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JACK L. AUFLICK, Ph.D.
SENIOR CONSULTANT

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Dr. Auflick is a Senior Consultant for ESI, specializing in human factors and engineering psychology, experimental design, risk assessment, and the analysis of human error within complex and hazardous operational environments. This expertise includes human visual-perceptual processes applied to human-machine interfaces for automotive, industrial, and medical device applications, including driver distraction, conspicuity, nighttime vision, warnings, procedures and instructions, usability, and crash avoidance. He has extensive experience in the development and assessment of warnings, usability, and instructions. His research has included experimental and analytical studies of driver workload, air traffic controller behavior with new interfaces, and human-computer interaction for various touch interface devices.

Areas of Specialization

Human Error Analyses

Automotive Accidents-Driver Behavior

Industrial and Process Safety Accident Investigation

Night and Daytime Visibility and Conspicuity-Human Perception

Automotive, Railroad, and Aviation Human Factors Analyses

Operational Assessment of Warnings, Labels, and Instructions for Industrial and Consumer Products

Risk Assessment, Advanced Statistical and Experimental Design Analyses

Education

Ph.D., Human Factors Psychology, University of South Dakota, Vermillion, SD, 1992

M.A., Human Factors Psychology, University of South Dakota, Vermillion, SD, 1988

B.A., Psychology (with Honors) University of Wyoming, Laramie, WY, 1973

Professional Affiliations/Honors/Awards

Human Factors and Ergonomics Society

Nissan Manager's Award (2003 & 2007)

U. S Department of Energy Year 2000 Award (Risk-based model to prevent year 2000 digital controller failures)

Diplomate to American Board of Forensic Examiners & Diplomate to American Board of Psychological Specialties

Selected as one of "2000 Outstanding Scientists of the 20th Century", International Biographical Center, Cambridge, England

Member CTA's Best Team Award (Air Traffic Control)

Invited to Join Phi Kappa Phi National Academic Honor Society

Invited to join National Junior College Academic Honor Society

Awarded 5 U. S. Patents for digital automotive entertainment, automotive safety warning

Positions Held

Engineering Systems Inc., Ann Arbor, Michigan

Senior Consultant, 2010 – Present

Packer Engineering, Ann Arbor, Michigan

Director, Human Factors, 2009-2010

St. Jude Medical, Sylmar, California

Principal Human Factors Engineer, 2008-2009

Nissan Technical Center North America, Farmington Hills, Michigan

Senior Project Engineer, 2003-2008

Visteon, Van Buren Township, Michigan

Senior Engineer, 2000-2003

Los Alamos National Laboratory, University of California, Los Alamos, New Mexico

Staff Member, 1992-2000

CTA Inc., Egg Harbor, New Jersey

Group Analyst, 1991-1992

Idaho National Engineering Laboratory, EG&G Inc., Idaho Falls, Idaho

Senior Scientist, 1988-1991

Publications/Presentations

"Human Factors & Premise Liability," (2020). **Auflick, J. L.** and Tuczak, E. J., Live Webinar, Ohio Association of Civil Trial Attorneys, December 3, 2020.

"Enhancing Contrast-Sensitivity Charts for Validating Visual Representations of Low-Illumination Scenes." Sprague, James K., Manuel Meza-Arroyo, Peggy Shibata, and **Jack L Auflick**. SAE 2019 World Congress & Exhibition, 2019.

"Forensic Analysis of Rumble Strips," **Auflick, J.L.**, Sprague, J.K., Eganhouse, J.T., Roberts, J.M., Presentation, Proceedings of the 10th International Conference on Applied Human Factors and Ergonomics and affiliated conferences (AFHE 2019), 7th International Conference on Advances in Human Factors in Transportation, Washington Hilton, Washington D.C., July 24-28, 2019.

"Human Factors and Premise Liability," **Auflick, J.L.**, Presentation, Builders Mutual, Raleigh, North Carolina, December 3, 2018.

"Human Factors: Answering the "How" and "Why" Questions," **Auflick, J.L.**, Roberts, J.M., Presentation, Aviva Insurance, Toronto, ON, Canada, October 5, 2018.

"Multivariate differences in driver workload: Test track versus on-road driving," **Auflick, J.L.** (2017). Proceedings of the 8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017) The Westin Bonaventure Hotel, Los Angeles, CA, July 17-21, 2017.

- "Determination of the Standard of Care in the Tire Service Industry," Arruda, J.F., Daws, J.W., and **Auflick, J.L.** (2016). Rubber & Plastic News, November 28, 2016, pp. 14-20. 2016.
- "Determination of the Standard of Care in the Tire Service Industry," Arruda, J.F., Daws, J.W., and **Auflick, J.L.** (2016). In conjunction with the International Tire Exhibition and Conference Tire Manufacturing, Akron, OH. September 13-15, 2016.
- "Resurrecting Driver Workload Metrics: A Multivariate Analysis of Test Track Data," **Auflick, J. L.** (2016). Advances in Human Aspects of Transportation, Proceedings of the AHFE 2016 International Conference on Human Factors in Transportation. Walt Disney World®, Florida, USA, Advances in Intelligent Systems and Computing, Volume 484. Stanton, N.A., Landry, S., DiBucchianico, G. & Vallicelli, A., editors. Springer International Publishing, AG Switzerland. July 27-31, 2016.
- "Human Factors Techniques in the Analysis of Low Illumination Accidents: Integrating Conspicuity, Validated Photography and Scientific Animation," **Auflick, J.L.**, Sprague, J., Shibata, P., and Kruger, D. (2015). Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting – 2015, Los Angeles, CA. October 26-29, 2015.
- "Resurrecting Driver Workload Metrics: A Multivariate Approach," **Auflick, J. L.** (2015). 6th International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, 3rd International Conference on Human Factors in Transportation. AHFE 2015, Los Vegas, NV. July 26-30, 2015.
- "Analysis of Nighttime Vehicular Collisions and the Application of Human Factors: An Integrated Approach," Sprague, J., Shibata, P., and **Auflick, J.** (2014). SAE Technical Paper 2014-01-0442, Detroit, MI. 2014.
- "A Multivariate Y2K Risk-Based Search for Embedded Digital Controllers," **Auflick, J.L.** (2000). In the Proceedings of the American Society of Mechanical Engineers (ASME) Pressure Vessels and Piping Conference, Seattle, WA. August 2000.
- "Using Fuzzy Logic in the Development of a Human Reliability Analysis Quantification Tool," **Auflick, J.L.** (1999). In the Proceedings of the American Society of Mechanical Engineers (ASME) Pressure Vessels and Piping Conference, Boston, MA. August 1999.
- "Human Events Reference for ATHEANA (HERA) Database Description and Preliminary User's Manual," **Auflick, J.L.** Los Alamos National Laboratory, Prepared for: United States Nuclear Regulatory Commission, August 12, 1999.
- "Demonstration Integrated Knowledge-Based System for Estimating Human Error Probabilities, **Auflick, J.L.**, (1999). Integrity Assessment & Risk Analysis 1999 ASME-PVP Conference, August 1-5, 1999.
- "HuRA! -A Prototype Expert System for Quantifying Human Errors," **Auflick, J.L.**, Hahn, H. and A., Morzinski, J. A., (1998). In the Proceedings of the Probabilistic Safety Assessment and Management (PSAM 4, A. Mosleh and R. Bari, Eds), London, England, Springer. 1998.
- "Development of a Prototype Knowledge-based System for Estimating Human Error Probabilities," **Auflick, J.L.**, Hahn, H. and A., Morzinski, J. A., (1998). In the Proceedings of ESREL '98 (European Safety and Reliability conference), Trondheim, Norway, Balkhema Publishers. 1998.
- "Efficient Human Reliability Assessment Using Soft Data and Bayesian Updates," **Auflick, J.L.**, Morzinski, J. A., Eide, S. A., and Houghton, F. K. (1996). The Proceedings of the International Conference on Probabilistic Safety Assessment and Management, Crete, Greece, London: Springer-Verlag London Limited, Publishers. June 24-28, 1996.

“Stuck Pipe, Statistics and Human Reliability Analysis,” **Auflick, J.L.** and Auflick, R. A. (1995). Proceedings of the International Mechanical Engineers Conference and Exposition and American Society of Mechanical Engineers Winter Meeting, San Francisco, CA. November 13-17, 1995.

“Intersystem LOCA risk assessment: methodology and results,” Galyean, W., Kelly, D., **Auflick, J. L.**, Schroeder, J., Blackman, H., Gertman, D. and Haney, L. (1995). Nuclear Engineering and Design, 152, 159-174.

“Modeling Errors of Commission for the ISLOCA Program,” Blackman, H., Gertman, D., Galyean, W., Hanson, D., and **Auflick, J.** (1990). CSNI Workshop on PRA Applications and Limitations, Albuquerque, NM. 1990.

Reports

“Driver Workload Metrics Task 2 Final Report,” Angell, L., **Auflick, J.**, Austria, P.A., Kochhar, D., Tijerina, L., Biever, W. Diptiman, T. Hogsett, J., and Kiger, S., (2006). DOT HS 810 635, (Nov. 2006). National Highway Traffic Safety Administration, U.S. Department of Transportation, 400 Seventh Street SW. Washington, DC 20590. 2006.

“Annual Report of the Crash Avoidance Metrics Partnership,” Deering, Richard, K., Angell, L., **Auflick, J.**, Austria, P.A., Kochhar, D., Tijerina, L., Biever, W. Diptiman, T. Hogsett, J., and Kiger, S., (2002). April 2001- March 2002, DOT HS 809 531, (Dec. 2002). National Highway Traffic Safety Administration, U.S. Department of Transportation, 400 Seventh Street SW. Washington, DC 20590. 2002.

“Development of an Integrated System for Estimating Human Error Probabilities,” **Auflick, J.L.**, Hahn, H. A. and Morzinski, J.A., (1998). TSA-9, DOE Office of Scientific and Technical Information. Dec. 1998.

“An Evaluation of the Effectiveness of the US Department of Energy Integrated Safety Process (SS-21) for Nuclear Explosive Operations Using Quantitative Hazard Analysis,” Fischer, S. R., Konkel, H., Bott, T., Eisenhower, S., **Auflick, J.**, Houghton, K., Maloney, K., DeYoung, L., and Wilson, M. (1996). International Conference on Probabilistic Safety Assessment and Management. June 24-28, 1996.

“Simulation of Triple Simultaneous Parallel ILS Approaches at the New Denver International Airport Using the Final Monitor Aid Display and a 4.8 Second Radar Update Rate,” Ozmore, R. and DiMeo K. (project managers) Fischer, T., Niederman, E., **Auflick, J.**, Courington, S., Jones, R., and Morrow, S. (1994). Technical Report: DOT/FAA/CT-94/36, U. S. Department of Transportation, Federal Aviation Administration, Washington, DC 20591. June 1994.

“Intersystem LOCA Risk Assessment: Methodology and Results,” Galyean, W. J., Kelly, D. L., Schroeder, J. A., **Auflick, J.L.**, Blackman, H. S., Gertman, D. I., and Haney, L. N., (1991). Nineteenth Water Reactor Safety Information Meeting, Vol. 1. NUREG/CP-0119, for U. S. Nuclear Regulatory Commission, Washington, DC. Bethesda, MD., October 28-30, 1991.

“Human Reliability Assessment Training Program,” **Auflick, J.L.** and Haney, L. (1991). Work performed under DOE contract DE-AC07-761DO1570, for the U. S. Nuclear Regulatory Commission, Washington, DC. 1991.

“Assessment of ISLOCA Risks - Methodology and Application: Combustion Engineering Plant,” Kelley, D. L., **Auflick, J.L.**, and Haney, L. (1991). NUREG/CR-5745, the U. S. Nuclear Regulatory Commission, Washington, DC. 1991.

“Appendix C; Human Reliability Analysis (HRA) for the Combustion Engineering ISLOCA Probabilistic Risk Assessment,” **Auflick, J. L.**, and Haney, L. N., pp. C-1 – C-91. 1991.

- "Assessment of ISLOCA Risks - Methodology and Application to a Westinghouse Four-Loop Ice Condenser Plant," Kelley, D. L., **Auflick, J.L.**, and Haney, L. (1991). NUREG/CR-5744, the U. S. Nuclear Regulatory Commission, Washington, DC. 1991.
- "A Human Factors Evaluation of Stuck Pipe in the Gulf of Mexico," **Auflick, J.L.** and Harbour, J. (1990). Technical Report performed under DOE contract DE-AC07761D01570, for British Petroleum Exploration, Houston, TX. 1990.
- "Human Factors Design Recommendations for Crane Controls at CPP-666," **Auflick, J.L.** (1989). EGG-HFRU-8649, technical report performed under DOE contract DEAC07-761DOI570, EG&G Idaho Inc. 1989.
- "Human Factors Evaluation of Electroluminescent Display #1," **Auflick, J.L.** (1989). EGG/ HFRU-8645, technical report performed under DOE contract DE-AC07-761DOI570, EG&G Idaho Inc. 1989.
- "Abnormal Operating Procedures for ATR Experiment Loops," **Auflick, J. L.** (1989). EGG: HFRU-8705, technical report performed under DOE contract DE-AC07-761DOI570, EG&G Idaho Inc. 1989.
- "An Evaluation of the Touch Table as a Command and Control Input Device," Ellingstad, V., Parng, A., Gehlen, J., Swierenga, S. and **Auflick, J.L.** (1988). Technical Report done for the Naval Oceans System Center, San Diego, CA. University of South Dakota, Human Factors Laboratory, Vermillion, SD. February 1988.
- "Selecting Functions with the Touch Tablet: Speed and Accuracy as Related to Function Density," **Auflick, J.L.** (1987). Technical Report done for the Naval Oceans System Center, San Diego, CA. University of South Dakota, Human Factors Laboratory, Vermillion, SD. 1987.

Invited Presentations, Lectures and Seminars

- "How and Why Vehicles Crash," Auflick, J.L., Sprague, J.K. (2019). ESi Michigan Office Open House, Ann Arbor, Michigan, September 26, 2019.
- "Human Factors: Answering the 'How' and 'Why' Questions," **Auflick, J. L.** (2017). Invited Continuing Education Technical Presentation for attorneys, Cremer, Spina, Shaughnessy, Jansen & Siegert, LLC, Chicago, Illinois. Nov. 14, 2017.
- "Determination of the Standard of Care in the Tire Service Industry," Arruda, J, Daws, J, and **Auflick, J.**, International Tire Exhibition & Conference, (ITEC), Akron, Ohio. September 2016.
- "Human Factors in Claims/Litigation" **Auflick, J.L.** and Shibata, P. A. (2016). Continuing Education Technical Presentation for attorneys and insurance professionals, Defense Trial Counsel of Indiana, 2016 DTIC Annual Conference, Fort Wayne, Indiana. Nov. 17-18, 2016.
- "Human Factors & Premise Liability," **Auflick, J.L.** and Tuczak, E. J. (2016). Michigan Defense Trial Counsel, Live Classroom and Live Webcast, Ann Arbor, Michigan. June 9, 2016.
- "Human Factors in Traffic Accidents and Accident Reconstruction," **Auflick, J.L.** and Shibata, P.A., (2013). Continuing Education Technical Presentation for attorneys and insurance professionals, Toledo Claims Association, Toledo, Ohio. Jan. 10, 2013.
- "Human Factors in Accident Reconstruction and Claims/Litigation," **Auflick, J.L.** and Sprague, J.K., (2012). Continuing Education Technical Presentation for attorneys and insurance professionals, Withrow and Associates and State Farm Insurance, Toronto, Canada, Sept. 5, 2012.

- "Human Factors in Claims/Litigation," **Auflick, J.L.** and Shibata, P.A., (2012). Continuing Education Technical Presentation for attorneys and insurance professionals, ESI-Ann Arbor, Michigan Open House Event, May 17, 2012.
- "Cognitive Aspects of Driving," **Auflick, J.L.** (2010). Invited Presentation to Air Gas Corporation, D. O. T. Training, St. Louis, MO. February 9, 2010.
- "Eyes on the Road - Driver Focus," **Auflick, J.L.** (2002). Invited presentation 2002 Consumer Electronics Show panel discussion, Audio Tape available from Consumer Electronics Association, Las Vegas, NV. 2002.
- "Y2K Risk Prioritization Using the Analytic Hierarchy Process and Discriminant Analysis," **Auflick, J.L.** (2000). U.S. Department of Energy Defense Nuclear Facility Safety Board, March 2000.
- "Human Factors: An Introduction to Human-System Relations," **Auflick, J.L.** (1992). Invited Presentation to the Arizona Association of Librarians Annual Conference, Phoenix, AZ. October 1992.
- "Human Factors Aspects of Stuck Pipe," **Auflick, J.L.** (1991). Invited presentation to the American Association of Drilling Engineers, Houston, TX. 1991.