

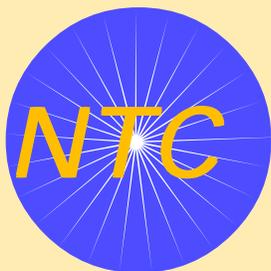
NTC TODAY

National Transportation Center at Morgan State University

Volume 3, Number 1
Summer 2000

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2nd Annual NTC Research Symposium

On February 7, 2000, Morgan State University's National Transportation Center (NTC) held its 2nd Annual Research Symposium in the Schaefer Engineering Building Auditorium.

Dr. Andrew Farkas (NTC Director) was moderator and, along with Dr. Eugene DeLoatch (Dean of the School of Engineering), gave the opening remarks.

Seven research projects were presented from the summer research grants program that emphasized the diversity of the research areas. The interdisciplinary nature of these reports was represented by fields such as transportation studies, psychology, civil engineering, urban planning, physics, marketing, information science, and accounting & finance.

The purpose of the NTC Summer Research Grants Program is to facilitate interdisciplinary transportation research at Morgan State.

This diversity was shown by the following research papers:

- The Effects of Motorcycle Rider Safety Course on the Risks of Accident and Violation in Maryland—**Dr. Carrol Perrino** and **Dr. Ashraf Ahmed**
- Experimental Investigations of Nonlinear Viscous Behavior of Subgrade Soils under Vehicle-Induced Loads—**Dr. Jiang Li**
- Development of a Room Temperature CMR Magnetic Material for Transportation Use—**Dr. Fred Oliver**

- Intermodal Personalized Public Transit—**Dr. Rodney Stump**
- Maryland Motor Carrier Program: Safety Inspections of Commercial Vehicles at Maryland Weigh/Inspection Facilities—**Dr. Sanjay Bapna** and **Dr. Jigish Zaveri**
- Impact of Deregulation on the Financial Performance of the Trucking Industry—**Dr. Alex Tang**
- An Estimation of Mobile Emissions Reduction from Using Electronic Toll Collection in the Baltimore Metropolitan Area: A Case Study of the Fort McHenry Tunnel Toll Plaza—**Dr. Anthony Saka** and **Dr. Dennis Agboh**.

Detailed project descriptions for all research included in the symposium are currently available on the NTC web site (www.eng.morgan.edu/~ntc). In addition, researchers have published final technical reports for presentation to an even wider audience via the site.

Through a peer-review process, the NTC recently selected six proposals for faculty summer research grants in 2000. Grant recipients are expected to prepare a final report, disseminate results through publication, and present results in the NTC Research Symposium the following winter.

The annual NTC Research Symposium contributes to fulfilling the outreach component of the NTC's mission as a University Transportation Center.

NEW HORIZONS

NTC Salutes Role of Advisory Committee

By *Dr. Andrew Farkas*
NTC Director

One of the most important developments at the NTC and one that has provided us with a wealth of advice, insight, and a great deal of satisfaction has been the creation of the NTC Advisory Committee. The committee serves as advisor to the NTC and the university on its research agenda, educational initiatives, and technology transfer activities. Members or their designees also serve as peer reviewers of research proposals and final technical research reports. The committee is composed of eleven individuals who are distinguished and respected in transportation circles:

- **Dr. Elizabeth Baker**, Regional Administrator, National Highway Traffic Safety Administration
- **Nelson Castelanos**, Division Administrator, Federal Highway Administration
- **Dr. Moges Ayele**, Director, National Highway Institute, Federal Highway Administration
- **Ronald Freeland**, Administrator, Maryland MTA
- **Clyde Pyers**, Director, Highway Policy, Maryland State Highway Administration
- **Dr. Robert Raleigh**, Chief, Medical Advisory Board, Maryland MVA
- **Jack Kinstlinger**, Chairman of the Board, KCI Technologies
- **Gloria Jeff**, Atlantic District Manager, Transportation Programs, Parsons Brinckerhoff
- **Paul Farragut**, Executive Director, Baltimore Metropolitan Council
- **Bob Garrett**, Research Division Manager, Pennsylvania Department of Transportation
- **Dr. William R. McShane**, PE, Vice President and Dean, Polytechnic University, Brooklyn, NY.

We are grateful to these individuals for their already obvious dedication and commitment to the success of the NTC.

The NTC has been involved in several highly visible initiatives that should be noted by our readers. We hosted and participated enthusiastically in the ONE DOT Ground Hog Job Shadow Day on February 2, an event sponsored by USDOT to expose primary and secondary school students to transportation careers. We are gearing up for another successful Summer Transportation Institute (STI) for high school students. We have recently established a scholarship for undergraduate students minoring in transportation geography. Also, we are embarking on several new research projects by faculty at Morgan (project descriptions are accessible via our web site).

This is a busy time for NTC, with new developments, ongoing projects, diverse research, and professional growth. We welcome our readers to be a part of it.

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Visit the NTC Web Site

The NTC web site (www.eng.morgan.edu/~ntc) is continually updated and improved. In the coming months, the site will undergo a major makeover. The site contains PDF versions of final technical reports, project descriptions, an updated NTC Directory, a PDF version of the 1999 STI final report, and other NTC publications.

STI



OUTREACH

STI 2000: Poised and Ready for Success!

From July 17 through August 11, the Summer Transportation Institute (STI) at Morgan State University's National Transportation Center will be brimming with activity.

"I've gotten so many calls already and the program hasn't even started yet," exclaimed Joyce Trussell, STI Coordinator. Even though the program has only 30 slots available, her recruiting efforts—as well as word-of-mouth—have resulted in an enthusiastic response to STI 2000.

With that kind of energy waiting to be unleashed on a well-prepared instructor and supportive counselors, this program is destined for success. Fueled with a host of varied experiences, stimulating classwork units, dynamic guest speakers, and diverse field trips, STI participants are in for a real treat.

Program Purpose

Morgan's STI program introduces 9th and 10th grade students to opportunities available in the transportation industry. In addition, they are exposed to transportation systems, innovations in transportation, management of transportation systems, research, and technology. "Our program is highly interactive," states Ms. Trussell. Discussion, exploration, experimentation, and hands-on participation are strongly encouraged throughout the four-week program.

Program Activities

Promising students are motivated to learn and to experience the STI program fully. To aid in this process, planned activities will include weekly units on bridges, land transportation, water transportation, and safety. Proposed field trips will include visits to a bridge museum, a railways system, a riding farm, coal mining facilities, a tour of the Federal Highway Administration, a tour of the Garrett A. Morgan Exhibit, and much more. The excitement continues with the possibility of a three-day partnership with West Virginia State College STI (still in the planning stage). As an added plus, Mr. John Porcari, Secretary of the Maryland Department of Transportation, has already been retained to be the guest speaker at the awards banquet.

Value of STI

This is Morgan State's fourth consecutive year hosting the STI program. According to Federal Highway Administrator, Kenneth R. Wykle, "These institutes [STIs] provide invaluable experience for students. They will help students see the importance of transportation to economic growth and the potential for career opportunities in the transportation industry."



1999 STI Participants

Here, at Morgan, we're well on our way to ensuring exactly that!

STI Four-Week Program Offers

- An enriching curriculum
- Hands-on learning and teamwork
- Introduction to campus life
- Challenging classwork
- Dynamic guest speakers
- Stimulating field trips
- Innovations in transportation
- Numerous educational activities
- And much more!!

For more information on Morgan's STI program, contact Ms. Joyce Trussell at 443-885-4813.

Meeting



Highlights

COMTO Winter Breakfast Meeting

The harsh cold of January 6th didn't stop officials and VIPs from gathering at Morgan State University to encourage COMTO in its purpose and objectives (to bring together minority officials; to elevate the consciousness of minority communities regarding policies, programs, and opportunities in the transportation field; and to ensure positive-end benefits for the minority community at large). More than 75 guests convened for the COMTO **(Conference of Minority Transportation Officials)** Winter Breakfast Meeting and Awards Ceremony. Hosted by Morgan State University and the National Transportation Center at Morgan, the first meeting of the Year 2000 presented the theme of **"The Ongoing Quest for Equity, Inclusion, and Full Participation in Transportation: If Not Now, When?"** According to Helen Dale, President of the Maryland Chapter of COMTO, "This theme was selected as a celebration of the past and as a challenge for the future."

This notable gathering of transportation professionals acknowledged with their presence the courageous COMTO pioneers who stood up and spoke out to enlighten a 'reluctant majority' and who persisted in removing the barriers blocking the aspirations of minorities. Thus, leading the way into the 21st Century were four individuals honored as Distinguished Transportation Pioneers: **Gwen Chisholm** (Senior Program Officer, Transportation Cooperative Research Program, National Academy of Sciences),

Gordon J. Linton (Senior Vice President and Director, Transportation Group/Siebert, Brandford, Shank, and Company, LLC), **Ronald L. Freeland** (Administrator, Maryland Mass Transit Administration), and **Congressman Elijah E. Cummings** (Member, U.S. Congress). Each honoree received a Distinguished Lifetime Certificate of Membership and a Governor's citation.

Gloria Jeff (Parsons Brinckerhoff) gave the keynote address: **"Breaking the Glass Ceiling."** In her inspirational speech, Ms. Jeff suggested, "...we continue to hammer at the glass ceiling, which, in reality, is more of a 'concrete ceiling.'" She also stated that, "...as the concrete ceiling is chipped away, we can reach back and pull up others to succeed as well."

"More than 75 VIPs gathered to encourage COMTO in its purpose and objectives."

Enthusiastically applauded for the content and delivery of her address, Ms. Jeff eagerly encouraged COMTO in its goals and initiatives for the new year. COMTO, in turn, acknowledged her tremendous contributions and commitment by presenting her with a Distinguished Lifetime Certificate of Membership, a Governor's Citation, a statute, and a specialized license plate.

The **Honorable Paul S. Sarbanes**, a Member of the U.S. Senate, also received an Honorary Lifetime Membership from COMTO.

The COMTO breakfast was very well attended. Many dignitaries and VIPs were present to celebrate and acknowledge COMTO, including: Dr. Earl Richardson, President, Morgan State University; Dr. Andrew Farkas, Director, National Transportation Center at Morgan; Reverend Jerry Moore, COMTO Founder; Beverly Swaim-Staley, Deputy Secretary, Maryland Department of Transportation; Ruth Roberts Hendrix, Director of the Minority Business Enterprise Program, Maryland Department of Transportation; Anne Ferro, Administrator, Maryland Motor Vehicle Administration; Tom Osborne, Executive Secretary, Maryland Department of Transportation; Liz Homer, Deputy Administrator, Maryland State Highway Administration; Beverly Hill, Director, Office of Fair Practices, Maryland Department of Transportation; Dr. Grady Dale, Jr., American Institute for Urban Psychological Studies; Ken Chapman, Safety Officer, Maryland Mass Transit Administration; Ray Nelson, Vice President, Yellow Transportation; and Minnie Carter, Equal Opportunity Administrator, Maryland Department of Transportation.

This spirited meeting of transportation professionals should help to usher in an opportunity-filled year for minorities in the transportation industry.

Workshop



News

Equity IMPACT ANALYSIS MODEL WORKSHOP

Environmental Defense (with support from the U.S. Environmental Protection Agency) conducted a workshop in early May at Morgan State University to discuss work in progress on transportation equity impact analysis modeling for the Baltimore region. Attendees included Transportation Studies faculty from Morgan State University and faculty from the University of Maryland, modeling staff from the Baltimore Metropolitan Council and the Maryland Office of Planning, and nongovernmental organizations active on transportation policy in the region. This workshop was followed by a more technical hands-on computer training session in late May for selected potential users of the STEP Baltimore model.

Environmental Defense, with assistance from Caliper Corporation and funding from the U.S. Environmental Protection Agency, has developed an equity/environmental impact analysis model for the Baltimore region, adapting a version of the sample-enumeration STEP travel demand analysis models developed by the late Greg Harvey into the TransCAD software environment. This workshop, hosted by Morgan, brought together model developers with a small, diverse group of individuals who were potential users of the STEP Baltimore model or who were likely users of transportation

equity analysis information in the Baltimore region.

The objectives of this workshop were to:

- Present a brief overview of methods for transportation equity impact analysis using travel demand models
- Discuss the specific capabilities, limitations, and requirements of the STEP model, both in general and in its specific application to date in Baltimore
- Guide the software developers in ensuring that additional STEP Baltimore software tool development will be responsive to the needs of potential model users
- Help strengthen a network of cooperating individuals and institutions in central Maryland interested in exploring transportation equity impact analysis and using evaluation tools to consider alternative transportation and land use strategies that will address environmental, equity, and environmental justice concerns.

The workshop agenda included the following items:

- An overview of transportation equity impact analysis travel demand model methods, with

emphasis on sample enumeration and STEP model

- An overview of the TransCAD software environment
- An overview of STEP Baltimore implementation: data inputs, data conversion, data outputs, and post processing
- Demonstration of model and discussion of post processing tool development needs for potential Baltimore model users
- Discussion of potential future STEP Baltimore applications for equity and alternatives analysis
- Discussion of framework for cooperative model use among universities, nongovernmental groups, MPO, and state/local agencies.

Environmental Defense is dedicated to protecting the environmental rights of all people, including future generations. Among these rights are clean air, clean water, healthy, nourishing food, and a flourishing ecosystem. For more details and information, visit the web site at www.environmentaldefense.org or write Environmental Defense, 257 Park Avenue South, NY, NY 10010.

NTC



NEWS

Groundhog Job Shadow Day

“The whole idea behind this day is for students to see what work is like in the real world—a ‘shadowing of jobs.’”

—Murray Piper

The Federal Highway Administration’s Eastern Resource Center and Maryland Division Office, National Highway Traffic Safety Administration Region 3, and Morgan State University’s National Transportation Center hosted a **National Groundhog Shadow Day Celebration** on February 2, 2000 on the campus of Morgan State University at the Clarence Mitchell Engineering Building.

Students from Maryland and the District of Columbia “shadowed” professionals who worked for the U.S. Department of Transportation; Maritime Administration; Federal Aviation Administration; Federal Transit Administration; Federal Railroad Administration; U.S. Coast Guard; Research and Special Programs Administration; National Aeronautical and Space Administration; Maryland State Highway Administration; Summer Transportation Institute; and the Civil Engineering, Mathematics, Science, and Engineering Departments, ROTC, and Engineering School of Morgan State University.

Groundhog Shadow Day is dedicated to giving students job shadowing experiences. Job shadowing, therefore, offered students the opportunity to get an up-close look at how the skills learned in school related to the workplace. There were hands-on demonstration activities, interactive transportation displays, and information booths. Joyce Mills, a licensed certified Locomotive Engineer with Norfolk Southern Corporation, gave a dynamic presentation on trains, engines, and her career. The students also had an opportunity to ask questions during a panel discussion and were able to participate in a “mock trial” with two attorneys from the Federal Highway Administration.

Press Release on NTC Air Quality Study

A research report by Morgan State University faculty members, **Dr. Anthony Saka** and **Dr. Dennis Agboh** (both with the Center for Transportation Studies), investigated electronic toll collection (popularly known as M-Tag) to reduce mobile emissions in the Baltimore Metropolitan Area. In an April 13th press release, their study (“An Estimation of Mobile Emissions Reduction from Using Electronic Toll Collection in the Baltimore Metropolitan Area: A Case Study of the Fort McHenry Tunnel Toll Plaza”) detailed the effect of mobile emissions on regional air quality, as well as the impact of M-Tag usage at all toll plazas in the Baltimore Metropolitan Area. For more information, contact Dr. Andrew Farkas, NTC Director, at 443-885-3761 or Dr. Anthony Saka at 443-885-1871. (See **CTS Update** for additional details.)

TRANSPORTATION GEOGRAPHY SCHOLARSHIP ESTABLISHED

The National Transportation Center recently established a scholarship for undergraduate students minoring in Transportation Geography. This scholarship attempts to broaden the exposure of undergraduate students other than civil engineering and business logistics students to transportation concepts and issues. The National Transportation Center will reimburse in-state student tuition (part-time rate per credit hour), plus a \$100 book allowance for each completed geography course for those students intending to earn a minor in geography (transportation). The grade for course(s) must be B or better, and the GPA must be 2.5 or better. Applicants must be U.S. Citizens or permanent residents to be eligible. For more information, contact Joyce Trussell at 443-885-4813.

CTS



Update

student awards and faculty projects

SHAQUITA MCCONNELL HONORED AS NTC "STUDENT OF THE YEAR"



(l to r) Mort Downey (Deputy Secretary, USDOT), Rodney Slater (Secretary, USDOT), Shaquita M. McConnell ("Student of the Year"), and Kelly Coyner (Administrator, USDOT-RSPA).

Shaquita M. McConnell, a Transportation graduate student at Morgan State University, was among twenty-two students conferred the University Transportation Center's (UTC) "Student of the Year" Award at the 2000 Transportation Research Board Annual Meeting in Washington, DC. The Student of the Year Awards are granted by the U.S. Department of Transportation to honor an outstanding student from each participating UTC.

Eisenhower Fellowship

The National Highway Institute awarded **Catherine Johnson**, a graduating senior in Transportation, the Eisenhower Historically Black Colleges & Universities Fellowship for the Academic Year 1999–2000. This fellowship seeks to attract "the best and brightest" minds to the field of transportation research and to the transportation workforce. Selection criteria for student awards

include the applicant's academic achievements, recommendations, and likelihood for pursuit of a career in the field of transportation.

NHTSA Study

Dr. Anthony Saka continues to serve as the Data Analysis and Evaluation Contractor for the National Highway Traffic Safety Administration (NHTSA). He will provide technical assistance to NHTSA Region III state agencies.

Air Quality Study

Dr. Anthony Saka received a \$78,000 research grant to continue investigating the air quality impact of M-Tag deployment. (See **NTC News** for more details of the study.)

AVL Study

Dr. Young-Jae Lee is Principal Investigator for a study entitled "Analysis and Evaluation of Automated Vehicle Location (AVL): Short-term and Long-term Strategies." The main objectives of this project are to: (i) suggest the proper data to be collected from the AVL system, (ii) show the impact of the AVL system on scheduling adherence as short-term improvement, and (iii) suggest future scheduling with the results of running time analysis.

Airport Accessibility Survey Study

Dr. Randal Reed is Principal Investigator for a study entitled "Airport Accessibility Survey." The main objective of this project is to model the relationship between airport activity and the length of time it takes to access the terminal from different airport access facilities.

MSU Buckles UP!

NTC/NAFEO urge students to buckle up every minute of every ride

Seat belts work!

Current research confirms that safety belt use remains lower among African-Americans. Low seat belt use has important implications for the preservation of African-American health and safety. Clearly, expanded efforts are needed to increase seat belt use within the Black community. It is a fact that more than 31.5% of African-American students *rarely* or *never* use seat belts, compared with 21% of White students and 18% of Hispanic students. To that end, Morgan State University (MSU) and the National

Seat Belts and African-Americans

- Observed seat belt use among African-Americans is more than 10% lower than the national average.
- Motor vehicle crashes are the leading cause of death for African-American males through the age of 14.
- Hospital emergency room visits showed that motor vehicle crashes accounted for 779,000 visits per year for African-Americans.
- African-American males are nearly twice as likely to die in a motor vehicle crash than their white counterparts.

Transportation Center, in conjunction with the National Association For Equal Opportunity in Higher Education (NAFEO), participated in the “HBCU Buckle-Up” campaign.

Urged by Rodney Slater, Secretary of the Department of Transportation, to educate students and youth in the communities about seat belt safety, Morgan campus responded enthusiastically. The National Transportation Center’s Joyce Trussell headed the campus-wide campaign. Through her efforts, the newly hung yellow and black banner that stretched across

Morgan’s Welcome Bridge issued a challenge for college and community alike to “Buckle Up” for safety. Seat belt literature was also included with student parking information, as well as with summer parking permits.

High-visibility enforcement, coupled with broad community support works. We praise the work of law enforcement and organizations nationwide to save lives on our roads!

**BUCKLE
UP!!**

NTC TODAY
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*Place
Postage
Here*