

# FEBRUARY REPORT

February 1, 1991

A monthly report on transportation research, education, and information activities at the University of Minnesota

## FACULTY PRESENTATIONS AT TRB MEETING

Minnesota was well-represented last month at the annual Transportation Research Board meeting in Washington, D.C. University presentations included the following:

- "Enhancements and Field Testing of a Dynamic Freeway Simulation Program," by Professor **Panos Michalopoulos**, **Eil Kwon**, and **Jeong-Gyu Kang**, Civil and Mineral Engineering
- "A Stochastic Process Approach to the Estimation of Origin-Destination Parameters from Time-Series of Traffic Counts," by Professor **Gary Davis**, Civil and Mineral Engineering
- "Towards a Balanced Transportation Research Program," by **Bob Johns**, Center for Transportation Studies
- "Rebar Corrosion Under Simulated Concrete Conditions Using Galvanic Current Measurements," by Professor **Iwao Iwasaki** and **Ji-Won Jang**, Mineral Resources Research Center
- "The National Coalition to Prevent Impaired Driving--A Coordinated Response," by Professor **Alexander Wagenaar**, Public Health
- "Testing of Soil Heat and Water Flow Models," by Professor **John Nieber** and **Zia Xu**, Agricultural Engineering; Professor **John Baker**, Soils Science; and Professor **David Newcomb**, Civil and Mineral Engineering

In addition, **Gene Ofstead**, assistant commissioner of Mn/DOT, made a presentation on Minnesota's *GuideStar* IVHS program.

## CTS CONFERENCE PROGRAM EXPANDED AT PLANNING MEETING

The Center's conference planning committee, chaired by **Judy Hollander** of the Regional Transit Board, met in January to review over 60 abstracts submitted in response to the Center's Call for Presentations and organize them into concurrent sessions. The committee developed special highlighted sessions that will feature presentations on topics of current state and national significance. These highlighted sessions will include presentations on Minnesota and the global economy, the *GuideStar* IVHS program, the Minnesota Road Research Project, and urban congestion solutions. The conference planning committee also recommended adding a luncheon on the conference's second day, May 8. This second luncheon will feature newly appointed Mn/DOT Commissioner **John Riley**. As announced previously, the keynote luncheon speaker on May 7 will be **Anthony Kane**, associate administrator of the Federal Highway Administration. A preliminary conference program and registration materials will be mailed with the Center's *March Report*.

## SEARCH BEGINS FOR TRANSPORTATION POSITIONS

The University of Minnesota is advertising two positions that will include transportation research and teaching responsibilities. An assistant professor position within the Humphrey Institute will focus on policy issues regarding transportation and the environment, with particular attention to water transportation. This position is jointly sponsored by the Humphrey Institute, Center for Transportation Studies, and the University Sea Grant Program. **Barbara Lukermann** is chair of the search committee. The second search, being conducted by the

Center and the Civil and Mineral Engineering Department, is for a research associate position that will focus on Intelligent Vehicle/Highway Systems research. This person will work jointly with Mn/DOT on the *GuideStar* IVHS program. **Yorgos Stephanedes** chairs the search committee, which also includes Mn/DOT's **Bob Benke** and **Jim Wright**, the newly appointed IVHS engineer.

#### UNIVERSITY INVOLVED IN TRANSIT ISSUES

Last month Professor **Yorgos Stephanedes** of Civil and Mineral Engineering presented the results of his study on transit need and service design to Mn/DOT's Transit Program section, which funded the project. Stephanedes studied areas currently served by public transportation to classify transit systems according to system performance and local need. The new classification scheme can be used to evaluate proposals and estimate the performance of proposed transit systems. Meeting participants included **Randy Halvorson** and several of his staff from Mn/DOT's Transit Office; **Steve Wilson** of the Metropolitan Council; and **Dave Kelliher** representing Senator **Gary DeCramer**. The group will hold a second meeting on February 15. In another transit activity, Professor **Russ Adams** of Geography participated in a December meeting with Hennepin County officials to discuss metro area plans for a light-rail transit system.

#### FINLAND VISITORS INTERESTED IN PAVEMENT RESEARCH

Several visitors from Finland's National Road Administration and Technical Research Centre spent two days with staff from Mn/DOT, the University's Civil and Mineral Engineering Department, and the Center to discuss pavement research activities in Minnesota. They are particularly interested in the Mn/ROAD project, the joint research program that the Center has established with Mn/DOT, which will conduct extensive pavement research using the test facility currently under construction on I-94 near Monticello. They presented the possibility of participating in joint research projects that evaluate the effects of a cold climate on pavement. Participants from the University included Professors **David Newcomb** and **Steve Crouch**, and **Bob Johns** and **Amy Vennewitz** of the Center. The visit was coordinated by **Nelrae Succio** and **Dave Johnson** of Mn/DOT.

#### IVHS CONFERENCES PLANNED FOR 1991

The second meeting of the IVHS America steering committee, of which Center Director **Dick Braun** is a member, was held in January in conjunction with the annual TRB meeting. The committee structure was formalized and preparations made for the first annual IVHS America conference to be held in March. As federal interest in IVHS research continues to grow, IVHS America plans to advise the USDOT on types of research, levels of funding, and both short- and long-range strategic planning. In other IVHS news, the Vehicle Navigation & Information Systems International Conference will be held October 20-23 in Dearborn, Michigan. The conference is being sponsored by the southeast Michigan section of the Institute of Electric/Electronic Engineers (IEEE). A Call for Papers has been issued, with a March 15 submission deadline for abstracts. For details, contact **Steven Underwood** at (313) 764-4333.

#### CENTER PARTICIPATES IN LOCAL EVENTS

The Center participated in several local events in January including the Association of General Contractors Annual Conference and an energy forum titled "Alternatives to the Persian Gulf: The Promise of Conservation and Efficiency," sponsored by the Minnesota Public Interest Research Group (MPIRG). At these events, **Amy Vennewitz** of the Center distributed materials on the research, education, and information programs of the Center

and discussed how these groups might become involved with and participate in the Center's programs. Vennewitz is also participating on the Institute of Transportation Engineers' Task Force on Career Guidance, which is looking at ways to attract more students into the transportation engineering profession. The task force has developed a basic presentation package consisting of an outline, video, overhead transparencies, and other visual materials which can be used and adapted for presentations to students at the junior/senior high and junior college levels.

## STUDENTS ATTEND TRB MEETING

**Joseph Daniel**, an Economics graduate student who received a TRB fellowship in 1990, presented a paper at last month's TRB meeting titled "Airline Scheduling and Airport User Fees at Hub Airports." Daniel, a research assistant under Professor **Herb Mohring**, received a stipend plus travel expenses to attend the 1990 and 1991 TRB meetings. In addition, eleven University students attended the TRB meeting with support from the Center. Each year the Center awards stipends to students based on criteria related to the students' research and coursework in transportation.

## CTS SEMINARS

The Center's winter quarter careers series and faculty seminars opened with several presentations last month. In the careers series, **Chuck Foslien**, division administrator of the Federal Highway Administration, informed students of possible career opportunities at the federal level. The faculty presentations featured **Panos Michalopoulos** of Civil and Mineral Engineering, who spoke on "Enhancements and Field Testing of a Dynamic Freeway Simulation Program," and **Howard Hoganson** of Forest Resources, who discussed "Advancing Forest Resource Planning Models to Recognize Transportation Considerations." In addition, a Civil and Mineral Engineering seminar was held with **Reinhart Kuhne** of Daimler-Benz AG Research Center, who lectured on "Advanced Technologies in Transportation Engineering for Freeway Control."

## UPCOMING TRANSPORTATION EVENTS

If you have an event you would like publicized, please call **Pam Snopl** of the Center at (612) 624-0841.

- February 6      CTS Transportation Careers Series--transportation leaders speaking to U of M students on career opportunities. **Daniel Frentress**, Executive Director, Concrete Paving Association of Minnesota, 11:15-12:05 p.m., 210 Civil and Mineral Engineering, University of Minnesota, Minneapolis. Contact CTS at (612) 626-1077.
- February 6-8    "Letting Bicycling Work for Minnesota," 1991 Minnesota State Bicycle Conference, St. Paul Hotel, St. Paul. Contact **Greg Pates** at (612) 296-1650.
- February 7-8    First Annual Combined Educational Conference, Richfield American Legion Hall, Richfield (Feb. 7); Seville Plaza Hotel, Bloomington (Feb. 8). Sponsored by Chapter 78 of the Delta Nu Alpha Transportation Fraternity and the North Central Chapter of the American Society of Transportation Logistics, featuring business logistics professor **Joseph L. Cavinato** of Penn State University. Contact **Jim Brademus** at (612) 937-7861.
- February 14    Center for Transportation Studies Winter Quarter Luncheon and Speech: **Anthony R. Eastham**, "High Speed Trains and Magnetic Levitation Technology in North America and the Upper Midwest," Radisson University Hotel, Minneapolis. Contact CTS at (612) 626-1077.

- February 20 CTS Faculty Seminar: "Rational Test Methods for Predicting Permanent Deformation in Asphalt Pavements," by Professor **Andrew Drescher**, 3:30-4:40 p.m., 210 Civil and Mineral Engineering, University of Minnesota, Minneapolis. Open to the public. Contact CTS at (612) 626-1077.
- February 25-26 1991 Annual Asphalt Contractors Workshop, Northland Inn, Brooklyn Park. Featuring a talk by **Nelrae Succio** on Mn/ROAD. Contact MAPA at (612) 636-4666.
- February 27 CTS Transportation Careers Series--transportation leaders speaking to U of M students on career opportunities. **Randal Erickson**, Technical Director, Traffic Control Materials Division, 3M, 11:15-12:05 p.m., 210 Civil and Mineral Engineering, University of Minnesota, Minneapolis. Contact CTS at (612) 626-1077.
- March 6 CTS Faculty Seminar: "Modeling and Testing of Frost Heave in Highway Pavements," by Professors **Raymond Sterling** and **Vaughan Voller**, 3:30-4:40 p.m., 210 Civil and Mineral Engineering, University of Minnesota, Minneapolis. Open to the public. Contact CTS at (612) 626-1077.
- March 21 "Management Issues for the 90's," one-day seminar, Holiday Inn International, Bloomington. Sponsored by the Council of Logistics Management, in association with the Minnesota World Trade Association and the Twin Cities Transportation Club. Featuring keynote speaker **Ron Zemke**, president, Performance Research Assoc. Contact **Charlene Flynn** at (612) 733-8061.
- April 28-30 Fifth Annual Airport Pavement Symposium, Hotel Sofitel, Bloomington. Sponsored by the National Association of State Aviation Officials (NASAO), Mn/DOT, and the Metropolitan Airport Commission. Contact **Dennis Taylor** at (301) 495-2848.
- May 7-8 CTS Second Annual Transportation Research Conference, St. Paul Radisson Hotel, St. Paul. Contact **Maria Juergens** of Conference Services at (612) 625-4366.