James M. Miller, P.E., Ph.D. October 2026
and
Selected Publication Projects

Miller Current Status
Title: Emeritus Professor of Engineering
The University of Michigan, Ann Arbor, Michigan
Address: 2392 Fuller Court, Ann Arbor, Michigan 48105
Phone: (734) 662-6822 Cell 208-308-1488
Professional Engineer Registration: Ohio, Idaho
University Courses Taught
Safety Management
Human Factors Engineering I
Safety Design Engineering
Website: www.millerengineering.com

Earned University Degrees
Ph.D. in Industrial Engineering, Ohio State University 1971
Accident Research and Human Factors)
Master Business Administration, Ohio State University 1965
Bach. Mechanical Engineering, Ohio State University 1963

Professional Society Affiliations
American Society of Mechanical Engineers
Human Factors and Ergonomics Society
American Society of Agricultural and Biological Engineers
American Society for Testing and Materials

Professional and Corporate Activities

1997 - present	Emeritus Professor, Industrial and Operations Engineering (IOE), The University of Michigan
1976 - 1997	Associate Professor of IOE The University of Michigan
1970 - 1997	Assistant Professor of IOE The University of Michigan
1981 - present	President, J.M. Miller Engineering, Inc.
1990 - present	CEO Kalajoki Farms, Inc. Active Farming and Timber Properties in Oregon.
1990 - present	CEO Miller Enterprises, Inc. Active Hydroelectric and Solar Energy Production in Idaho.
1990 - present	CEO Miller Family, Inc. Active Cattle, Hay, Corn and Potato Farms in Idaho.
1978 - 1980	Special Assistant for Safety to Dr. Eula Bingham, U. S. Assistant Secretary of Labor, OSHA
1977 - 1978	Acting Director of Safety Standards, Federal OSHA, Washington D.C.

- Directing promulgation and revision of construction, general industry, and maritime OSHA safety standards.
- Liaison activities between OSHA and NIOSH, U.S. Department of Transportation, Mine Safety and Health Administration, labor unions, trade associations, and industry organizations.

1971 - 1976	Assistant Professor of IOE, University of Michigan
1964 - 1966	Corporate Methods Engineer, Owens-Corning Fiberglas, Toledo, Ohio

Miller Engineering Production Facility Experience

Besides engineering consulting, Dr. Miller and other engineers participate in energy, timber and agricultural crop production. These require daily hands-on engineering expertise and hands-on experience to achieve the production and processing objectives. Equipment and computers are purchased, operated and maintained to achieve the production of: electrical and solar energy, harvestable timber, annual farm crops, commercial gill net salmon harvests, building structures, recreational marine facilities, and market ready angus beef cattle. The breadth of these endeavors has made Miller Engineering principals familiar with many types of equipment and situations, which has been quite advantageous to our clients.

Publications

Books and Chapters

Warnings, Labels and Hazard Analysis

Miller, J. M. (2027). Chemical warnings. In M. S. Wogalter, C. B. Mayhorn, & B. Millet (Eds.), Handbook of Warnings (2nd ed.). Routledge/CRC Press.

Miller, J. M. (2027). Hazard analysis as part of the safety information development process. In M. S. Wogalter, C. B. Mayhorn, & B. Millet (Eds.), Handbook of Warnings (2nd ed.). Routledge/CRC Press.

Miller, J.M. (2027 in print). Standards reference bibliography chapter. In M.S. Wogalter (Ed.), Handbook of warnings (Revised), Mahwah, NJ: Erlbaum.

Miller, J.M. & Cook, B.T. (2019). This game had a bad ending. In M.S. Wogalter (Ed.), Forensic Human Factors and Ergonomics: Case studies and analyses (pp. 149-161). Boca Raton, FL: CRC Press, Taylor & Francis.

Miller, J.M. (2012). Hazard communication and right-to-know regulatory issues. In J.M. Haight (Ed.), *The safety professionals handbook: Management applications* (pp. 237-292). Park Ridge, IL: ASSE.

Miller, J.M. (2008). Hazard communication and right-to-know regulatory issues. In J.M. Haight (Ed.), *The safety professionals handbook: Management applications* (pp. 199-252). Park Ridge, IL: ASSE.

Miller, J.M. (2006). Standards reference bibliography chapter. In M.S. Wogalter (Ed.), *Handbook of warnings* (pp. 795-804). Mahwah, NJ: Erlbaum.

Miller, J.M., & Lehto, M.R. (2001). *Warnings and safety instructions: Annotated and indexed fourth edition.* Ann Arbor, MI: Fuller Technical Publishing.

Miller, J.M., Lehto, M.R., & Frantz, J.P. (1991). *Warnings and safety instructions: Annotated and indexed.* Ann Arbor, MI: Fuller Technical Publishing.

Miller, J.M., Lehto, M.R., & Frantz, J.P. (1994). *Instructions and warnings: The annotated bibliography.* Ann Arbor, MI: Fuller Technical Publishing.

Miller, J.M., Lehto, M.R., & Frantz, J.P. (1990). *Instructions and warnings: The annotated bibliography.* Ann Arbor, MI: Fuller Technical Publishing.

Miller, J.M., & Lehto, M.R. (1987). *Warnings: Vol. 2: An annotated bibliography.* Ann Arbor, MI: Fuller Technical Publishing.

Miller, J.M., & Lehto, M.R. (1986). *Warnings: Vol. 1: Fundamentals, design and evaluation methodologies.* Ann Arbor, MI: Fuller Technical Publishing.

Art

Miller, J.M., & Hulsker, J. (Eds.). (1990). *Vincent and Theo Van Gogh: A dual biography.* Ann Arbor, MI: Fuller Technical Publishing.

Refereed Publications

Warnings

Miller, J.M., & Frantz, J.P. (1993). Communicating a safety-critical limitation of an infant carrying product: The effect of product design and warning salience. *International Journal of Industrial Ergonomics, 11,* 1-12.

Miller, J.M., & Rhoades, T.P. (1992). Methods used on atypical climbing systems. In S. Kumar (Ed.), *Advances in industrial ergonomics and safety IV*. London: Taylor & Francis.

Miller, J.M., & Frantz, J.P. (1992). The effect of product design and warning salience on the perception of safety-critical product attributes: A case study in infant carriers. In S. Kumar (Ed.), *Advances in industrial ergonomics and safety IV*. London: Taylor & Francis.

Miller, J.M., Frantz, J.P., & Lehto, M.R. (1991). Must the context be considered when applying generic safety symbols: A case study in flammable contact adhesives. *Journal of Safety Research, 22,* 147-161.

Miller, J.M., & Lehto, M.R. (1988). The effectiveness of warning labels. *Journal of Products Liability, II,* 225-270.

Slip & Fall Related

Miller, J.M., Lehto, M.R., & Frantz, J.P. (1991). Prediction of slip resistance in climbing systems. *International Journal of Industrial Ergonomics, 7,* 287-301.

Miller, J.M., & Rhoades, T.P. (1990). Revisions of TMC Recommended Practice RP-404 "Truck and truck tractor access systems." *SAE Journal of Commercial Vehicles*.

Miller, J.M., & Rhoades, T.P. (1989). Revisions of TMC Recommended Practice RP-404 *"Truck and truck tractor access systems"* (SAE Technical Paper Series #892523; also presented at the SAE Truck and Bus Meeting, Charlotte, November 1989). Warrendale, PA: Society of Automotive Engineers. [Voted outstanding paper in 1989 commercial vehicle field]

Miller, J.M., Rhoades, T.P., & Lehto, M.R. (1987). *Slip resistance predictions for various metal step materials, shoe soles and contaminant conditions* (SAE Technical Paper Series #872288; also presented at the SAE Truck and Bus Meeting, Dearborn, November 1987). Warrendale, PA: Society of Automotive Engineers.

Miller, J.M. (1983). Slippery work surfaces: Towards a performance definition and quantitative Coefficient of Friction (COF) criteria. *Journal of Safety Research, 14*(4), 145-148.

Miller, J.M., & Pfauth, M. (1976). Work surface friction coefficients: A survey of relevant factors and measurement methodology. *Journal of Safety Research.*

Truck, Auto, Boat, Plane

Miller, J.M., & Wiker, S. (1983). Acceleration exposures in forward seating areas of bowrider recreational boats. *Human Factors.*

Miller, J.M. (1976). Commercial motor carrier driver hazards and workspace design. *Human Factors Journal.*

Miller, J.M. (1971). Student visual and control behavior in the real aircraft instrument landing task, The Ohio State University, 1971. [Doctoral dissertation]

Response to Advanced Notice of Proposed Rule Making on Unregulated Hazards on the Outer Continental Shelf, 44Fed. Reg. (Sept. 20, 1979).

Educational/Scientific Diving (ANPR), 44 Fed. Reg. (Aug. 17, 1979).

Verticalization Package of OSHA 1910/1926 Safety and Health Standards, 44 Fed. Reg. (February 1979).

Human Factors

Miller, J.M. (1977). A critique of the Poulton book: Tracking skill and manual control. *Journal of Industrial Engineering.*

Miller, J.M., Chaffin, D., Dinman, B., Smith, R., & Zontine, D. (1975). Psychomotor and neuromuscular changes in workers exposed to inorganic mercury. *Journal of the American Industrial Hygiene Association.*

Miller, J.M., Hancock, W., & Foulke, J. (1973). *Comparison of MTM-1, GPD, MTM-2, and the AMAS systems.* Des Plaines, IL: MTM Association.

Miller, J.M. (1972). Use of human subjects in human factors research. *Journal of the Human Factors Society, 14*(1).

Manufacturing

Miller, J.M. (1965). Capacity concept for improved production management decision making, The Ohio State University, 1965. [Master's thesis]

Federal Register (OSHA Safety Editor)

Response to Advance Notice of Proposed Rulemaking on Unregulated Hazards on the Outer Continental Shelf, 45 Fed. Reg. (November 1980).

Notice of Proposed Rulemaking for Modification to 29 CFR Part 1907, Laboratory Accreditation, 45 Fed. Reg. (November 1980).

Memorandum of Agreement on Occupational Health Standards for Workplaces Aboard Inspected Vessels, 45 Fed. Reg. (Feb. 11, 1980). [between U.S. Coast Guard and OSHA]

Memorandum of Understanding [U.S. Coast Guard and OSHA]: Occupational Safety and Health on Artificial Island, Installations and Other Devices on the Outer Continental Shelf of the United States, 45 Fed. Reg. pp (Feb. 11, 1980).

General Safety

Miller, J.M., & Lehto, M.R. (1997). Principles of prevention: Safety information. In J.M. Stellman (Ed.), *ILO encyclopaedia of occupational health and safety*. Geneva, Switzerland: International Labour Office.

Miller, J.M. (1982). The management of occupational engineering. In G. Salvendy (Ed.), *Handbook of industrial engineering* (pp. 6.14.1-18). New York: Wiley. [American Publishers Association Award for the Best Engineering Book in 1982]

Miller, J.M., & Lehto, M.R. (1987). Scientific knowledge acquisition during the extension of GSA: An expert system for Generic Safety Analysis. *International Journal of Industrial Ergonomics, II,* 61-75.

Miller, J.M. (1985). An experimental application of knowledge engineering: A Generic Safety Analysis system. *Proceedings of the IEEE Conference on Systems, Man and Cybernetics, Tucson, AZ.*

Bulletins, Proceedings and Presentations

Chemical Safety

Miller Engineering, Inc. (2010). *Technical bulletin: Evaluating compliance of chemical labels & MSDS (OSHA, ANSI, and the new GHS).*

Miller, J.M., & Chaffin, D. (1973). *Behavioral and neurological evaluation of workers exposed to inorganic mercury* (Contract No. 5T01-0N00161-02). Atlanta, GA: NIOSH.

Miller, J.M., Chaffin, D., Dinman, B., Smith, R., & Zontine, D. (1973). *An evaluation of the effects of chronic mercury exposures on EMG and psychomotor functions: Final report* (Contract No. 5T01-0N00161-02). Atlanta, GA: NIOSH.

Miller, J.M. (1972). *Commercial vehicle occupational health hazards* (SAE No. 720264). Warrendale, PA: Society of Automotive Engineers. [Selected for publication in 1972 *Transactions of Annual Meeting*]

Miller Engineering, Inc. (2010). *Technical bulletin: Occupational exposure to benzene.*

Auto, Truck, Boat, Plane

Truck

Miller, J.M. (1979). *Occupational accidents of drivers of auto haul commercial trucks* [A statistical report describing accidents occurring to the U.S. and Canadian universe of 20,000 auto haul truck drivers in 28 companies]

Miller, J.M. (Editor). Federal OSHA. Appropriateness of Standards for Commercial Vehicle Cab Interior Design (Aug. 1978). [Response to a Federal Register Docket, submitted to U.S. Department of Transportation on behalf of the International Brotherhood of Teamsters.

Auto

Miller, J.M., Boydstun, L., Kessel, D., & Hensen, D. (1980). Driver's training program: A methodology for determining the training needs of individuals with perceptual disabilities. *Proceedings, International Conference on Rehabilitation Engineering, Toronto, ON.*

Miller, J.M., Main, B., & Rhoades, T.P. (1991). *Driver expectancy as a potential traffic control criteria at rural state highway intersections* (Miller Engineering Technical Report). Ann Arbor, MI: Miller Engineering.

Miller, J.M., & Pollock, S. (1977). Analysis of automobile emissions laboratory operations: Final report to the U.S. Environmental Protection Agency. Washington, DC: The Agency.

Miller, J.M., & Gatchell, S. (1974). Prediction of driver's eye location. *Proceedings, Human Factors Society, Huntsville, AL, 18.*

Miller, J.M., & Gatchell, S. (1974, June). *Final report, visibility pilot research (phase I)* (SAE VRI 13.1). Warrendale, PA: Society of Automotive Engineers.

Boat

Miller Engineering, Inc. (2010). *Technical bulletin: Auto/truck accident reconstruction & analysis.* Retrieved from

Miller, J.M., Grieser, B.C. (1998). *Boat handhold placement*. Edgewater, MD: American Boat and Yacht Council.

Miller, J.M., Grieser, B.C. (1998). *Boat boarding ladder placement*. Edgewater, MD: American Boat and Yacht Council.

Miller, J.M., Grieser, B.C., & Clark, D.R. (1996). *Analysis of designs and principles of movement transition intended for boat handholds and boarding ladders*. Edgewater, MD: American Boat and Yacht Council.

Miller, J.M., Grieser, B.C., Clark, D.R. (1996). *Experimental determination of lateral boat accelerations during turns at bow seat versus stern seat locations*. Edgewater, MD: American Boat and Yacht Council.

Miller, J.M, Grieser, B.C., & Clark, D.R. (1996). *Bowrider backrest height variables*. Edgewater, MD: American Boat and Yacht Council.

Miller, J.M., Main, B., & Igball, C. (1994). *Occupant protection in recreational boating.* Annapolis, MD: American Boat and Yacht Council.

J.M. Miller Engineering. (1990). *Static testing – Boat seating systems*. Westland, MI: Defiance – STS. (Test #7269)

Miller, J.M., & Gatchell, S. (1977). The visual behavior of recreational boat operators: Final report. Washington, DC: U.S. Coast Guard.

Miller, J.M. (1974). An experiment to test the visual detection capabilities of boating operators under representative stressors. Calabasas, CA: Wyle Laboratories.

Miller, J.M., & Gatchell, S. (1974). Boating operators maneuvering responses using hand vs. foot throttles. Calabasas, CA: Wyle Laboratories.

Miller, J.M., & Stiehl, C. (1974). Perception, decision making and skill in relation to a boating operators performance. *Proceedings, Human Factors Society, Huntsville, AL, 18.*

Miller, J.M. (1974). Identifying human factors causes from boating accident data. *Proceedings, Human Factors Society, Huntsville, AL, 18.*

Miller, J.M., & Gatchell, S. (1974). Boating operator performance stressors. *Proceedings, Human Factors Society, Huntsville, AL, 18.*

Miller, J.M. (1973). *Human factor applications in boating safety* (U.S. Coast Guard Contract). Washington, DC: U.S. Coast Guard. (NTIS Nos. AD 780-988, Vol. I, 781-205, Vol. II)

Miller, J.M. (1979). Human factors implications for power boat designer. *Proceedings, Symposium on Power Boat Design, Boating Industry Association, Ann Arbor, MI.*

Airplane

Miller, J.M. (1973). Visual behavior changes of student pilots flying instrument approaches. *Proceedings, Human Factors Society, Washington, DC, 17.*

Miller, J.M., & Weislogel, S. (1970). *Study to determine the operational profile and mission of the certificated instrument rated private and commercial pilot* (Contract No. FAA-RD-70-51). Washington, DC: Federal Aviation Administration.

Slip & Fall Related

Miller, J.M., & Rhoades, T.P. (1988). Measurement and comparison of "required" versus "available" slip resistance. *Proceedings of the Annual Meeting of the Human Factors Society, Edmonton, AB, 34.*

Miller, J.M., & Bloswick, D.S. (1985). *Coefficient of Friction Analysis of Metal Step Materials* (Miller Engineering Technical Report). Ann Arbor, MI: Miller Engineering.

Miller, J.M., & Bloswick, D.S. (1985, January). *Summary of the Development of 49CFR399 – Step, Handhold and Deck Requirements on Commercial Motor Vehicles* (Miller Engineering Technical Report). Ann Arbor, MI: Miller Engineering.

Miller, J.M., & Bloswick, D.S. (1985, January). *Standards, Recommended Practices and Human Factors References Relating to Climbing on and About Trucks, Equipment and Related Vehicles* (Miller Engineering Technical Report). Ann Arbor, MI: Miller Engineering.

Miller, J.M. (1983). *"Slippery" vs. "slip resistant" work surfaces: The background for a regulatory definition.* Washington, DC: Occupational Safety and Health Administration. (NTIS No. PB8 3 243634)

Miller, J.M. (1983). *A bibliography of Coefficient of Friction literature relating to slip type accidents.* Washington, DC: Occupational Safety and Health Administration. (NTIS No. PB8 3 243626)

Miller, J.M., Chaffin, D., & Andres, R. (1983). *Work surface friction: Definitions, laboratory and field measurements, and a comprehensive bibliography.* Ann Arbor, MI: The University of Michigan, Center for Ergonomics.

Miller, J.M., & Pfauth, M. (1975). Safety research requirements relevant to industrial floor friction. Atlanta, GA: NIOSH.

Warnings

Miller Engineering, Inc. (2011). *Technical bulletin: Implementing a hazard communication program.*

Miller, J.M., Main, B., & Frantz, J.P. (1993). The ability of two lay groups to judge product warning effectiveness. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Santa Monica, CA,* 989-993.

Miller, J.M., Frantz, J.P., & Rhoades, T.P. (1991). A model for developing and evaluating product information. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, San Francisco, CA.*

Miller Engineering, Inc. (2010). *Technical bulletin: How to design a warning label.*

Miller, J.M., Rhoades, T.P., & Frantz, J.P. (1990). Emerging methodologies for the assessment of safety related product communications. *Proceedings of the Annual Meeting of the Human Factors Society, Orlando, FL, 34.*

Miller, J.M., & Lehto, M.R. (1987, October). *Predicting warnings-induced behavior changes.* Paper presented at the 31st Annual Meeting of the Human Factors Society, New York, NY.

Miller, J.M., & Lehto, M.R. (1986, September/October). *Warnings: Methodology, presentation, and interpretation.* Paper presented at the 30th Annual Meeting of the Human Factors Society, Dayton, OH.

Home, Batteries, Child, Vaping, E-Cig Accidents

Miller Engineering. (2019). *Technical bulletin: Button batteries & children. In-House Technical Paper*

Miller Engineering. (2019). *Technical bulletin: Vaping E-cigarettes & vaporizers, and their lithium ion batteries.*

Miller, J.M. (2012). *OSHA mandates changes to all MSDS & labels* (Miller Engineering Technical Bulletin 7-12:GHS). Ann Arbor, MI: Miller Engineering, Inc.

Miller Engineering, Inc. (2010). *Technical bulletin: Common household hazards for children*.

OSHA and General Safety

Miller, J.M., & Bingham, E. (1978, February). *What's ahead for OSHA standards.* Invited paper for the Greater New York Safety Council and the New Jersey Chamber of Commerce, New York, NY.

Miller, J.M., & Herrin, G. (1978, January). *Relation of workers compensation data to national OSHA priorities.* Invited paper for the Bureau of Labor Statistics, Memphis, TN.

Miller, J.M., & Bingham, E. (1977, October). *Priorities for future OSHA standards activities.* Invited paper for the National Safety Council for the National Safety Congress, Chicago, IL.

Miller, J.M., & Lehto, M.R. (1985). An experimental application of knowledge engineering: A Generic Safety Analysis system. *IEEE International Conference on Systems, Man and Cybernetics, Tucson, AZ.*

Manufacturing

Miller, J.M., & Clark, D. (1983). *A generic safety standard system for robotic and other types of automated manufacturing machinery* (Final Rep.). Ann Arbor, MI: The University of Michigan, College of Engineering, Center for Research in Integrated Manufacturing (CRIM).

Miller, J.M. (1982). *Safety aspects of automated devices.* Ann Arbor, MI: The University of Michigan, Center for Robotics and Integrated Manufacturing, Management Systems Division.

Miller, J.M. (1974). Work measurement as a tool in teaching dental students and scheduling simultaneous patients. *Proceedings, The American Institute of Industrial Engineers, New Orleans, LA, 25.*

Human Factors

Miller, J.M., & Rhoades, T.P. (1987). Towards the development of a consensual design standard for casual furniture chairs. *Interface 87, Symposium on Human Factors and Industrial Design in Consumer Products, Rochester, NY, 5.*

Miller, J.M., Lehto, M.R., & Clark, D. (1984). An isomorphism between fault tree analysis and LISP data structures. *Proceedings of the USA-Japan Conference on Human-Computer Interaction, Honolulu, HI, 1.*

Miller, J.M., Boydstun, L., & Kochhar, D. (1981). *Simulator based evaluation of perceptually disabled drivers* (IEEE

Miller, J.M., Boydstun, L., & Kochhar, D. (1981). An approach to training the disabled driver. *International Conference – IEEE Systems, Man and Cybernetics.*

Miller, J.M., Boydstun, L., & Kessel, D. (1980). Assessment of perceptually disabled individual's driving skills with a driving simulator. *Proceedings, Annual Meeting of the Human Factors Society, 24.*

Miller, J.M., Boydstun, L., Kessel, D., & Langolf, G. (1979). Spherical harmonics: A new method for estimating maximum reach distance. *Proceedings, Annual Meeting, Human Factors Society, . 23*

Miller, J.M., et al. (1979). Digital simulation techniques for drivers training and skill evaluation. *Proceedings, Interagency Conference on Rehabilitation Engineering, Atlanta, GA.*

Editor for the program and *Proceedings of the Human Factors Society 22nd Annual Meeting* (1978).

Miller, J.M. (1972-1974). Human factors implications of recent government legislation. *University of Michigan Human Factors Engineering Summer Conference, Ann Arbor, MI.*

Miller, J.M., & Gatchell, S. (1974, November). *Final subcommittee report, visibility pilot research (phase I)* (SAE VRI 13.1, Vol. II). Warrendale, PA: Society of Automotive Engineers.

Miller, J.M., & Foulke, J. (1973). *Instruction manual for visual activity monitor* (Contract No. F33615-73-C-0232). Dayton, OH: Wright-Patterson Air Force Base.