

## UAB UTC Activity Update

To: Advisory Board Members and Friends of the Center

From: Dr. Russ Fine, Director, UAB UTC



Date: Monday, August 2, 2010

We've been very busy (read: *swamped*) since our May, 2010 Advisory Board Meeting. We are pleased to report having made considerable progress in the areas of ongoing as well as new initiatives. Nonetheless, I have been remiss for not having written sooner. I apologize.

Before continuing, on behalf of our staff, our faculty and others who benefit from and contribute to the UTC, we would like to thank you once again for contributing to our Annual Advisory Board Meeting. We think it was one of our most productive, useful and enjoyable in the comparatively brief time we've been getting together.

We benefited, enormously, from the invaluable guidance and assistance you provided. Thus, I hope it goes without saying that all of us are deeply appreciative of the time you took from personal and professional obligations to travel to Birmingham and be an active participant and contributor to the gathering.

That which follows is comparatively brief from a topical standpoint. However, we've tried to be comprehensive in reviewing and highlighting most if not all of the important activities that have taken place since we were last together in May.

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- We have been notified that our **Continuation Application** for the coming year has been approved and funded. We are deeply appreciative of the helpful guidance and assistance provided to the UAB UTC by Ms. Amy Stearns, our RITA Program Officer. ☺
- Our Summer, 2010 **newsletter**, the UAB University Transportation Center **UPDATE** has been published and distributed. If for some reason your copy has not yet arrived, it may be accessed at the following URL  
<http://www.uab.edu/utc/Newsletter.htm>.
- Each month, RITA's University Transportation Centers Program publishes a newsletter highlighting noteworthy findings or other significant accomplishments reported by one of the agency's University Transportation Centers. This past June, 2010, the UTC **Spotlight Newsletter** featured findings from the UAB UTC study focusing on the impact of *urban sprawl* on delayed emergency services arrival. The UAB UTC is working to help achieve livable, sustainable, and healthy communities through projects like *Urban Sprawl and Pre-hospital Emergency Care Time* and other complementary research efforts. For a copy of the UTC Spotlight Newsletter featuring this UAB UTC research project or for additional information about this project or the other UAB UTC-sponsored projects, we invite you to visit the UAB UTC website, [www.uab.edu/utc](http://www.uab.edu/utc).
- **Dr. Gerald McGwin**, Senior UAB UTC Scientist and Principal Investigator of Research Domain 1: Emergency Medical Services and Congestion, succeeds Dr. Jay Goldman as Associate Director of Research and Scientific Oversight. Dr. Goldman remains with the UTC as an Emeritus Professor. Dr. McGwin is Professor and Vice Chair of the UAB School of Public Health's Department of Epidemiology in addition to holding a number of other, very important positions in various departments and centers throughout UAB.
- In early June, it was my privilege to participate in the **Annual CUTC Meeting** hosted by our colleagues at Texas A&M University. I came away from that meeting with several new and exciting ideas, some of which, we hope to adopt as meaningful components of our local programming. One example of a potentially major addition to our Educational Component is a linkage we are in the midst of establishing with the UTC at North Dakota State University.

The opportunity consists of piggy-backing NDSU's two, distance learning transportation certification programs, making them available thru the UAB-NDSU partnership to our core audience. The Certificate programs are:

**The Certificate in Transportation & Urban Systems:** The certificate in Transportation & Urban Systems is primarily targeted at practicing professionals who are unable to study in residency, but who wish to gain additional knowledge in the emerging fields of transportation and urban systems.

The certificate requires a minimum of 9 course credits that can be selected from a list of on-line courses, including: Transportation Systems Security, Transportation Planning and Environmental Compliance, Transportation System Modeling, Urban Transportation Systems Analysis, Context Sensitive Solutions, and Public Transportation; and,

**The Transportation Leadership Graduate Certificate**, the purpose of which is described on the NDSU website which states: "The purpose of this web site is to introduce you to, describe, and inspire you to investigate and apply to an exciting new web based DISTANCE LEARNING NATIONAL GRADUATE EDUCATION CERTIFICATE PROGRAM. The name of this program is THE TRANSPORTATION LEADERSHIP GRADUATE CERTIFICATE (TLGC). This National Program of Excellence is being offered by some of the nation's most outstanding University graduate education faculty, that potentially include over fifty Universities located throughout the USA. It has been enthusiastically endorsed by Federal, State and Private Sector Leaders throughout the nation. The TRANSPORTATION INDUSTRY is conducted by those Private Sector and Public Sector organizations that plan, design and operate highways, transit, air and water facilities for the movement of people and freight. It is a growing and dynamic industry that is in need of professionals who come from not only traditional Transportation Engineering, but also from Information Technology, Operations Research, Systems Engineering, Economics, Public Finance, Public Administration, Political Science, Social and Environmental Sciences and other related and supporting disciplines. The target audiences for the program include individuals holding at least a Bachelor's Degree in one of many disciplines. It will appeal to not only those individuals currently employed in one of the several Transportation Sectors of the Industry, but also those who might be interested in exploring the possibility of transferring their skills to Transportation from another Industry.

- Another important activity is being explored based on information acquired during the Summer CUTC Meeting. During one of the main sessions, Ms. Lydia Mercado presented information about the increased emphasis RITA and DOT have placed on **Work Force Development**. Subsequently, UAB-UTC leadership made a decision to explore ways in which we might be able to increase our involvement with this USDOT-wide effort. Conversations took place between our leadership and Dr. Jay Lindly, Director of the University Transportation Center at our sister-institution, The University of Alabama (Tuscaloosa). Within the past week, the UAB UTC and the UTC-A engaged in a telephone conference call with Ms. Mercado for the purpose of acquiring background and guidance regarding our interest in conducting a state-wide conference addressing current and future transportation-related work force needs for our state. We are presently engaged in additional planning efforts with the expressed goal of co-sponsoring and hosting such an event as soon as possible. Several ideas, including one of which was research-related emerged from our exchange with Ms. Mercado. We anticipate calling on AB leadership for additional guidance and advice in the near future.

- On Friday, July 23<sup>rd</sup>, Mr. Cheng Zhong, MSCE a PhD Candidate, UAB School of Engineering's Department of Civil Construction and Environmental Engineering presented a **Research In Progress Seminar Series lecture** addressing Crash Prediction on Rural Roads.

- On Tuesday, July 27<sup>th</sup> the UAB UTC sponsored a **Public Presentation & Forum**. Mr. Peter Behrman, Executive Director of the Birmingham-Jefferson County Transit Authority (BJCTA). Mr. Behrman discussed the status of transit in our region as reflected in a report prepared by a national transit peer review group.

- The UAB UTC's **Distracted Driving** activities are "running at full throttle."

Dr. Stavrinou's research continues to make great progress and is attempting to expand.

We recently **responded to a Request for Proposed Research Projects** from the National Transportation Research Center, Inc., a Regional UTC in Knoxville, TN. Dr. Stavrinou and UTC leadership decided the quality and scope of our required pre-proposal would be enhanced by partnering with a highly

regarded transportation research scientist, Dr. Karen Heaton, a member of the UAB School of Nursing faculty. This joint effort resulted in the submission of a pre-proposal entitled "Impact of Distraction and Health on Commercial Driving Performance." Dr. Heaton has been named a UAB UTC Senior Scientist.

As described in the abstract, the pre-proposal seeks the opportunity to pursue NTRCI funding for Phase I of a study that will examine the interaction of the psychological/cognitive and technological aspects of distracted driving and health in commercial drivers.

Specifically, **our group has proposed a research project intended to evaluate the impact of visual and cognitive distraction, sleep, medication use, age, and cognition on driving performance.** Findings from this study are expected to impact multiple stakeholders; and to contribute to the development of future, large intervention studies targeting distraction and health factors in commercial drivers. Upon the funding and successful completion of Phase I, Dr. Stavrinou will seek funding for the Phase II follow-up naturalistic driving study. The four specific objectives of the proposed study are:

**Objective 1:** To compare the relative impact of psychological aspects of distraction (cognitive vs. visual), on the driving performance of commercial drivers in low vs. high mental workload conditions;

**Objective 2:** To evaluate potentially distracting technological aspects of commercial vehicles (on-board technical systems and personal communication/entertainment devices) on the driving performance of commercial drivers in low vs. high mental workload conditions;

**Objective 3:** To determine the driver health effects of sleep quantity, sleep quality and propensity, medication use, and age on cognitive function as measured by Useful Field of View (UFOV) and Performance Vigilance Testing (PVT) among commercial drivers; and,

**Objective 4:** To examine the interaction between driver health (sleep quantity, sleep quality and propensity, medication use, and age); cognitive function (Useful Field of View [UFOV] and the Performance Vigilance Test [PVT]); distraction; and driving performance among commercial drivers in low vs. high mental workload conditions.

Specific examples of the potential impact of study objectives include:

**Objective 1** will address a significant, lingering controversy regarding the relative importance of visual and cognitive distractions in degrading driving performance of commercial drivers. Resolving this particular controversy will enable federal transportation agencies, researchers, and stakeholders to identify, develop, test, validate, and implement the most effective and efficient interventions to minimize distracted driving crashes among commercial drivers (read: best practices).

**Objective 2** will further inform heavy truck designers, ergonomists, and wireless communication industry design and implementation specialists of possible modifications necessary to promote a safer in-cab environment for the commercial driver.

**Objectives 3 and 4** will provide knowledge about vital driver health factors derived from the acquisition and analysis of sleep quantity, quality and propensity data, coupled with data documenting other key driver factors such as medication use, age, and neuropsychological status through the UFOV and PVT; and will also contribute, significantly, to implementation of “best practices.” If the study determines that sleep, medication use, and cognition negatively impact driving performance among commercial drivers in low vs. high mental workload conditions, there would be compelling indications for future interventions using currently available methods to target these modifiable factors.

***• By way of this information regarding our pre-proposal, we solicit your feedback on the pre-proposal coupled with your permission to proceed if we are offered the opportunity to continue by submitting a full-scale proposal.***

Since we are not expecting to learn of our “fate” until late August, we are hopeful and optimistic this is enough time for you to consider that which we are proposing as a new research project and to advise us of your approval or rejection, accordingly. We will, of course, be glad to supply you with an electronic copy of the entire pre-proposal if you wish. Just let me know.

- On August 11, Jeff Foster, Dr. Stavrinou and I are scheduled to **meet with** Dr. Karin Svensson and Dr. Jan Hellager of **Volvo Technology - North America** at their offices in Greensboro, North Carolina. The purpose of the meeting is to explore partnering with them in future heavy truck related distracted driving research.

- Our **distracted driving-related educational and community service activities** have provided much needed data and direction to several municipalities throughout the Greater Birmingham Region as well as elsewhere in Alabama that have led to the adoption of the local ordinances banning texting while driving. Among these of which we are most proud is the City of Birmingham, whose texting ban includes the UAB Campus.

- On Wednesday, July 27<sup>th</sup>, the entire UAB UTC staff was on-site at a large, local high school to observe a **Distracted Driving / Impaired Driving classroom training and field demonstration** conceptualized, designed and developed by The Jefferson County Sheriff's Department at the direction of Sheriff Mike Hale. The program includes two to three hours of classroom instruction (including the use of a computerized driving simulator) along with "real-life hands-on" distracted and impaired driving experiences in a specially equipped, recreational 4-wheeler vehicle and an electric go kart (both of which are driven by students under the direct supervision and watchful eyes of specially trained School Resource Officers from the Sheriff's Department). The program targeting high school students from throughout Jefferson County, Alabama (wherein the UAB UTC resides) was quite impressive and determined to be well-worth replicating. The outcome of this experience has resulted in an agreement between the Jefferson County Sheriff's Department and UAB UTC leadership to establish a semi-formal partnership that will attempt to develop a "train-the trainers" program, the purpose of which will be to facilitate replication of the entire program elsewhere in the seven county BREMMS region at first, and if funding can be acquired, elsewhere throughout the state in the future.

- Mr. Jeff Foster & I have been invited, by Birmingham Mayor William Bell, to be part of his **Blue Ribbon Transportation Commission**.

- The UTC has provided technical assistance and guidance to a citizen-driven grass roots anti-texting while driving movement known as **Alabamians**

**Against Distracted Driving.** That group has partnered with the state's largest ABC Television affiliate in an effort to spread its educational messages.

- We learned, late last week that Dr. Stavrinos and I have been invited to attend the Secretary of **Transportation's Second National Summit on Distracted Driving** on or around September 21<sup>st</sup>. We are hopeful that being invited back to be part of the Second Summit is Secretary of Transportation Ray LaHood's way of acknowledging that which the UAB-UTC has done to advance his anti-distracted driving agenda during the past year.
- Finally, to quote, once again, that famous lyric from the late entertainer Jerry Reed's Smokey and The Bandit tune

*"... we've got a long way to go and a short time to get there..."*

but, we're going to continue working hard to accomplish everything we can as long as the funding holds out. Clearly, the future of Title III UTCs remains uncertain. We are hopeful and optimistic we will have an opportunity to become a regional or, perhaps, even a national center at sometime in the future (because of our unique niche as a center with a medical orientation) but many cosmic tumblers have to fall into precise alignment before something like that even shows up on the radar screens of policy and decision makers. Time will tell.

We look forward to hearing from you if you would like more information and/or clarification about anything we've described in this update!

**Kindest Regards☺**