# Human Factors Research

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U.S. Department of Transportation Federal Railroad Administration

# U.S. Department of Transportation - Federal Railroad Administration

### 1200 New Jersey Avenue, S.E. - Washington, D.C. 20590

July 2008

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## **EVENTS and ANNOUNCEMENTS**

### **Volume III of Reviews of Human Factor and Ergonomics Published:** - Volume 3 of *Reviews of Human Factors and Ergonomics* presents six reviews of current topics of practical significance to human factors/ergonomics (HF/E) researchers and practitioners and anyone interested in the design of user-centered devices, systems, and processes. Each chapter provides implications for future research and real-world applications. Topics in Volume 3 include:

- analysis of cognitive work
- macroergonomics
- human factors of homeland security
- task interruptions
- research-based guidelines for multimedia instruction
- railroad human factors

Click here for more information about how to obtain the book.

Within this publication is a **chapter focused on Railroad Human Factors** written by Donald Sussman and Thomas Raslear. You can see an abstract of the chapter on Railroad Human Factors by clicking <u>here</u>.

# UPDATE: Human Systems Integration Instructional Seminar

The attendees at the Human Systems Integration (HSI) instructional seminar held at DOT Headquarters in Washington, D.C. on July 9 and 10, 2008, were afforded the rare opportunity to engage the Chief Scientist of the Georgia Tech Research Institute (GTRI) on HSI. The small class size enabled personalized instruction and discussion of HSI issues in the context of current FRA research projects managed by the attendees. Dr. Dennis Folds of GTRI presented a 2-day short course on HSI fundamentals. Dr. Folds illustrated how the application of a variety of human factors analyses associated with HSI can be used to reduce risk of human error once a system is implemented, and how it can improve human performance with an operational system. Due to the audience, the systems discussed were entirely rail systems. Dr. Folds went on to discuss the importance of addressing manpower, personnel, training, human factors engineering, safety, habitability, and survivability in transportation systems in the context of designing the complete transportation system. This can be achieved through systems engineering that includes HSI and can be carried out by integrated product teams. As explained by Dr. Folds, these teams comprised of engineering, software, training and personnel specialists and human factors specialists come together to address all of these issues during the design phase of a system. This approach inevitably reduces total long term system costs and improves performance significantly.

This instructional seminar was sponsored by Mike Jones, Program Director for Human Systems and Technology, of FRA's Office of Research and Development. JeniusSolutions, LLC. and GTRI have provided a series of briefings about HSI to senior researchers at the Volpe Transportation Research Center, Cambridge MA, as well as the Rail Safety Advisory Committee, GE Transportation, engineering classes at the US Air Force Academy (interest in rail applications), and other organizations. Further briefings are being planned for the rail industry.

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