

Breaking News

Seminars and Contracts Awarded in December's Human Factors News...
See Below to Link to Details!



Cab Technology Integration Laboratory

The Federal Railroad Administration's (FRA) Office of Research and Development recently awarded a contract to Alion Science and Technology to acquire a new research capability. Page two has all the details! [Click here for link.](#)

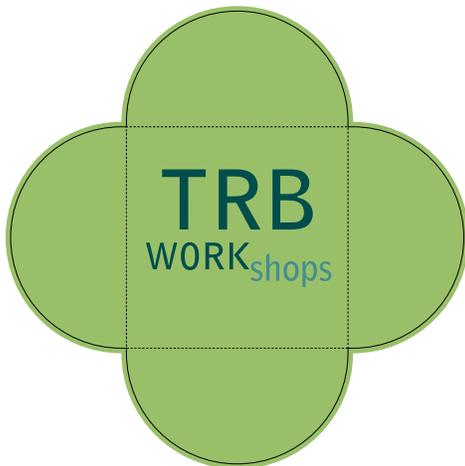


Human Factors Symposium

The US Department of Transportation's (DOT) Human Factors Coordinating Committee (HFCC) is exploring the possibility of holding a Human Factors Symposium to be held at the DOT headquarters in Washington, DC. The goal of the symposium is to educate individuals in the DOT that are outside of the human factors community on the range and importance of human factors work in transportation. [Click here for link.](#)

TRB Workshop 133: Increasing Utilization, Impact, and Effectiveness of Research and Development: Stakeholder Involvement Strategies in Evaluation

The TRB 87 Annual Meeting will be attended by approximately 10,000 transportation professionals from around the world in Washington, D.C., January 13-17, 2008. [Click here for details.](#)



Human Factors in Transportation Workshop Session B: Identifying Safety Trends and Accident Precursors for Proactive Prevention

Participants will analyze ways to develop robust information on safety trends and accident precursors for accident prevention.

[Click here for more.](#)

Human Factors In Transportation, Session 139

A number of workshops are listed and described on the PDF which will come up for you when you click the following link: [Click here for more.](#) Scroll down or use the PDF search to locate session 139.



Cab Technology Integration Laboratory

The Federal Railroad Administration's (FRA) Office of Research and Development recently awarded a contract to Alion Science and Technology to acquire a new research capability. An engineering research simulator, called the Cab Technology Integration Laboratory (CTIL), will enable researchers to address locomotive crew performance issues, as well as address any new capabilities that require more electronic interfaces and displays. Plans call for this new capability to be based at the Volpe Transportation Research Center in Cambridge, MA, in fall 2008. The CTIL will become a national resource for government, academic, and industry researchers. Researchers will also be able to experiment with the integration of new controls and displays in the locomotive cab environment, as well as demonstrate new technology and workstation configurations to the industry.

The human-centered approach to control/display integration will be demonstrated through CTIL in efforts to improve the locomotive engineer's capabilities to communicate, plan, and control locomotives within the railroad system. Additional lab capabilities will also enable FRA to address ergonomic issues related to the safety and health of locomotive operators by examining general cab design and layout. The CTIL will demonstrate advantages of a human-centered systems approach to the design of locomotive cabs.

By enabling researchers to rapidly prototype locomotive controls and display configurations, CTIL will yield assessments of control/display integration and its impact on human or locomotive crew performance to meet safety, cost, and security measures.



For further information contact Mike Jones, Program Manager, 202 493-6106, Michael.e.jones@dot.gov

Human Factors Symposium

The US Department of Transportation's (DOT) Human Factors Coordinating Committee (HFCC) is exploring the possibility of holding a Human Factors Symposium to be held at the DOT headquarters in Washington, DC. The goal of the symposium is to educate individuals in the DOT that are outside of the human factors community on the range and importance of human factors work in transportation. Additionally, demonstrating the range of human factors research should enhance cross-modal communication among researchers.

This will be an opportunity for organizations to present transportation research projects with emphasis on work completed for the DOT. Contractors will also be able to present information on their company's capabilities in conducting human factors research.

An additional goal of organizing this symposium is to collect a repository of information on contractors and their capabilities within the human factors area.

For those interested in providing information about their organization and participating in the symposium, please respond to the following request for information on FedBizOpps:

<http://www.fbo.gov/spg/DOT/TASC/TASCASD/DTOS59%2D08%2DRFI%2DCW0001/SynopsisR.html>

As more details on the symposium become available, information will be sent to the organizations that have responded to above request for information.

Contact Information:
Arnold Konheim
ArnoldKonheim@dot.gov
(202) 366-4849



Transportation Research Board Workshop #133

Increasing Utilization, Impact, and Effectiveness of Research and Development: Stakeholder Involvement Strategies in Evaluation

Michael Coplen, Federal Railroad Administration,
presiding

Joyce Ranney, Volpe National Transportation
Systems Center, presiding

Sponsored by The Railroad Operational Safety
Task Force and System Users Group

Sunday, January 13 • 8:30 a.m.–5:00 p.m.
Marriott, Wilson Room

TRB Annual Meeting:

The TRB 87 Annual Meeting will be attended by approximately 10,000 transportation professionals from around the world in Washington, D.C., January 13-17, 2008. The meeting program covers all transportation modes, with more than 3,000 presentations in nearly 600 sessions addressing topics of interest to all attendees – policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions. The spotlight theme for 2008 is "Partnerships for Progress in Transportation".

Workshop #133 Description:

Government sponsored R&D programs direct scarce resources to create new technology and new knowledge that can make a difference in how government is run, how safely companies operate, and how individuals live. To optimize the inherent value of these R&D investments for those who are likely to be affected by them, R&D program managers must identify and prioritize projects carefully, and project managers must manage their projects wisely. Two processes must operate to assure careful prioritization of scarce research dollars, wise project management, and the realization of intended benefits. First, R&D projects (and portfolios of projects) must be

systematically evaluated along their entire life cycles. Second, as the R&D life cycle proceeds, appropriate stakeholders must be involved in appropriate ways. Participants in this workshop will learn what it means to evaluate an R&D process, and how to involve stakeholders at different stages in the R&D lifecycle to optimize success. This workshop is designed for R&D policy makers and program managers who are interested in improving the allocation and prioritization of R&D funds, project managers and researchers who are interested in optimizing the usefulness of their products and research results, and other stakeholders who are interested in how to influence the R&D process.

Subject Areas:

Transportation, research and development, evaluation, safety, and security

Biographies of Presenters:

Michael Patton, Ph.D.

Dr. Patton is an internationally recognized evaluation consultant. He is former president of the American Evaluation Association. The 4th edition of his major book, *Utilization-Focused Evaluation*, will appear early in 2008.

Jonny Morell, Ph.D.

Dr. Morell conducts evaluations of the FRA's Confidential Close Call Reporting System and the Behavior-Based Safety Pilot Program, and for the U.S. Air Force. He is writing a book about evaluating unintended consequences. Jonny edits the *Journal Evaluation and Program Planning*, and is a Senior Policy Analyst at TechTeam Government Solutions.

Gretchen Jordan, Ph.D.

Dr. Jordan is with Sandia National Laboratories (DOE). She chairs the American Evaluation Association's Topical Interest Group on Research, Technology, and Development Evaluation and was recently elected a fellow of the American Association for the Advancement



Transportation Research Board Workshop #133 (continued)

of Science for developing innovative methods for assessing the effectiveness of research programs.

Registration and Schedule:

No advance registration and no fee are required to attend this workshop. Either your full TRB registration or one day registration covers attendance. However, limited space is available. If you plan on attending, please plan to arrive early as the room will only accommodate a maximum of 45 people. Also, for planning purposes please RSVP your intentions of attending to Vijay Kohli at: vkohli@fulcrum-corp.com or telephone (703) 876-9750, ext 201. Provide your name, position, company, and affiliation (researcher, management, labor, etc.). Because the workshop is designed for a full day of participant activities, including small group discussions and break-out session reporting, we encourage you to attend only if you plan on participating for the entire day. You can register for the TRB Annual Meeting online at <http://www.trb.org/meeting/>.





WORKSHOPS

Human Factors in Transportation

Advance registration and fee required

Sunday, January 13, 2008, 9:00 a.m.-5:00 p.m.,
Marriott

A. Operator Performance Modeling: Case Studies and Emerging Opportunities

John D. Lee, University of Iowa; Judith Burki-Cohen, Volpe National Transportation Systems Center, presiding

Sponsored by Vehicle User Characteristics Committee

The techniques and challenges in modeling vehicle operator performance will be discussed. Following a general discussion of modeling purposes, processes, and approaches, experts will present case studies applying cognitive, behavioral, physical, and control-theoretic models to pilot and driver performance. Application areas include driver state assessment, design to minimize distraction, and aviation safety. Finally, an initiative to share driver behavioral data for model development and validation will be launched and an update on international activities will be provided.

Sunday, January 13, 2008, 9:00 a.m.-5:00 p.m.,
Marriott

B. Identifying Safety Trends and Accident Precursors for Proactive Prevention

Terry T. Shelton, Federal Motor Carrier Safety Administration; Denise McCafferty, American Bureau of Shipping, presiding

Sponsored by Vehicle User Characteristics Committee

Participants will analyze how best to develop robust safety trend and accident precursor information for accident prevention. Innovative combination and interpretation of various safety data sources can enable safety professionals to proactively justify appropriate safety-based initiatives without the heretofore obligatory precursor accident. With the understanding of how to combine and better mine data from the host of data sets that are available as its goal, the workshop will be a combination of presentation, case review, and group discussion.

Sunday, January 13, 2008, 9:00 a.m.-5:00 p.m., Marriott

C. Developing Useful Human Factors Guidelines for Transportation Systems: Practical Tools and Procedures

John L. Campbell, Battelle Memorial Institute, presiding

Sponsored by Vehicle User Characteristics Committee

There is a growing information gap between the advanced and diverse status of human-machine systems and the availability of human factors design criteria that can be used during the system design process. In response to this gap, both industry and government have initiated a number of recent efforts to develop human factors guidelines. Historically, however, human factors guidelines have not always been well received by system designers because of such factors as weak research support, limited applicability, restrictiveness of design standards, and difficulty of developing repeatable performance standards. By using a series of case studies drawn from recent guideline-development efforts, this session will describe the role of human factors guidelines in system design, obstacles to the acceptance of guidelines, and the art and science of developing effective human factors guidelines. Participants can expect to be involved in exercises and group discussions on selecting and evaluating both guideline content and presentation formats for guidelines. This session is aimed at both developers and end users of human factors guidelines and will emphasize practical tools for guideline development.



D. Looking Backward, Thinking Backward: Hindsight Judgment of Human Error in Accident Investigation

Michael Dillich, Foresight Reconstruction, Inc.;
John M. Gobelbecker, Foresight Reconstruction,
Inc., presiding
Sponsored by Vehicle User Characteristics
Committee

This workshop will address two natural judgmental biases, hindsight and counterfactual thinking, within the context of investigating operator error in transportation accidents. Wisdom born of the event restricts the ability to appreciate accident situations as they unfolded from the point of view of those involved and to learn appropriate remedial lessons. The primary theme will be Fischhoff's research, which demonstrated that those who know how things turned out have trouble believing that others didn't see what was coming.

Sunday, January 13, 2008, 9:00 a.m.-5:00 p.m.,
Marriott

E. Digital Billboards on the Highway: A Bright Future?

Jerry Wachtel, Veridian Group, Inc., presiding
Sponsored by User Information Systems
Committee

Billboards have existed since there were roadways. Although their pros and cons have been debated for 60 years, it is their influence on traffic flow and safety that has been most controversial. Now this controversy is being renewed thanks to the advent of large digital billboards that can display extremely bright images of broadcast quality. This workshop will consider the evolution of roadside billboards and the technologies now in use and under development and will examine the issues from all perspectives. The goal will be recommendations for how, when, and under what circumstances digital roadside billboards might be used and the conditions under which they should be restricted.

Sunday, January 13, 2008, 9:00 a.m.-5:00 p.m.,
Marriott

F. Evaluation of Evidence-Based Assessment Tools for Older Drivers: Translating Research to the Roadway

Karlene K. Ball, University of Alabama,
Birmingham; Beth Stalvey, Consultant,
presiding
Sponsored by Safe Mobility of Older Persons
Committee

Research on the risk factors for unsafe driving practices and crash risk among older adults have led in recent years to the development of multiple driver assessment and training tools administered by individuals, clinics, departments of motor vehicles. However, few tools have been evaluated for their validity in predicting driver safety. This workshop will summarize recent research on the linkages between evidence-based assessment tools and actual driving behavior and on-road driving performance.

Sunday, January 13, 2008, 9:00 a.m.-5:00
p.m., Marriott

G. Roundabouts: Shared Use by Pedestrians and Drivers

Ronald Granger Hughes, North Carolina State
University, presiding
Sponsored by Roundabouts Task Force

While modeling and simulation tools are frequently used to address vehicle interactions (i.e., traffic), they have not traditionally been used to address interactions between pedestrians and vehicles. Researchers involved in NCHRP Project 3-78 have been working on quantifying critical behavioral and system-level attributes of such interactions, one of the most poorly understood from a data standpoint being the likelihood of drivers' yielding to pedestrians. The researchers will talk about work currently being conducted in this area and go over the analytical and human factors rationale for the treatments to be evaluated by Project 3-78 in the field. They will discuss the VISSIM modeling



work that has been done to support the proposed treatments. Results from several research studies on driver and pedestrian behavior will be presented, followed by discussion of pedestrian and driver attributes and issues in coding interactions in simulation programs. The workshop will conclude with a discussion of the type of research that is needed to improve capabilities to effectively represent pedestrian-vehicle interactions as a component of overall system-level design and evaluation.

Sunday, January 13, 2008, 9:00 a.m.-5:00 p.m.,
Marriott

H. Toward Best Practices for Ethical and Privacy Issues in On-Road Driving Research

Daniel V. McGehee, University of Iowa; James R. Sayer, University of Michigan Transportation Research Institute; Susan T. Chrysler, Texas Transportation Institute, presiding
Sponsored by Vehicle User Characteristics Committee

As increased availability of low-cost video and vehicle instrumentation enables researchers to gather enormous amounts of detailed information about driver behavior, researchers are in a good position to address a complex array of associated ethical and privacy issues. With case studies and other past experience, the workshop will concentrate on the identification of ethical and privacy problems, ideas, and solutions with the aim of working toward a set of definitions and guidelines that could be considered best practices in the conduct of on-road driving research.





**Human Factors in Transportation Workshop
Session B
Identifying Safety Trends and Accident
Precursors for Proactive Prevention**

(Sponsored by Vehicle User Characteristics Committee)

Sunday, January 13 • 9:00 a.m.–5:00 p.m.
Marriott

Participants will analyze ways to develop robust information on safety trends and accident precursors for accident prevention. With innovative combinations and interpretations of various safety data sources, safety professionals can proactively justify appropriate safety-based initiatives without the obligatory precursor accident. The workshop will offer presentations, case reviews, and group discussions with the goal of understanding how to combine data and to improve the mining from the host of available data sets.

Biographies of CoLeaders:

Terry T. Shelton, Federal Motor Carrier Safety Administration

Ms. Shelton is the Associate Administrator for Research and Information Technology and Chief Information Officer for the Federal Motor Carrier Safety Administration (FMCSA) within the U.S. Department of Transportation. Ms. Shelton has worked in statistical analysis and information systems in the traffic safety arena for over 20 years, first at the National Highway Traffic Safety Administration and then at FMCSA. In addition to her work at these DOT safety agencies, she acted as interim Director of the Bureau of Transportation Statistics for six months while a permanent Director was being recruited. Her accomplishments include designing and implementing the General Estimates System (a nationwide sample of police reported crashes), the National Occupant Protection Use Survey, and the Large Truck Crash Causation Study. In 2005, she was awarded the Presidential Meritorious Rank Award. Prior to coming to the Department of Transportation, Ms. Shelton was a mathematical statistician for the Bureau of Labor Statistics, U. S. Department of Labor, where she

conducted statistical analysis and designed sample surveys. Ms. Shelton graduated magna cum laude from the University of Delaware with a degree in Mathematics and attended graduate school in mathematical statistics at the George Washington University in Washington, D.C.

Denise McCafferty, American Bureau of Shipping

Ms. McCafferty is the Manager of the Risk and Human Factors Group in the Corporate Technology branch of American Bureau of Shipping. She is located in Houston, Texas. She is responsible for managing the development of tools and techniques for use by ABS surveyors, engineers and clients. For over 25 years, she has provided human factors engineering consulting services and research capability to a variety of domestic and international clients in the oil and gas industry, both offshore and onshore; marine; refining, chemical; pipeline; nuclear; and other process control industries. Her areas of expertise include: human factors in vessel / facility design; integration of human factors into design projects; the role of human and organizational factors in safety management and risk assessment; integration of human factors and human reliability into hazards analysis and quantitative risk assessment studies; and incident investigation. In recent years, her experience has concentrated on human and organizational risk factors relating to the design, management and operation of marine vessels, marine terminals and offshore installations. She has published numerous articles on topics relating to industrial human factors.

Registration and Schedule:

Advance registration and fee is required, \$225 by November 30; \$275 after November 30 and on site. These participatory workshops are designed for users of information on human factors; researchers studying human factors in transportation system design, safety and operations; and practitioners involved in the design and operation of transportation systems cover topics chosen for timely insights into current practice and ongoing research.



Registration and Schedule (continued):

Thomas B. Sheridan, Senior Research Fellow, Volpe National Transportation Center, and Professor Emeritus, Massachusetts Institute of Technology, will present the keynote lunch address entitled, "Human Factors in Automated Future Transportation." Workshops run concurrently—use the Registration Form, page 9, to select only one session. Tickets received on site will indicate the room locations. The fee which includes coffee service, lunch, and a reception must be received by November 30 to guarantee enrollment.

Full descriptions for all of the Human Factors workshop sessions may be found at: TRB.org/Meeting. *To register ONLY for this workshop complete the address and e-mail information about yourself at the top of the registration form and then fill out only box II (select only section B with the \$275 charge and subtotal of \$275), section III (check the appropriate box), and section VI making payment for the total \$275 charge. Those who wish to register for the regular TRB meetings should complete the rest of the form and provide the appropriate additional payment. Please note that attendance at the workshop is not covered by the normal registration for the TRB meetings.*

