

## ***FHWA R&T Now*** -September 2008-

*A news update of research, technology, and development from the U.S. Department of Transportation, Federal Highway Administration*

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### **ADMINISTRATION/GENERAL**

#### **-Madison Confirmed as Highway Administrator-**

Thomas J. Madison Jr. was confirmed to head the Federal Highway Administration. Madison was sworn in as Administrator on August 18, 2008. Madison has an extensive transportation background which includes his recent role as President of the Spectra Subsurface Imaging Group, LLC. Prior to this he worked as Commissioner of the New York State Department of Transportation, and earlier in his career as Deputy Secretary for Transportation to the Governor of New York.

<http://www.fhwa.dot.gov/admin.htm>

#### **-NHTSA Data Shows Drop in 2007 Highway Fatalities-**

The U.S. Secretary of Transportation announced the release of National Highway Transportation Safety Administration (NHTSA) data on highway fatalities in 2007. Total highway deaths in the U.S. for 2007 were 41,059 a drop of 1,649 from the 2006 total.

<http://www.dot.gov/affairs/dot11308.htm>

#### **-2009 TRB 88TH Annual Meeting: Dennis C. Judycki, 2008 Roy W. Crum Award Recipient-**

The 2008 Roy W. Crum Distinguished Service Award will be presented to Dennis C. Judycki, former Associate Administrator for Research, Development and Technology at the Federal Highway Administration (FHWA), in recognition of his outstanding leadership in research management. Serving in that position from 1999 until his retirement in 2008, he was also Director of the agency's Turner-Fairbank Highway Research Center. As the FHWA's chief manager, overseer, and champion of research, Judycki worked tirelessly to enhance national programs and develop partnerships in highway research and technology, reaching out systematically to stakeholders and promoting the implementation of innovative research results.

[http://trb.org/news/blurb\\_detail.asp?id=9421](http://trb.org/news/blurb_detail.asp?id=9421)

#### **-Dennis C. Judycki Nominated for Frank Turner Award-**

Dennis C. Judycki, former Associate Administrator for Research, Development and Technology at FHWA, has been nominated for the Frank Turner Medal for Lifetime Achievement in Transportation. The award recognizes lifetime achievement in transportation, as demonstrated by a distinguished career in the field, professional prominence, and a distinctive, widely recognized contribution to transportation policy, administration, or research.

### **ADVANCED RESEARCH**

#### **-Exploratory Advanced Research Opportunities: Advanced Research on the Empirical Mode Decomposition Algorithm-**

FHWA signed a contract with Princeton University to create the advanced mathematical base of the Hilbert-Huang Transform (HHT) method and explore its potential applications in highway safety, infrastructure including bridges, and energy and the environment. The researchers will develop precise mathematical methods that will have potential applications in sensor technology and analysis. This is the first award to be made as a result of the national Broad Agency Announcement for Exploratory Advanced Research (EAR) proposals that FHWA issued in May 2008. Awarded through a cooperative effort of FHWA's Office of Corporate Research, Technology, and Innovation Management; Office of Safety R&D; and Office of Acquisition Management, the project will be managed by the Office of Safety R&D.

For more information about the project, contact:

[kunik.lee@dot.gov](mailto:kunik.lee@dot.gov) 202-493-3491

For more information about the Broad Agency Announcement for EAR projects, contact:

[terry.halkyard@fhwa.dot.gov](mailto:terry.halkyard@fhwa.dot.gov) 202-493-3467

### **-Development of Methodologies to Evaluate the Nighttime Safety Implications of the Roadway Visual Scene Under Varying Cognitive Task Loads-**

FHWA entered into a cooperative agreement with the Virginia Tech Transportation Institute that aims to integrate new technology and identify a dynamic driver visual model to improve nighttime driving safety. The research is designed to develop a model framework of human visual perception in the driving environment that is comprehensive yet simple enough to derive probabilistic forecasts of driver performance under given visual conditions. An important aspect of the research is development of a combined driver/roadway monitoring system, which combines two existing systems, an infrared eye tracker and a dynamic photometer, into a unified system which also links to in-vehicle instrumentation. This award is a result of the national Broad Agency Announcement for Exploratory Advanced Research (EAR) Proposals issued in May 2008. Awarded through a cooperative effort of FHWA's Office of Corporate Research, Technology, and Innovation Management; Office of Safety R&D; and Office of Acquisition Management, the project will be managed by the Office of Safety R&D.

For more information about the project, contact:

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For more information about the Broad Agency Announcement for EAR projects, contact:

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### **-Human Factors for Limited-Ability Autonomous Driving Systems-**

FHWA signed a contract with General Motors Corporation that proposes to study the human factors aspects of limited automated driving systems. The research will address a number of concerns pertaining to these systems including drivers becoming over-reliant upon the systems, drivers evoking such systems outside of design parameters and drivers not being aware when the systems are not operating as intended. Expected outcomes are the impact of human factors on performance of automated systems and better definition of roles of drivers using such systems in a variety of scenarios. This award is a result of the national Broad Agency Announcement for Exploratory Advanced Research (EAR) Proposals. Awarded through a cooperative effort of FHWA's Office of Corporate Research, Technology, and Innovation Management; Office of Safety R&D; and Office of Acquisition Management, the project will be managed by the Office of Safety R&D.

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## **ENVIRONMENT**

### **-“It All Adds Up to Cleaner Air” Initiative Launches New Web Site-**

The It All Adds Up to Cleaner Air transportation and air quality initiative will launch a new and improved Web site during the first week of September. The site will be easier to use and has plenty of free, professional tools to help states and MPOs create affordable, commercial-quality public education campaigns to improve air quality and reduce traffic congestion in their communities.

[www.italladdsup.gov](http://www.italladdsup.gov)

## **PAVEMENTS**

### **-LTPP Newsletter, Summer 2008-**

This issue includes: Texas Uses Long-Term Pavement Performance (LTPP) Data to Calibrate the M-E PDG Permanent Deformation Models; LTPP Database Server Relocation; and, In Brief: LTPP Forensic Studies Update.

<http://www.fhwa.dot.gov/pavement/ltp/news.cfm>

## **SAFETY**

### **-2008 Interactive Highway Safety Design Model (IHSDM) Public Release-**

The 2008 public release (Version 5.0.0) of IHSDM is available for free downloading. IHSDM is a suite of software analysis tools for evaluating safety and operational effects of geometric design decisions on two-lane rural highways. This 2008 release includes the addition of a fully-functioning beta version of a Driver/Vehicle Module (DVM), along with significant enhancements to output/reporting capabilities and other functionalities. An updated IHSDM training course (#380071) can also be arranged via the National Highway Institute.

For more information, visit:

[http://www.ihsdm.org/wiki/Current\\_events](http://www.ihsdm.org/wiki/Current_events)

## **TRANSPORTATION POOLED FUND PROGRAM**

### **-New Transportation Pooled Fund Program Manager-**

Lisa Williams, who previously served as the Transportation Pooled Fund (TPF) Program Coordinator, has returned to FHWA as our new TPF Program Manager. She reported on September 2nd. Lisa brings a rich variety of experience to the position and we look forward to Lisa sharing her talents and skills in furthering the transition to the new financial procedures, improving our ability to communicate with the users, as well as, other program improvements.

[lisa.a.williams@fhwa.dot.gov](mailto:lisa.a.williams@fhwa.dot.gov) 202-493-3375

### **-FHWA Officially Closes Over 10 Pooled Fund Projects-**

In November 2007, new financial procedures for the Transportation Pooled Fund (TPF) program were issued by the Federal Highway Administration (FHWA) to create a process that will result in simplified steps and improved financial accountability. More specifically, the new procedures are intended to improve

financial records for pooled fund projects within FHWA and assist with the successful close out of all completed projects. Under these new procedures, more than 10 projects are now officially closed and any remaining funds in the project have been returned to the participating States. Within fiscal year 2009, it is anticipated that over 100 completed projects will be officially closed. For more information on the TPF program and/or the status of any pooled fund project, please visit the TPF website:

<http://www.pooledfund.org/>

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## **EVENTS/MEETINGS/ WORKSHOPS**

### **-Technical Presentations at TFHRC by the Applied Research Laboratory at The Penn State University-**

On October 7 in McLean, Virginia, the Turner-Fairbank Highway Research Center (TFHRC) is hosting three technical presentations by staff of the Applied Research Laboratory (ARL) at The Penn State University.

- Dr. James F. Tarter, Department Head, Advanced Computational Analysis and Design at ARL, will present “Advanced Finite Element Analysis for Highway Applications.”
- Dr. Moustafa El-Gindy, Director of the Vehicle Dynamics and Simulation Research Center at ARL, will present an “Overview of ARL Vehicle Dynamics and Highway Safety Research.”
- Dr. Kevin Koudela, Head of the Composite Materials Division and Assistant Director of ARL, will present an “Overview of Composite Materials Research for Transportation Systems.”

For more information about the technical presentations, contact:

[eric.weaver@fhwa.dot.gov](mailto:eric.weaver@fhwa.dot.gov) 202-493-3153

### **-Upcoming Interactive Highway Safety Design Model (IHSDM) Web Conferences-**

To support the 2008 public release of IHSDM, a web conference will be offered from 11:00-12:30 pm EST on Wednesday, October 8, 2008.

For registration information, contact:

[clayton.chen@fhwa.dot.gov](mailto:clayton.chen@fhwa.dot.gov) 202-493-3054

## **RECENT PERIODICALS**

### **-FOCUS Newsletter - August 2008-**

This issue includes the place to go for system preservation technical assistance, all construction, all the time, FHWA sponsors asset management webinars, seminar offers one-stop information source for building more corrosion-resistant bridges, highway technology calendar, and highways for LIFE now accepting applications for 2009 projects.

<http://www.tfsrc.gov/focus/aug08/index.htm>

[lgpope@woodwardcom.com](mailto:lgpope@woodwardcom.com)

**-Public Roads - July/August 2008-**

This issue includes: 1. Accessing America's Treasures: The FLHP celebrates its 25<sup>th</sup> anniversary with a retrospective of past accomplishments and a preview of its next 25 years. 2. Did You Help Lead the Safety Initiative Today: Effective leadership is the intangible ingredient in reducing fatalities and injuries on the Nation's highways. 3. CSD Avoids Delays on New Tolling Project: Pennsylvania shares recent experience with involving the community in the context sensitive design for the Mon/Fayette Expressway. 4. Applying "Fuzzy Concept" to Bridge Management: This approach could help account for uncertainties in condition assessments and improve maintenance decisions. 5. Gaining Traction in Roadway Safety: High-friction surfacing systems show promise in helping transportation agencies improve skid resistance on wet pavement and hazardous curves and grades.

<http://www.tfrc.gov/pubrds/08july/index.htm>

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**Links:**

**Turner-Fairbank Highway Research Center:** [www.tfrc.gov](http://www.tfrc.gov)

**Resource Center:** <http://www.fhwa.dot.gov/resourcecenter/>

**National Highway Institute:** <http://www.nhi.fhwa.dot.gov/home.aspx>

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Suggestions may be submitted to: [FHWA\\_Now@fhwa.dot.gov](mailto:FHWA_Now@fhwa.dot.gov)