



# Research News

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## NETC is Moving...

Effective January 1, 2005, NETC's administrative management will move to the University of Massachusetts, Dartmouth, with Dr. Walaa Mogawer as the project PI. Gerald McCarthy will resume as Coordinator, commuting from his new home in Rhode Island.



Dr. Walaa S. Mogawer

**Dr. Walaa S. Mogawer** is Associate Professor of Civil & Environmental Engineering at the University of Massachusetts Dartmouth and is also an Adjunct Assistant Professor of Civil Engineering at the University of Rhode Island. He received a B.Sc. degree in Civil Engineering from Kuwait University and a M.Sc. and Ph.D. in Civil Engineering from the University of Rhode Island. He is a member of the Tau Beta Pi honor society. His area of expertise is transportation Engineering, particularly pavement materials. He is a registered Professional Engineer in the State of Rhode Island.

Since he joined UMass Dartmouth, Dr. Mogawer has been an active researcher in the area of pavement materials. He is the author of several research papers published in national engineering journals in the area of transportation Engineering. Besides his research activities, Dr. Mogawer has been serving as a consultant for the Federal Highway Administration during the past four years.

Dr. Mogawer is a recipient of the Federal Highway Administration 1989 Outstanding Technical Accomplishment Award for Outstanding Research, Development, and Technology paper entitled, "The Effect of Load, Tire Pressure, and Tire Type of Flexible Pavement Response." Recently, Dr. Mogawer has been selected to receive an Eisenhower Faculty Fellowship through the Dwight David Eisenhower transportation Program. Dr. Mogawer is a member of the American Society of Civil Engineers, and the Asphalt Association of Paving Technology.

[http://www.umassd.edu/engineering/civil/civ\\_dr\\_wmogawer.cfm](http://www.umassd.edu/engineering/civil/civ_dr_wmogawer.cfm)

**Gerry McCarthy** received his B.S. in Civil Engineering from the University of Rhode Island and completed graduate work at the Yale University Bureau of Highway Traffic. He received a master's degree in civil engineering from North Carolina State University with a major in transportation engineering and a minor in public administration. Gerry served as a commissioned officer in the U.S. Army Corps of Engineers, serving in Germany and France. He has held positions in municipal and state government in traffic engineering, transportation planning, transit operations and regional planning. He also held positions as Director of Transportation Planning for the city of Hamilton, Ontario, and Director of Regional Planning for the Regional Municipality of Hamilton-Wentworth, Ontario, Canada. Gerry served as Coordinator for the NETC from 1995 to June of 2005. Gerry and his wife, Jane Farrell McCarthy, have three daughters and six grandchildren.



Gerald McCarthy, P.E.

## CURRENT RFPs

There are currently two active RFPs for which "Scope of Work" information may be accessed from the NETC website:

06-1: "New England Verification of NCHRP 1-37A Mechanistic-Empirical Pavement Design Guide with Level 2 & 3 Inputs"  
The deadline for proposal submission is December 20, 2005.

06-5: "Winter Severity Indices for New England"  
The deadline for proposal submission is January 10, 2006.



## NETC 05 Series Projects Awarded

Based on the recommendations of the technical committees, the NETC advisory committee voted on September 21, in Concord, NH, to award the following three projects:

NETC 05-1: "Develop Base Resistance Load-Displacement Curves for the Design of Drilled Shaft Rock Sockets,"  
Dr. Sanford at the University of Maine.

NETC 05-3: "Analysis of Roundabout Operational Characteristics Utilizing Microscopic Simulation Modeling,"  
Dr. Sadek at the University of Vermont.

NETC 05-8: "Evaluation of Alternative Traffic Simulation Models, Including CA4PRS, for Analysis of Traffic Impacts of Highway Construction, Reconstruction and Rehabilitation Projects," Dr. Collura at the University of Massachusetts, Amherst.

*Since the September 21 meeting, the advisory committee has awarded two more projects via email ballot:*

05-6: "Employing Graphic-aided DMS to Assist Elder Drivers' Message Comprehension," Dr. Wang at the University of Rhode Island.

05-7: "Warrants for Exclusive Left Turn Lanes at Unsignalized Intersections and Driveways," Dr. Ivan at the University of Connecticut and Dr. Adel Sadek at the University of Vermont.



## NETC 06 Series Projects Selected

During their spring meeting, the NETC advisory committee selected four 06 series projects for funding. This meeting involved a new procedure in that the university representatives had a vote in project selection. The technical committees are meeting this fall for orientation. Two scopes of work are completed. The committees will finalize the scopes of work and formal RFPs will be issued in winter 2005/2006.



## NETC Represented at AASHTO Annual Meeting and Trade Fair

The NETC display, highlighting NETC's research program, was presented by Gerry McCarthy at the AASHTO Annual Meeting and Trade Fair held in Nashville, TN this past September.

Gerry also attended a briefing by the AASHTO Standing Committee on Highways addressing the Safety, Operations, Research, Program Management and Administration aspects of the recently passed "Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users" (SAFETEA-LU). Some of the proposed funding targets under the new legislation relating to highways are:

- Safety: \$1.3 billion (up from \$660 million under T-21)
- Operations (Congestion management): \$36 million
- ITS Research & Development: \$550 million
- Freight Research & Development: \$15 million
- Research, Technology & Education: 30% funding increase (over T-21)
- SPR: approximately 20% funding increase expected



## New England Universities Research News

**Dr. Jo Sias Daniel** is working on research funded by the National Science Foundation CAREER award entitled "Relating Viscoelastic Properties Measured from Various Geometrics." The objective of this project is to relate fundamental material properties and strengths of viscoelastic materials determined from different test geometrics. This will be accomplished by studying stress and strain fields using Digital Image Correlation. Dr. Daniel is an Assistant Professor of Civil Engineering at the University of New Hampshire.



**Dr. Britt Holmén**, Associate Professor of Civil and Environmental Engineering at the University of Connecticut, is just completing a study entitled "Comparisons of Ultrafine Particle Emissions from Hybrid-electric and Particle-trap Diesel Connecticut Transit Buses." The project, funded by ConnDOT and CTTransit, compared ultrafine particulate matter emissions from buses with different engine, fuel and aftertreatment configurations in order to determine the combination that will best meet current and likely future particulate matter emission standards.

**Dr. Per Gårder** is currently undertaking a project entitled "Traffic Conflict Studies Before and After Introduction of Red-light Running Photo Enforcement in Maine," with funding from the Region I University Transportation Center at MIT and the Maine Department of Transportation (MDOT). The objective is to use traffic conflict data to evaluate the potential effectiveness of photo enforcement in a community in Androscoggin County where the Federal Highway Administration (FHWA) and MDOT will jointly look at the feasibility of such a system. Drivers running red lights will be photographed and receive a warning in the mail, sent to the owner of the violating vehicle. No formal citations will be issued. The intentions of this pilot study are to demonstrate the need for photo enforcement, to prove that it can work in Maine, and to convince the legislators that they need to allow such enforcement in Maine. Dr. Gårder is an Associate Professor of Civil Engineering at the University of Maine.



## Eastern Winter Maintenance Symposium & Equipment Expo

In September 2005, the Connecticut Transportation Institute (CTI) co-sponsored the 10th Eastern Winter Maintenance Symposium, an annual event that provides local and state highway agencies the opportunity to learn ways of improving the response to winter weather transportation issues. The event, held at the new Connecticut Convention Center in Hartford, was co-sponsored by CTI, ConnDOT, FHWA and AASHTO, and was attended by 800 participants from around the country. Symposium tracks centered on safety, environmental issues and operations. Specific session topics included: advances in road weather information systems; alternative applications for winter operations and the environmental implications; sensing devices and environmental management; simple solutions to improve operations; and operator safe handling of snow plows. The Connecticut Work Zone Safety Memorial and the National Work Zone Safety Memorial were on display throughout the two-day event. These memorials (shown below) honor workers, drivers, children and others killed in highway work zones. - from article by Nan Cooper.



Connecticut Work Zone Safety Memorial



National Work Zone Safety Memorial

### Naomi Sanders Retires

Naomi Sanders recently retired from her position as secretary for the Connecticut Transportation Institute. Naomi worked with Gerry McCarthy for many years - handling various NETC administrative duties. NETC thanks Naomi for her dedicated service and wishes her well in her retirement.



## WEB SITE RECOMMENDATIONS

[www.clear.uconn.edu](http://www.clear.uconn.edu) - shows examples of how satellite imaging data can be used for land use and environmental studies. Maybe there is a future potential transportation application.

[www.googleearth.com](http://www.googleearth.com) - another satellite data website that is exciting to college students and others.

The editor welcomes the submission of articles, issues of interest and useful web links, as well as updates and photos of current research projects, for inclusion in future issues of *Research News*. Reprints of articles must be accompanied by publication name, date, author and any other pertinent information for assigning proper credit.

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