service firm. He lives in Brookline, Massachusetts, with his wife Joanne, daughter Sarah, age 11, and son Phillip, age 9.

The objective of Mr. Bowman's research is to develop models that can be practically applied in metropolitan areas, and that provide policymakers with improved information about the potential effects of policies, especially those aimed at improving air quality and reducing congestion. He is especially interested in the role of nonmotorized transportation in this context. In his master's thesis he presented an integrated discrete choice model system, intended for use in forecasting urban passenger travel demand, which uses an improved activity-based representation of traveler behavior. He is currently extending this model system to include models of residential choices, using the activity-based travel model to supply the residential choice model with superior measures of accessibility. He has presented the results of his research at annual meetings of the Transportation Research Board in 1994 and 1995; the 1995 Activity Analysis conference in Eindhoven, The Netherlands; and the 1995 Regional Science Association, North America.

Region II

City University of New York (Lead)
Cornell University
New Jersey Institute of Technology
New York University
Polytechnic University
Princeton University
Rensselaer Polytechnic Institute
Rutgers University
State University of New York
Stevens Institute of Technology
University of Puerto Rico
University of Virgin Islands

Jeffrey M. Casello is a second year candidate for the master of science degree in transportation at Rensselaer Polytechnic Institute. He received his bachelor of science degree in civil engineering from the University of Pennsylvania in 1992. After graduation, he began working full time at the New York State Department of Transportation. In 1994, he was selected for an Advanced Institute for Transportation Education Graduate Scholarship from the University Transportation Research Center.

As a civil engineer in the Design Services Bureau, Mr. Casello designs and details highway construction plans and specifications. He is responsible for a design group that has produced projects valuing nearly $10 million in only 3 years. He has been a leader in the department's conversion to metric design. He has designed 6 kilometers of four-lane expressway in Utica, New York, and has provided metric training to fellow designers and managers.

While at the University of Pennsylvania, Mr. Casello concentrated on urban transportation planning and design. At Rensselaer, he has expanded his studies on urban traffic networks, concentrating on traffic flow theory and modelling. His thesis work attempts to predict driver route choice decision making, with applications to dynamic traffic assignment models and advanced traveler information systems (ATIS). He anticipates graduation in the spring of 1996.

Region III

The Pennsylvania State University (Lead)
University of Pennsylvania
University of Virginia
Virginia Polytechnic Institute and State University
West Virginia University

Christopher M. Poe is a doctoral candidate in civil engineering at The Pennsylvania State University. His dissertation research focuses on developing geometric design criteria for low-speed urban streets. Mr. Poe has led research on examining the relationship between vehicle operating speeds and roadway geometric design features. He has developed speed estimation models to assist designers in evaluating operations on new or reconstructed segments of roadway. The recommended design procedures should result in operating speeds more consistent with the intended low-speed environment. The research will assist designers in creating a safer environment for vehicle operators, bicyclists, and pedestrians.

As a research assistant with the Pennsylvania Transportation Institute, Mr. Poe assisted in developing a traffic engineering education program for the Pennsylvania Department of Transportation. Education and training needs for transportation professions are growing due to technological advancements and the increased responsibility to operate and maintain today's transportation systems. The education program provides a method for employees to obtain advanced training and continue their professional development.

In addition to the above academic and professional achievements, Mr. Poe was awarded a Dwight D. Eisenhower Graduate Transportation Fellowship, participated as an Eno Fellow in the Eno Transportation Policy Education Conference, and was awarded the Institute of Transportation Engineers' Student Paper Award. Mr. Poe is also a registered engineer in the State of Texas.

Region IV

University of Tennessee (Lead)
Duke University
Georgia State University
North Carolina A&T University
North Carolina State University
University of Florida
University of Kentucky
University of North Carolina
University of North Carolina, Chapel Hill
University of North Carolina, Charlotte
University of South Florida
Vanderbilt University

Jennifer J. Harper is a master of science candidate in civil engineering at the University of Tennessee. She received her bachelor's degree in civil engineering from Tennessee in May of 1994. Ms. Harper has worked on a variety of research projects at the Transportation Center. One of her most recent projects involves validating an existing NETSIM network and modifying the network for use in the development of a real-time simulation laboratory at Oak Ridge National Laboratory. For another project, Ms. Harper is writing a strategic plan for the Traffic Record Improvement Program for the State of Tennessee. In addition to her research activities, she has also organized and taught a short course on MicroBENCOST for employees of the Tennessee Department of Transportation.

In August, Ms. Harper finished an 8-month internship with Oak Ridge National Laboratory, where she worked as a research assistant. While at ORNL, she developed transportation safety recommendations for a uranium tailings cleanup operation in Moab, Utah. Ms. Harper also performed noise level calculations for several alternatives of a proposed section of roadway in the Great Smoky Mountains National Park. The evaluation was included as part of the environmental impact statement for the proposed roadway.

While working on her degree, Ms. Harper has remained highly active in the transportation professional societies, where she serves as founder and president of the Intelligent Transportation Society of America and also as president and former secretary of the Institute of Transportation Engineers. This year, Ms. Harper was appointed as both a judge and coordinator for the 1996 Southeastern Conference of ASCE, and as chair of the Undergraduate Enhancement Committee. She also serves as a mentor in the Undergraduate Peer-Mentor Program, as a member of the Student Engineering Council, and as a member of the Knoxville-Knox County Traffic Safety Task Force. Recently, Ms. Harper was nominated for membership in both Tau Beta Pi and Chi Epsilon honor societies.

Region V

University of Michigan (Lead)
Central State University
Michigan State University
Michigan Technological University
Northwestern University
Wayne State University

Gregory L. Ohl recently completed his doctoral studies in mechanical engineering at the University of Michigan. Mr. Ohl's doctoral work evolved from previous research that applied fuel cell technology to transportation applications. The primary motivation behind these studies is designing vehicles using internal combustion engine powerplants. One promising fuel cell based propulsion scheme requires the use of steam reformer technology to convert methanol to hydrogen on board the vehicle. A drawback of this scheme, however is that current generation steam reformers respond much more slowly to a change in the demand for power than is acceptable for typical vehicle duty cycles. As a result, power must be focused on the development of generic analytical models that describe the steam reformer dynamics. These models are subjected to an optimization procedure where the objective is minimum response speed. From these analyses, Mr. Ohl developed basic features of the reformer that minimize the need for supplementary energy storage devices on board the vehicle.

Mr. Ohl presented preliminary results of his research at the 1994 Fuel Cell Seminar. In addition, a paper outlining the desired design characteristics for a fast-responding steam reformer was recently accepted for publication by the Journal of Energy Resources Technology. Mr. Ohl is a member of the American Society of Mechanical Engineers and Society of Automotive Engineers. He is a licensed professional engineer in the state of Michigan, and is currently employed by the Chrysler Corporation in the powertrain systems group.

Region VI

Texas A & M University System (Lead)
Texas Southern University
University of Texas, Austin

Elise Deborah Miller is a doctoral candidate in the Department of Civil Engineering at the University of Texas at Austin where she received her M.S. in civil engineering. She is a recipient of the Eisenhower Graduate Fellowship Grant for the Ph.D. She received her B.S. summa cum laude (italics) in civil engineering and the Carroll Phillips Bassett Award for Excellence in Civil Engineering from Lafayette College in Pennsylvania. Prior to attending Lafayette College, Ms. Miller was a student at the Institute of Design at Illinois Institute of Technology in Chicago and at Oberlin College in Ohio.

Ms. Miller first became interested in transportation systems as a high school student when she became a daily commuter from Long Island, New York to the Upper West Side of Manhattan. As a graduate student and research assistant at The University of Texas at Austin, Ms. Miller is primarily involved in research concerning the determination of optimal paths in stochastic, time-dependent networks. Her main interests are in applications of operations research techniques, especially graph theoretic approaches, to solving transportation problems. Her principal focus is in algorithm design for determining optimal paths given real-time information on traffic conditions for assigning vehicles to routes and other applications to Intelligent Transportation Systems.

Elise's interests are quite diverse. She spends her free time playing the piano, painting, and training at the gym and at the dojo, where she studies Kenpo karate.

Region VII

University of Nebraska, Lincoln (Lead)
Kansas State University
Kansas University
University of Missouri, Columbia
University of Missouri, Lincoln
University of Missouri, Rolla

Bryan A. Hartnagel is a doctoral candidate at the University of Missouri, Columbia. He received a master of science degree in May 1993 and a bachelor of science degree in December 1989 from the Department of Civil Engineering at the University of Missouri, Columbia. Mr. Hartnagel was involved in evaluating and field testing polymer concrete paving materials for the Poplar Street Bridge in St. Louis, Missouri. This work was sponsored by the Missouri Highway and Transportation Department (MHTD). Currently, he is working on a project sponsored by National Science Foundation, American Institute for Steel Construction, American Iron and Steel Institute and Missouri Highway and Transportation Department with the objective of experimental verification of inelastic bridge design procedures.

In addition to research projects, Mr. Hartnagel is a graduate teaching assistant for the civil engineering department at the University of Missouri, Columbia. He has taught two different undergraduate courses several times in the past five years. In 1994 he received the Donald K. Anderson Graduate Student Teaching Award. Other awards he has received are the Superior Graduate Achievement Award in Civil Engineering and the Mid-Missouri Section of ASCE Outstanding Senior in Civil Engineering.

Mr. Hartnagel has presented publications at the 74th Annual Transportation Research Board Meeting in Washington, DC and the Fourth International Bridge Engineering Conference in San Francisco, CA. He also presented a paper at the 9th National Conference on Microcomputers in Civil Engineering in Orlando, FL.

Region VIII

North Dakota State University (Lead)
Colorado State University
University of Wyoming
Utah State University

Geoffrey Clay Robinson is currently pursuing his M.S. degree from Colorado State University in civil (structural) engineering. He received his B.S. degree in 1985 from Colorado State University in Wood Science and Technology.

As part of his research activities, Mr. Robinson has assisted on projects involving work on rural bridges and has conducted field tests on railroad bridges. His thesis topic is "Field Testing of Timber Railroad Bridges under Static and Moving Train Loads."

He received the William Bresner Outstanding Senior Award in 1985, and the W.O.O.D. Scholarship in 1984, and was vice president of the Wood Science Club in 1984.

Mr. Robinson worked for the Timber Research and Development Association in England and Engineering Data Management of Fort Collins, Colorado as a timber engineering researcher. He is currently a graduate research assistant in the Department of Civil Engineering at Colorado State University.

Mr. Robinson is presently qualified as an engineer-intern (EI-Colorado) and plans to pursue employment as a consulting engineer.

Region IX

University of California, Berkeley (Lead)
University of California, Davis
University of California, Irvine
University of California, Los Angeles

Susan Shaheen holds a B.A. in english, political science, and philosophy from Nazareth College Rochester (magna cum laude (italics)) and an M.S. in public policy analysis from the University of Rochester, and is working toward the Ph.D. in ecology at the University of California, Davis. While studying at the Sorbonne in the University of Paris, she earned the French Proficiency Certificate. While studying at Oxford University in England, she earned the Graduate Certificate in Constitutional History. Before coming to UC, Davis, to work on energy alternatives and their environmental consequences, she spent three years in Washington, DC, working with the Environmental Protection Agency and the U.S. Department of Energy.

Ms. Shaheen's background prepared her for her current program of study and research. Since coming to Davis two years ago, she has co-authored five transportation policy papers and reports and has co-edited a book on transportation energy. She is lead author of a paper for Transportation Quarterly (italics) on air-quality analysis and of a conference paper that analyzes equity effects of accelerated vehicle-scrappage programs. Her doctoral dissertation deals with policy models for exposing equity implications of Intelligent Transportation System technologies. Her advisors expect a highly sophisticated dissertation that will influence future ITS policy and funding.

She quickly became a leader among the Davis transportation students and has already received several meritorious awards: the Women's Transportation Seminar Scholarship, the Eisenhower Scholarship, and the UCTC Fellowship (twice), and she was one of only ten students nationwide selected for the 1995 Eno Foundation Student Leadership Fellowship.

Region X

University of Washington (Lead)
Oregon State University
Portland State University
University of Alaska, Fairbanks
University of Idaho
Washington State University

Eric Jessup is a doctoral candidate in the Department of Agricultural Economics at Washingtons State University, specializing in transportation research. He holds master's and bachelor'ss degrees in agricultural economics from the University of Kentucky. Eric has worked in either a staff or leadership role on several projects related to agricultural and rural transportation in eastern Washington while attending WSU. One project Mr. Jessup is currently working on is the eastern Washington Intermodal Transportation Study, which identifies future transportation needs in eastern Washington. He participated in data collection and analysis of the first statewide freight origin and destination study in the Nation and conducted statewide survey training seminars across the State of Washington. He is currently using a Geographical Information System (GIS) to develop a pavement management component within an optimization model for commodity flows in eastern Washington.

Mr. Jessup econometrically investigated the issue of shortline rail regulation and the prevalent differences between State regulators and shortline railroads concerning rail regulation. Two papers on the issue were presented, one at the World Conference of Transportation Research in Sydney, Australia. In addition, he developed the theoretical underpinnings of the economic incentive of truckers to overload and produced an empirical estimation of the violation and capture of overweight trucks in Washington State for the Washington Department of Transportation. He presented papers on these research projects at five national transportation and GIS conferences.

Mr. Jessup is also active in the Transportation Research Forum, a national transportation research organization. He currently serves as president of the Agricultural and Rural Transportation Chapter of the Transportation Research Forum, having previously served as vice president of programs for the chapter. He was also selected by the Eno Transportation Foundation's Board of Regents as an Eno Fellow for the week-long Transportation Leadership Development Conference in Washington, DC in 1994.

Mack-Blackwell National Rural Transportation Study Center

University of Arkansas

Quintin B. Watkins received his master of science in civil Engineering degree from the University of Arkansas in May 1995 and his bachelor of civil engineering degree from Georgia Tech University in May 1993. He received a graduate research assistantship from the Mack-Blackwell National Rural Transportation Center for work on the flexible pavement overlay design procedure ROADHOG, currently used by the Arkansas Highway and Transportation Department.

Mr. Watkins, a registered engineering intern, works for the Black & Decker Corporation in Ft. Mill, North Carolina as a distribution engineer. His duties include site location and facility design for Black & Decker distribution centers across the United States.

Mr. Watkins presented "Effective Structural Number Enhancements to ROADHOG," a paper he co-authored at the 1995 Annual Meeting of the Transportation Research Board in Washington, DC. He also co-authored another paper, "A Comparison of the AASHTO and ROADHOG Overlay Design Procedures," to be published by the Transportation Research Board.

National Center for Transportation and Industrial Productivity

New Jersey Institute of Technology

Arlene R-M Willis received her master of science degree in transportation at the New Jersey Institute of Technology in October 1995, and her bachelor of science in industrial engineering from the same university in October 1994. She was an Institute for Transportation Research Fellow and received support for work on modelling passenger comfort under the supervision of Dr. Lazar Spasovic.

In 1994, Ms. Willis was awarded the Dwight David Eisenhower Fellowship from the National Highway Institute, an agency of the U.S. Department of Transportation. She managed four case studies for "Developing Effective Congestion Management Systems," a project of the Metropolitan Planning Division of the Office of Environment and Planning at the Federal Highway Administration headquarters in Washington, D.C. Ms. Willis was a key to the success of that major effort, as she shared examples of practice regarding congestion management initiatives through a technology transfer summary report.

Throughout her academic career, Ms. Willis has participated in various campus and off-campus activities. She served one term as secretary for the Institute of Transportation Engineers (ITE) and was an active member in the school's student chapter of the then Intelligent Vehicle Highway Systems (IVHS). Off-campus, Arlene is a dedicated member of her high school alumnae association, St. Andrew Alumnae Association, New York Chapter.

Ms. Willis has participated in several Transportation Research Board annual meetings, and will be presenting her paper, "Evaluating Transportation Needs in a Developing Country: The Case of the Montego Bay Free Zone," at the 1996 Annual Meeting of the Transportation Research Board. This paper is based on consulting work completed for and funded by Jamaica Digiport International Limited.

National Center for Transportation Management, Research, and Development

Morgan State University

Danyell Beard will receive her master of science in transportation studies from Morgan State University in May 1996. Her current grade point average is 3.9. Ms. Beard received a bachelor of science degree in transportation and logistics from the University of Maryland at College Park in 1993. During her graduate study years she received various honors and awards, including a National Transportation Center Scholarship, a National Defense Transportation Association Foundation Scholarship, a Women's Transportation Seminar Scholarship. She also was named a Council of Logistics Management Scholar and a David Eisenhower Research Fellowship Grant.

As an Eisenhower Graduate Research Fellow, Ms. Beard works for the Federal Highway Administration in the Office of Motor Carriers. She is currently developing a microcomputer-based system and application test for planning and measuring the performance and status of projects directly related to the Office of Motor Carriers. The projects include their strategic plan, quality improvement projects, and internal and external initiatives. She will coordinate more than a dozen organizational subunits nationwide and manage a system of 50 separate improvement projects.

Ms. Beard's activities include: vice president of the Intelligent Transportation System student chapter, treasurer of Delta Nu Alpha student chapter, member of the Institute of Transportation engineers, and member of the Conference of Minority Transportation Officials.

Ms. Beard's long-range professional goals in transportation involve working at the government level or private industry as director or manager. She desires to be an integral part of a staff that seeks to develop cost-effective transit management strategies.