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1684 Legibility of Words Rendered using ClearType™
Thomas R. Aten, Leo Gugerty, Richard A. Tyrrell

1688 Motion in Mimic Displays: Effects on the Detection and Diagnosis of Electrical Power System Failures
Douglas A. Wiegmann, Gavin R. Eisenberg, Thomas J. Overbye, Aaron M. Rich

Professional Development

1693* HF/E’s Place in the Parade: Should We Be Drum Majors or Toot Our Own Horns? [Panel]
Christopher Miller, chair; Robert A. North, cochair
Panelists: Robert North, Valerie Gawron, Anna Wichansky, Barry Beith, Sherry Chappell, Arnold Lund, Robert North

Safety

Arnold M. Small Lecture [Lecture]
Jake L. Pauls, chair; Michael J. Kalsher, cochair

** Error Prevention and Appropriateness of Care: A Practitioner’s Perspective
Lucian L. Leape

Warnings and Risk Perception [Lecture]
Alvaro Taveira, chair; J. P. Purswell, cochair

1697 Masked Thresholds and Predicting the Audibility of Auditory Displays: An Example for Long-Haul Trucks
John G. Casali, Gary S. Robinson, Suzanne E. Lee
**Abstract only**

**Manuscript not submitted for publication**
Analysis of Distribution, Frequency, and Duration of Naturalistic Lane Changes
Erik C. B. Olsen, Suzanne E. Lee, Walter W. Wierwille, Michael J. Goodman

The Development and Evaluation of Icons for Side Obstacle Warning Systems
Tina Brunetti Sayer

Driver Acceptance of General vs. Specific Icons for In-Vehicle Information
Akiko Nakata, John L. Campbell, Joel B. Richman

Using Driver Performance Measures to Estimate Workload
Joshua B. Hurwitz, David J. Wheatley

Driver Distraction Issues: Focus on Cell Phones and Telematics [Lecture]
Louis Tijerina, chair; John D. Lee, cochair

Accessing Multimodal Information on Cell Phones while Sitting and Driving
Susan R. Fussell, Delia Grenville, Sara Kiesler, Jodi Forlizzi, Anna M. Wicksansky

The Effects of Voice Technology on Test Track Driving Performance: Implications for Driver Distraction
Thomas A. Ranney, Joanne L. Harbuluk, Y. Ian Noy

An Experimental Evaluation of Using Automotive HUDs to Reduce Driver Distraction while Answering Cell Phones
Christopher Nowakowski, Dana Friedman, Paul Green

Effects of Auditory Stimulus Intelligibility on Concurrent Scanning of Driving Scenes
Margaret J. Vais, Jason McCarley, Eric D. Vidoni, Arthur F. Kramer

The Attentional Costs of Interrupting Task Performance at Various Stages
Christopher A. Monk, Deborah A. Boehm-Davis, J. Gregory Trafton

Effectiveness of Cognitive-Based and Conventional Alerters for Locomotive Engineers
Andrew R. Dattel, Stephen M. Popkin, John K. Pollard

Effect of Distraction Complexity on Driving Performance and Emergency Event Response
Michael P. Manser, Dana M. Even

Alertness Maintaining Tasks While Driving
Tal Oron-Gilad, Adi Ronen, Yair Cassuto, David Shinar

A National Survey of Commercial Truck Driver Parking Preferences
Stephen A. Flegier, Katherine J. Chen

Light Vehicle–Heavy Vehicle Interactions: A Preliminary Assessment Using Critical Incident Analysis
Richard J. Hanowski, Robert J. Carroll, Walter W. Wierwille, Rebecca L. Olson

Surface Transportation Posters

Perceived Urgency, Alerting Effectiveness, and Annoyance of Verbal Collision Avoidance Messages
Carryl L. Baldwin, Colleen Moore

Effects of Age and Memory Grouping on Simulated Car Driving
Yan Bao, Miklos Kiss, Marc Wittmann

Designing Better Traveler Information Systems: Cognitive and Task-Related Factors
Jason D’Orazio, Bruce N. Walker

Subjective Measure for Workload Assessment: A New Method to Address Driving Mental Load
Florence Nathan, Laurence Gautheret

Occlusion Paradigm as a Tool to Assess Visual Distraction from In-Vehicle Telematics
Tracy L. Frank, Y. Ian Noy, Christopher Klachan

The Effects of Telematics on Driver Distraction
Patrick Siebert, Mustapha Mouloua, Kendra Burns, Jennifer Marino, Lora Scagliola, Lelah Winters, Peter Hancock, Daniel Agliata

Voice Information System Adapted to Driver’s Mental Workload
Yuji Uchiyama, Shin-Ichi Kojima, Takero Hongo, Ryuji Terashima, Toshihiro Wakita

System Development

Perspectives on Validating Complex Human-Machine System Performance [Symposium]
John M. O’Hara, chair

Using a Benchmark-Referenced Approach for Validating a Power Plant Control Room: Results of the Baseline Study
Andrew W. Lang, Emilie M. Roth, Kent Bladh, Roger Hine

Human Factors Certification in Civil Aircraft
John A. Wise

Human Performance Assessment of a Prototype Multimodal Naval Command Center
Lawrence J. Hettinger, Bart J. Brickman, James McKinney

Methods of Assessing Medical Devices
Devorah E. Klein, Matthew J. Jordan

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** Manuscript not submitted for publication
Improving the Consideration of Human Factors in System Design [Panel]
Daniel Wallace, chair; Melissa Dugger, cochair
Panelists: Melissa Dugger, J. Robert Bost, Trish Hamburger, E. Johan Hendrikse, Brian Peacock

Development and Application of Human Performance Models [Lecture]
Barry L. Berson, chair; Laurel E. Allender, cochair

Shipboard Communications: Quantifying Operator Capabilities and Limitations
Debra E. Bardine, Daniel F. Wallace, Udo Goff, Christine Schlichting

Manpower, Skill, and Fatigue Analysis of Future Unmanned Aerial Vehicle (UAV) Environments
Brett Walters, Michael J. Barnes

Human Performance Modeling and Decision Analysis in a Concept Crew Workstation
Thaddeus M. Wojcik

The Use of Voice and Head-Tracking for Hands-Free Human-Computer Interaction
David E. Kancler, Megan E. Gorman, Allen R. Revels

Measurement of Trust in Humans in Hybrid Inspection for Different Levels of Error Randomness
Neville Z. Ginwalla, Sittichai Kaewkuekool, Shannon R. Bowling, Anand K. Gramopadhye, Brian J. Melloy

System Development Posters

Driver Performance Model: I. Conceptual Framework
Joseph M. Heimerl

Quantifying Usability: The Industry Usability Reporting Project
Jean Scholtz, Anna Wichansky, Keith Butler, Emilie Morse, Sharon Laskowski

An Automated Method for Human-Operator Error Analysis
Alexander M. Yemelyanov

Test and Evaluation Posters

Identification and Control of Potential Variables in User Testing of PPE for Industrial Operations
Cindy R. Ching, Robert P. Reisdorf, D. Susan McGlothlin

An Approach to Measuring Accessibility of Office Automation Equipment
W. Bradley Fain, Dennis J. Folds

A New and Simple Method and Tool for the Evaluation of Input Devices
Detlef Zuehlke, Lutz Krauss

Evaluating the Content and Usability of an Experimental Text Summarization System and Three Web-Based Search Engines
Andre W. Kushniruk, Min-Yen Kan, Kathleen R. McKeown, Judith L. Klavans, Vimla Patel

Dynamic Assessment of Pilot Mental Status
Staffan Magnusson, Peter Bergggren

Quantification of Adverb Intensifiers for Use in Ratings of Acceptability, Adequacy, and Relative Goodness
Stephen J. Krscak, William F. Moroney

Performance Testing and Subjective Evaluation: Giving Equal Importance to Both
Laurie L. Quill, David E. Kancler, Allen R. Revels, Carlton D. Donahoo, Megan E. Gorman, Matthew W. Goddard

A New Test of Self-Paced Work Sensitive to the Effects of Prolonged Work and Sleep Deprivation
William J. Tharion, Scott J. Montain, Cara D. Leone, John W. Castellani

Assessing Team Situation Awareness in the Field: A Comparison of Measurement Approaches
Gwendolyn E. Campbell, James A. Pharmer

Development of the Nondistributed Flight Reference Off-Boresight Helmet-Mounted Display Symbology
Joseph C. Jenkins, Paul R. Havig, Eric E. Getseelman

Collection of Process, Preference, and Outcome Data to Select PPE for Industrial Operations
Cindy R. Ching, Robert P. Reisdorf, D. Susan McGlothlin

Contemporaneous versus Retrospective User-Reported Critical Incidents in Usability Evaluation
Miranda G. Capra

Test and Evaluation: Research, Tools, and Techniques [Lecture]
Rene J. de Pontbriand, chair; William F. Moroney, cochair

An Empirical Analysis of Human Factors Research
David Meister

Effective IVIS Icon Comprehension Research: Context and Response Scaling Methods
Joel B. Richman, John L. Campbell, Marvin C. McCallum

* Abstract only
** Manuscript not submitted for publication
Training

Training System Technology and Development [Lecture]
Barry P. Goettl, chair; Stephanie Guerlain, cochair

2002 Training Critical Thinking to Enhance Battlefield Initiative
Marvin S. Cohen, Leonard Adelman

2007 Collaborative Development of Expertise: Evaluation of an On-the-Job (OJT) Training Program
Terry Stanard, Rebecca M. Pliske, Amelia A. Armstrong, Stacey Green, Caroline E. Zsambok, Daniel P. McDonald, Beth W. Crandall

** Innovative Technology in a Truck Driver Training Program

2012 Development and Evaluation of an Information Management Training Program
Eileen B. Entin, Elliot E. Entin, Kathleen P. Hess

2017 Training Information Management
Elliot E. Entin, Eileen B. Entin, Kathy Hess

Richard E. Christ, chair; Jean L. Dyer, cochair
Panelists: Richard E. Christ, Kathleen Mosier, Alex Kirlik, Marvin S. Cohen, Gary Klein

2025* Using Synthetic Teammates to Train Teamwork Skills: Perspectives and Issues [Symposium]
Jean MacMillan, chair; Denise Lyons, cochair

2026 Training a Team with Simulated Team Members
Alma Schaafstal, Raeagan M. Hoeft, Martin van Schaik

2030 Hybrid Team Training Testbed for AWACS Aircraft Controllers
Frederick J. Diedrich, Bruce Roberts, David E. Diller, Jean MacMillan, Stephen Deutsch

2035 Instructorless Team Training Using Synthetic Teammates and Instructors
Wayne W. Zachary, William Weiland, Daniel Scolaro, Jacqueline Scolaro, Thomas Santarelli

2039 Behavioral Characteristic of Synthetic Teammates in Simulation-Based Training
Michael A. Szczepkowski, Joan Ryder, Jacqueline Scolaro

2044 I’ve Got Synthers, Who Could Ask for Anything More?
Jared T. Freeman

Issues in Training Design and Evaluation [Lecture]
Lori R. van Duyne, chair; Wayne Shebilske, cochair

2049 Computerized Card Sort Training Tool: Is it Comparable to Manual Card Sorting?
Michelle E. Harper, Lori Rhodenizer van Duyne, Florian Jentsch, Kimberly Smith-Jentsch, Alicia D. Sanchez

2054 Training for Optimal Strategic Skills
Ginger W. Cross, Stephanie M. Doane, David L. Alderton

2059 Effectiveness of Audio and Visual Training Presentation Modes for Glucometer Calibration
Anne C. McLaughlin, Wendy A. Rogers, Arthur D. Fisk

2064 A Cognitive Laughlin to Student-Centered E-Learning
Frank L. Greitzer

2069 Introducing Teamwork Training into Healthcare Organizations: Implementation Issues and Solutions
John C. Morey, Mary Salisbury

Training Posters

2074 What to Do or What Not to Do? Identifying the Content of Effective Feedback
Wendi L. Buff, Gwendolyn E. Campbell

2079 Impact of Feedback Training in CBT in Visual Inspection
Jiao Ma, Colin G. Drury, Ann M Bisantz

2084 Military Tacit Knowledge Elicitation in Written versus Online Settings
Kenneth S. Robinson, Joseph Psotka

2089 Matching Instructional Media with Instructional Demands
Edmundo A. Sierra, Jr., Arthur D. Fisk, Wendy A. Rogers

2094 Supporting the Analysis Phase of Team Training Design
Marcel P. W. van Berlo

2099 Evaluating Guidelines Concerning the Use of Text and Audio in Web-Based Training
Lori Rhodenizer Van Duyne, David L. Ryan-Jones, Cheryl J. Hamel, John M. White

Virtual Environments

2104* Designing Virtual Environment Training Systems that Work: Stacking the Deck in the User’s Favor [Panel]
Joseph Cohn, chair; Denise Lyons, cochair
Panelists: Dylan Schmorrow, Stephanie Lackey, Robert Allen, Kay Stanney, Eric Muth, Laura Milham

Simulator Sickness [Lecture]
Kay M. Stanney, chair; Mark H. Draper, cochair

2109 Gender Differences in Visually Induced Motion Sickness
David A. Graebner, Kay M. Stanney

* Abstract only
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**Procedures of the Human Factors and Ergonomics Society 46th Annual Meeting — 2002**

2114 Dropouts and Aftereffects: Examining General Accessibility to Virtual Environment Technology
Kay M. Stanney, Kelly S. Kingdon, Robert S. Kennedy

2119 A Progress Report on the Quest to Establish a Cybersickness Dose Value
Wei Chen, S. L. Yuen, R. H. Y. So

2124 A "Natural" Independent Visual Background Reduced Simulator Sickness
James Jeng-Weei Lin, Habib Abi-Rached, Do-Hoe Kim, Donald E. Parker, Thomas A. Furness

2129 Motion Sickness Symptoms and Perception of Self-Motion from Exposure to Different Wallpaper Patterns
Robert S. Kennedy, Kay M. Stanney, Jannick Rolland, Mark J. Ordy, Andrew P. Mead

 Displays and Controls in Virtual Environments [Lecture]
W. Todd Nelson, chair; Heath A. Ruff, cochair

2134 Empirical Comparison of Human Behavior and Performance with Different Display Devices for Virtual Environments
Doug A. Bowman, Ameya Datey, Young Sam Ryu, Umer Farooq, Omar Vassnaik

2139 The Effects of Head-Coupled Control and a Head-Mounted Display (HMD) on Large-Area Search Tasks
Mark H. Draper, Heath A. Ruff, John V. Fontejon, Samantha Napier

2144 Utility of a Tactile Display for Cueing Faults
Gloria L. Calhoun, Mark H. Draper, Heath A. Ruff, John V. Fontejon

2149 Three-Dimensional Tracking in Augmented Environments: User Performance Trade-Offs between System Latency and Update Rate
Stephen R. Ellis, Anthony Wolfram, Bernard D. Adelstein

2154 Text Input Techniques for Immersive Virtual Environments: An Empirical Comparison
Doug A. Bowman, Christopher J. Rhoton, Marcio S. Pinho

 Navigation and Training in Virtual Environments [Lecture]
Scott M. Galster, chair; Brian D. Simpson, cochair

2159 Attentive Interaction Techniques for Searching Virtual Environments
Stephen Hughes, Michael Levis

2164 Viewpoint Optimization for Navigation Using Dynamic Tether
Wenbi Wang, Paul Milgram

2169 Comparing Standing Balance at Real and Virtual Elevated Environments
Peter Simeonov, Hongwei Hsiao, Brian Dotson, Douglas Ammons

2174 Verbal and Spatial Loading Effects on Eye Movements in Driving Simulators: A Comparison to Real-World Driving
Kim R. Hammel, Donald L. Fisher, Anuj K. Pradhan

 Virtual Environments Posters

2179 The Proprioceptive Aftereffects of Prism Adaptation Influence Interlimb Rhythmic Coordination
David Black, Michael A. Riley

2184 Effects of Disorientation on Human Spatial Cognition: Object Localization in Virtual Environments
Randy Brou, Daniel W. Carruth, Stephanie M. Doane, Rhonda J. Vickery, Robert J. Moorhead

2189 Effects of Long Duration and Repeated Exposures in an Immersive Virtual Environment on Postural Stability
Henry Been-Lirn Duh, Deborah L. Harm, Donald E. Parker

2193 Haptic Perception of Whole and Partial Extents of Small Objects
Philip Hove, Alison M. Tollner, Martina I. Klein, Michael A. Riley, Marie-Vee Santana

2197 Immersive Tendency, Feeling of Presence, and Simulator Sickness: Formulation of a Causal Model
Christian J. Jerome, Bob Witmer

2202 Evaluation of Force Feedback Steering in a Fixed-Base Driving Simulator
Ronald R. Mourant, Praveen Sadhu

2206 Training in a Virtual Stereoscopic Environment
Ronald R. Mourant, Lily Parsi

2210 The Ethics of Telepresence: Human Factors Considerations in Preserving Privacy
Ronald W. Noel, Claudia M. Hunter

2215 Recognition of Computer-Generated Trees
Valerie K. Sims, Charles E. Hughes, J. Michael Moshell, James E. Cotton, Jiangjian Xiao

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