

# Jack L. Auflick

PhD

Senior Consultant Emeritus



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.

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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 (Honors). University of Wyoming. 1973

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## Licenses & Certifications

- American Board of Forensic Examiners Certification
- American Board of Psychological Specialties Certification

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## 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

## Contact Information

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## ESi Ann Arbor

1174 Oak Valley Drive  
Ann Arbor, MI 48108

## Areas of Specialization

- Human Error Analyses
- Automotive Accidents (Driver Behavior)
- Industrial & Process Safety
- Accident Investigation
- Night & Daytime Visibility and Conspicuity (Human Perception)
- Automotive, Railroad, & Aviation
- Human Factors Analyses
- Operational Assessment of Warnings, Labels & Instructions for Industrial/Consumer Products
- Risk Assessment, Advanced Statistical & Experimental Design Analyses

**St. Jude Medical, Sylmar, California**

- Principal Human Factors Engineer, 2008–2009

**Visteon, Van Buren Township, Michigan**

- Senior Engineer, 2000–2003

**University of California, Los Alamos, New Mexico**

- Staff Member, Los Alamos National Laboratory, 1992–2000

**CTA Inc., Egg Harbor, New Jersey**

- Group Analyst, 1991–1992

**EG&G Inc., Idaho Falls, Idaho**

- Senior Scientist, Idaho National Engineering Laboratory, 1988–1991

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**Professional Affiliations/Honors**

**Human Factors and Ergonomics Society**

- Member, Retired 2022

**Nissan**

- Recipient, Manager's Award, 2003 & 2007

**U.S. Department of Energy**

- Recipient, U.S. Department of Energy Year 2000 Award, 2000

**International Biographical Center**

- Honoree, 2000 Outstanding Scientists of the 20th Century, 1998

**CTA Inc.**

- Recipient, CTA's Best Team Award (Air Traffic Control), 1991

**Phi Kappa Phi, National Academic Honor Society**

- Member, 1973 – Retired 2000

**National Junior College Academic Honor Society**

- Member, 1971 – Retired 2000

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**Publications**

"Determination of the Standard of Care in the Tire Service Industry," J.F. Arruda, J.W. Daws, and **J.L. Auflick**, Rubber & Plastic News, pp. 14–20, November 28, 2016.

- “Resurrecting Driver Workload Metrics: A Multivariate Analysis of Test Track Data,” **J.L. Auflick**, N.A. Stanton, S. Landry, G. DiBucchianico, and A. Vallicelli, *Advances in Intelligent Systems and Computing*, Vol. 484, July 2016.
- “Analysis of Nighttime Vehicular Collisions and the Application of Human Factors: An Integrated Approach,” J. Sprague, P. Shibata, and **J.L. Auflick**, SAE Technical Paper, 2014-01-0442, 2014.
- “Driver Workload Metrics Task 2 Final Report,” L. Angell, **J.L. Auflick**, P.A. Austria, D. Kochhar, L. Tijerina, W. Biever, T. Diptiman, J. Hogsett, and S. Kiger, U.S. Department of Transportation Technical Report, DOT-HS-810-635, 2006.
- “Annual Report of the Crash Avoidance Metrics Partnership,” R. Deering, L. Angell, **J.L. Auflick**, P.A. Austria, D. Kochhar, L. Tijerina, W. Biever, T. Diptiman, J. Hogsett, and S. Kiger, U.S. Department of Transportation Technical Report, DOT-HS-809-531, 2002.
- “Human Events Reference for ATHEANA (HERA) Database Description and Preliminary User’s Manual,” **J.L. Auflick**, United States Nuclear Regulatory Commission Technical Report, August 12, 1999.
- “Development of a Prototype Knowledge-Based System for Estimating Human Error Probabilities,” **J.L. Auflick**, H. Hahn, A. Hahn, and J.A. Morzinski, *Proceedings of the 1998 European Safety and Reliability Conference*, 1998.
- “Development of an Integrated System for Estimating Human Error Probabilities,” **J.L. Auflick**, H. Hahn, A. Hahn, and J.A. Morzinski, DOE Office of Scientific and Technical Information, TSA-9, December 1998.
- “Efficient Human Reliability Assessment Using Soft Data and Bayesian Updates,” **J.L. Auflick**, *Proceedings of the International Conference on Probabilistic Safety Assessment and Management*, June 1996.
- “Intersystem LOCA Risk Assessment: Methodology and Results,” W. Galyean, D. Kelly, **J.L. Auflick**, J. Schroeder, H. Blackman, D. Gertman, and L. Haney, *Nuclear Engineering and Design*, Vol. 152, pp. 159–174, 1995.
- “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.L. Auflick**, S. Courington, R. Jones, S. Morrow, R. Ozmore, and K. DiMeo, Federal Aviation Administration Technical Report, DOT/FAA/CT-94/36, 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, U.S. Nuclear Regulatory Commission Technical Report, NUREG/CP-0119, Vol. 1, October 1991.
- “Human Reliability Assessment Training Program,” **J.L. Auflick** and L. Haney, U.S. Nuclear Regulatory Commission Technical Report, DE-AC07-761DO1570, 1991.
- “Assessment of ISLOCA Risks — Methodology and Application: Combustion Engineering Plant,” D.L. Kelley, **J.L. Auflick**, and L. Haney, U.S. Nuclear Regulatory Commission Technical Report, NUREG/CR-5745, 1991.

“Appendix C: Human Reliability Analysis (HRA) for the Combustion Engineering ISLOCA Probabilistic Risk Assessment,” **J.L. Auflick** and L.N. Haney, U.S. Nuclear Regulatory Commission Technical Report, NUREG/CR-5745, 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, U.S. Nuclear Regulatory Commission Technical Report, NUREG/CR-5744, 1991.

“A Human Factors Evaluation of Stuck Pipe in the Gulf of Mexico,” **J.L. Auflick** and J. Harbour, British Petroleum Exploration Technical Report, DE-AC07-761D01570, 1990.

“Human Factors Design Recommendations for Crane Controls at CPP-666,” **J.L. Auflick**, EG&G Idaho Inc. Technical Report, EGG-HFRU-8649/DE-AC07-761DOI570, 1989.

“Human Factors Evaluation of Electroluminescent Display #1,” **J.L. Auflick**, EG&G Idaho Inc. Technical Report, EGG-HFRU-8645/DE-AC07-761DOI570, 1989.

“Abnormal Operating Procedures for ATR Experiment Loops,” **J.L. Auflick**, EG&G Idaho Inc. Technical Report, EGG-HFRU-8705/DE-AC07-761DOI570, 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**, Naval Oceans System Center Technical Report, February 1988.

“Selecting Functions with the Touch Tablet: Speed and Accuracy as Related to Function Density,” **J. L. Auflick**, Naval Oceans System Center Technical Report, 1987.

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## **Presentations**

“Human Factors & Premises Liability,” **J.L. Auflick** and E.J. Tuczak, Ohio Association of Trial Attorneys, Virtual, December 3, 2020.

“Enhancing Contrast-Sensitivity Charts for Validating Visual Representations of Low-Illumination Scenes,” J.K. Sprague, M. Meza-Arroyo, P.A. Shibata, and **J.L. Auflick**, SAE 2019 World Congress & Exhibition, Detroit, MI, 2019.

“How and Why Vehicles Crash,” **J.L. Auflick** and J.K. Sprague, ESI Michigan Office Open House, Ann Arbor, MI, September 26, 2019.

“Forensic Analysis of Rumble Strips,” **J.L. Auflick**, J.K. Sprague, J.T. Eganhouse, and J.M. Roberts, 10th International Conference on Applied Human Factors and Ergonomics & 7<sup>th</sup> International Conference on Advances in Human Factors in Transportation, Washington, DC, July 24–28, 2019.

“Human Factors: Answering the ‘How’ and ‘Why’ Questions,” **J.L. Auflick** and J.M. Roberts, Aviva Insurance, Toronto, Canada, October 5, 2018.

“Human Factors: Answering the ‘How’ and ‘Why,’” **J.L. Auflick**, Continuing Education Technical Presentation for Attorneys at Dremer, Spina, Shaughnessy, Jansen & Siegert, LLC, Chicago, IL, November 14, 2017.

- "Multivariate Differences in Driver Workload: Test Track Versus On-Road Driving," **J.L. Auflick**, 8th International Conference on Applied Human Factors and Ergonomics, Los Angeles, CA, July 17–21, 2017.
- "Resurrecting Driver Workload Metrics: A Multivariate Analysis of Test Track Data," **J.L. Auflick**, AHFE 2016 International Conference on Human Factors in Transportation, Florida, USA, 2016.
- "Human Factors in Claims/Litigation," **J.L. Auflick** and P.A. Shibata, 2016 DTIC Annual Conference, Fort Wayne, IN, November 17–18, 2016.
- "Determination of the Standard of Care in the Tire Service Industry," J. Arruda, J. Daws, and **J.L. Auflick**, International Tire Exhibition and Conference Tire Manufacturing, Akron, OH, September 13–15, 2016.
- "Human Factors & Premise Liability," **J.L. Auflick** and E.J. Tuczak, Michigan Defense Trial Counsel, Ann Arbor, MI, June 9, 2016.
- "Human Factors Techniques in the Analysis of Low-Illumination Accidents: Integrating Conspicuity, Validated Photography and Scientific Animation," **J.L. Auflick**, J.K. Sprague, P.A. Shibata, and D. Kruger, Human Factors and Ergonomics Society 59th Annual Meeting, Los Angeles, CA, October 26–29, 2015.
- "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, Las Vegas, NV, July 26–30, 2015.
- "Human Factors in Claims/Litigation," **J.L. Auflick** and P.A. Shibata, ESi Continuing Education Technical Presentation, Ann Arbor, MI, May 17, 2012.
- "Cognitive Aspects of Driving," **J.L. Auflick**, Air Gas Corporation D.O.T. Training, St. Louis, MO, February 9, 2010.
- "Eyes on the Road: Driver Focus," **J.L. Auflick**, Consumer Electronics Show, Las Vegas, NV, 2002.
- "A Multivariate Y2K Risk-Based Search for Embedded Digital Controllers," **J.L. Auflick**, American Society of Mechanical Engineers (ASME) Pressure Vessels and Piping Conference, Seattle, WA, August 2000.
- "Y2K Risk Prioritization Using the Analytic Hierarchy Process and Discriminant Analysis," **J.L. Auflick**, U.S. Department of Energy Defense Nuclear Facility Safety Board, Los Alamos, NM, March 2000.
- "Using Fuzzy Logic in the Development of a Human Reliability Analysis Quantification Tool," **J.L. Auflick**, 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, Boston, MA, August 1–5, 1999.
- "HuRA! A Prototype Expert System for Quantifying Human Errors," **J.L. Auflick**, H. Hahn, A. Hahn, and J.A. Morzinski, Probabilistic Safety Assessment and Management, London, England, 1998.
- "Development of a Prototype Knowledge-Based System for Estimating Human Error Probabilities," **J.L. Auflick**, H. Hahn, A. Hahn, and J. A. Morzinski, 1998 European Safety and Reliability Conference, Trondheim, Norway, 1998.

“Efficient Human Reliability Assessment Using Soft Data and Bayesian Updates,” **J.L. Auflick**, International Conference on Probabilistic Safety Assessment and Management, Crete, Greece, June 24–28, 1996.

“Stuck Pipe, Statistics and Human Reliability Analysis,” **J.L. Auflick** and R.A. Auflick, International Mechanical Engineers Conference and Exposition & 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**, Arizona Association of Librarians Annual Conference, Phoenix, AZ, October 1992.

“Human Factors Aspects of Stuck Pipe,” **J.L. Auflick**, American Association of Drilling Engineers, Houston, TX, 1991.

“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, Nineteenth Water Reactor Safety Information Meeting, Bethesda, MD, October 28–30, 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.