

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.

Positions Held

Engineering Systems Inc., Ann Arbor, Michigan

- Senior Consultant Emeritus, 2024-Present
- Senior Consultant, 2010 – 2024

Packer Engineering, Inc., Ann Arbor, Michigan

- Director, Human Factors, 2009-2010

St. Jude Medical, Sylmar, California

- Principal Human Factors Engineer, 2008-2009

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

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Education

PhD, Human Factors Psychology
University of South Dakota. 1992

MA, Human Factors Psychology
University of South Dakota. 1988

BA, Psychology (with Honors)
University of Wyoming. 1973

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

Publications and Reports

Resurrecting Driver Workload Metrics: A Multivariate Analysis of Test Track Data. Advances in Intelligent Systems and Computing, Volume 484

J. L. Auflick, N.A., Stanton, S. Landry, G. DiBucchianico, & A Vallicelli, editors. Springer International Publishing, AG Switzerland. July 27-31, 2016.

Determination of the Standard of Care in the Tire Service Industry

J.F. Arruda, J.W. Daws, and J.L. Auflick, Rubber & Plastic News, November 28, 2016, pp. 14-20.

Analysis of Nighttime Vehicular Collisions and the Application of Human Factors: An Integrated Approach

J. Sprague, P. Shibata, and J. Auflick, SAE Technical Paper 2014-01-0442, Detroit, MI. 2014.

Driver Workload Metrics Task 2 Final Report

L. Angell, J. Auflick, P.A. Austria, D. Kochhar, L. Tijerina, W. Biever, T. Diptiman, J. Hogsett and S. Kiger. (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

R. Deering, L. Angell, J. Auflick, P.A. Austria, D. Kochhar, L. Tijerina, W. Biever, T. Diptiman, J. Hogsett and S. Kiger. (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.

Human Events Reference for ATHEANA (HERA) Database Description and Preliminary User's Manual

J. L. Auflick, Los Alamos National Laboratory, Prepared for: United States Nuclear Regulatory Commission, August 12, 1999.

Development of a Prototype Knowledge-based System for Estimating Human Error Probabilities

J. L. Auflick, H. Hahn, A. Hahn, J. A. Morzinski, In the Proceedings of ESREL '98 (European Safety and Reliability conference), Trondheim, Norway, Balkhema Publishers. 1998.

Development of an Integrated System for Estimating Human Error Probabilities

J. L. Auflick, H. Hahn, A. Hahn, J. A. Morzinski, (1998). TSA-9, DOE Office of Scientific and Technical Information. Dec. 1998.

Efficient Human Reliability Assessment Using Soft Data and Bayesian Updates

The Proceedings of the International Conference on Probabilistic Safety Assessment and Management, Crete, Greece, London: Springer-Verlag London Limited, Publishers. June 24-28, 1996.

Intersystem LOCA risk assessment: methodology and results

W. Galyean, D. Kelly, J. L. Auflick, J. Schroeder, H. Blackman, D. Gertman, and L. Haney, (1995) Nuclear Engineering and Design, 152, 159-174.

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

T. Fischer, E. Niederman, J. Auflick, S. Courington, R. Jones, S. Morrow, Ozmore, R. and DiMeo K. (project managers) (1994). Technical Report: DOT/FAA/CT-94/36, U. S. Department of Transportation, Federal Aviation Administration, Washington, DC 20591. June 1994.

An Intersystem LOCA Risk Assessment: Methodology and Results

J. W. Galyean, D. L. Kelly, J. A. Schroeder, J. L. Auflick, H. S. Blackman, D. I. Gertman and L. N., Haney, (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

J. L. Auflick and L. Haney, (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

D. L. Kelley, J. L. Auflick and L. Haney, (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

J.L. Auflick and L. N. Haney. pp. C-1 – C-91. 1991.

Assessment of ISLOCA Risks - Methodology and Application to a Westinghouse Four-Loop Ice Condenser Plant

D. L. Kelley, J. L. Auflick and L. Haney, (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

J. L. Auflick and J. Harbour, (1990). Technical Report performed under DOE contract DE-AC07761DO1570, for British Petroleum Exploration, Houston, TX. 1990.

Human Factors Design Recommendations for Crane Controls at CPP-666

J. L. Auflick, (1989). EGG-HFRU-8649, technical report performed under DOE contract DEAC07-761DO1570, EG&G Idaho Inc. 1989.

Human Factors Evaluation of Electroluminescent Display #1

J. L. Auflick, EGG/ HFRU-8645, technical report performed under DOE contract DE-AC07-761DOI570, EG&G Idaho Inc. 1989.

Abnormal Operating Procedures for ATR Experiment Loops

J. L. Auflick, (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

V. Ellingstad, A. Parng, J. Gehlen, S. Swierenga and J. L. Auflick, (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

J. L. Auflick, (1987). Technical Report done for the Naval Oceans System Center, San Diego, CA. University of South Dakota, Human Factors Laboratory, Vermillion, SD. 1987.

Presentations

Human Factors & Premises Liability,

J. L. Auflick and E.J. Tuczak, Live Webinar, Ohio Association of Trial Attorneys, December 3, 2020

How and Why Vehicles Crash,

J. L. Auflick and J. K. Sprague. ESi Michigan Office Open House, Ann Arbor, Michigan, September 26, 2019

Enhancing Contrast-Sensitivity Charts for Validating Visual Representations of Low-Illumination Scenes,

James K., Sprague, Manuel Meza-Arroyo, Peggy Shibata, and Jack L Auflick, SAE 2019 World Congress & Exhibition, 2019

Forensic Analysis of Rumble Strips,

J.A. Auflick, J.K. Sprague, J.T. Eganhouse, J.M. Roberts. 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: Answering the ‘How’ and ‘Why,’

J. L. Auflick. Invited Continuing Education Technical Presentation for Attorneys, Dremer, Spina, Shaughnessy, Jansen & Siegert, LLC, Chicago, Illinois. Nov. 14, 2017

Human Factors: Answering the “How” and “Why” Questions,

J.L. Auflick and J.M. Roberts, Presentation, Aviva Insurance, Toronto, ON, Canada, October 5, 2018

Multivariate differences in driver workload: Test track versus on-road driving,

J.L. Auflick, 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

Resurrecting Driver Workload Metrics: A Multivariate Analysis of Test Track Data,

J. L. Auflick, Advances in Human Aspects of Transportation, Proceedings of the AHFE 2016 International Conference
on Human Factors in Transportation. Walt Disney World®, Florida, USA, 2016

Human Factors & Premise Liability,

J.L. Auflick and E.J. Tuczak. Michigan Defense Trial Counsel, Live Classroom and Live Webcast, Ann Arbor, Michigan.
June 9, 2016

Determination of the Standard of Care in the Tire Service Industry,

J. Arruda, J. Daws, and J. Auflick. In conjunction with the International Tire Exhibition and Conference Tire
Manufacturing, Akron, OH. September 13-15, 2016

Human Factors in Claims/Litigation,

J. L. Auflick and P.A. Shibata. Continuing Education Technical Presentation for attorneys and insurance professionals,
Defense Trial Counsel of Indiana, 2016 DTCI Annual Conference, Fort Wayne, Indiana. Nov. 17-18, 2016

Resurrecting Driver Workload Metrics: A Multivariate Approach,

J. L. Auflick, 6th International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences,
3rd International Conference on Human Factors in Transportation. AHFE 2015, Las Vegas, NV. July 26-30, 2015

**Human Factors Techniques in the Analysis of Low Illumination Accidents: Integrating Conspicuity,
Validated Photography and Scientific Animation,**

J.L. Auflick, J.K. Sprague, P. Shibata, and D. Kruger (2015). Proceedings of the Human Factors and Ergonomics
Society 59th Annual Meeting – 2015, Los Angeles, CA. October 26-29, 2015

Human Factors in Claims/Litigation,

J. L. Auflick and P.A. Shibata. Continuing Education Technical Presentation for attorneys and insurance professionals,
ESI-Ann Arbor, Michigan Open House Event, May 17, 2012

Cognitive Aspects of Driving,

J. L. Auflick. Invited Presentation to Air Gas Corporation, D. O. T. Training, St. Louis, MO. February 9, 2010

Eyes on the Road - Driver Focus,

J. L. Auflick. 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,

J. L. Auflick. U.S. Department of Energy Defense Nuclear Facility Safety Board, March 2000

A Multivariate Y2K Risk-Based Search for Embedded Digital Controllers,

J. L. Auflick, 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,

J. L. Auflick, In the Proceedings of the American Society of Mechanical Engineers (ASME) Pressure Vessels and Piping Conference, Boston, MA. August 1999

Demonstration Integrated Knowledge-Based System for Estimating Human Error Probabilities,

J. L. Auflick, Integrity Assessment & Risk Analysis 1999 ASME-PVP Conference, August 1-5, 1999

HuRA! -A Prototype Expert System for Quantifying Human Errors,

J. L. Auflick, H. Hahn, A. Hahn, J.A. Morzinski. 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,

J. L. Auflick, H. Hahn, A. Hahn, J.A. Morzinski. In the Proceedings of ESREL '98 (European Safety and Reliability conference), Trondheim, Norway, 1998

Efficient Human Reliability Assessment Using Soft Data and Bayesian Updates,

J. L. Auflick, J.A. Morzinski, S. A. Elde, and F. K. Houghton. The Proceedings of the International Conference on Probabilistic Safety Assessment and Management, Crete, Greece, 1996

Stuck Pipe, Statistics and Human Reliability Analysis,

J. L. Auflick and R. A. Auflick. Proceedings of the International Mechanical Engineers Conference and Exposition and American Society of Mechanical Engineers Winter Meeting, San Francisco, CA. November 13-17, 1995

Human Factors: An Introduction to Human-System Relations,

J. L. Auflick. Invited Presentation to the Arizona Association of Librarians Annual Conference, Phoenix, AZ. October 1992

Human Factors Aspects of Stuck Pipe,

J. L. Auflick. Invited presentation to the American Association of Drilling Engineers, Houston, TX. 1991

Modeling Errors of Commission for the ISLOCA Program,

H. Blackman, D. German, W. Galyean, D. Hanson and J.L. Auflick. CSNI Workshop on PRA Applications and Limitations, Albuquerque, NM. 1990

Professional Affiliations/Honors

- 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