

Current Personal Information

Title: Emeritus Professor of Engineering
 The University of Michigan, Ann Arbor, Michigan
 Address: 2392 Fuller Court, Ann Arbor, Michigan 48105
 Phone: (734) 662-6822
 Professional Engineer Registration: Ohio, Idaho

University Courses Taught

439 - Safety Management
 463 - Work Measurement
 563 - Legal and Labor Issues in Engineering
 639 - Engineering Safety Research
 333 - Human Factors Engineering I
 533 - Human Factors Engineering II
 539 - Safety Design Engineering

Earned University Degrees

Ph.D. in Industrial Engineering, Ohio State University 1971
 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 National Standards Institute
 American Society for Testing and Materials
 Society of Automotive Engineers
 National Fire Protection Association
 National Safety Council

PROFESSIONAL WORK EXPERIENCE SUMMARY

1997 Emeritus Professor, Industrial and Operations Engineering (IOE), The University of Michigan
 1976 - 1997 Associate Professor of Industrial and Operations Engineering (IOE), The University of Michigan
 1981 - present President, J.M. Miller Engineering, Inc.
 1978 - 1980 Special Assistant for Safety to Dr. Eula Bingham, U. S. Assistant Secretary of Labor, OSHA

OSHA responsibilities included:

- 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.
- Negotiation of agreements involving OSHA and U.S. Coast Guard.
- Research needs and project area definition and prioritization.
- Recruiting, staffing, and budgeting.

1977 - 1978 Acting Director of Safety Standards, Federal OSHA, Washington D.C.
 1971 - 1976 Assistant Professor of IOE, University of Michigan
 1964 - 1966 Corporate Methods Engineer, Owens-Corning Fiberglas, Toledo, Ohio

PUBLICATIONS

Books and Chapters

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. (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., 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., & Hulsker, J. (Eds.). (1990). *Vincent and Theo Van Gogh: A dual biography*. 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.

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]

Refereed Publications

- 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., & 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., & Lehto, M.R. (1988). The effectiveness of warning labels. *Journal of Products Liability*, II, 225-270.
- 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., 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. (1985). An experimental application of knowledge engineering: A Generic Safety Analysis system. *Proceedings of the IEEE Conference on Systems, Man and Cybernetics, Tucson, AZ*.
- 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., & Wiker, S. (1983). Acceleration exposures in forward seating areas of bowrider recreational boats. *Human Factors*. 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).
- Response to Advanced Notice of Proposed Rule Making on Unregulated Hazards on the Outer Continental Shelf, 44 Fed. 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).
- Miller, J.M. (1977). A critique of the Poulton book: Tracking skill and manual control. *Journal of Industrial Engineering*.
- Miller, J.M., & Pfauth, M. (1976). Work surface friction coefficients: A survey of relevant factors and measurement methodology. *Journal of Safety Research*.
- Miller, J.M. (1976). Commercial motor carrier driver hazards and workspace design. *Human Factors Journal*.
- 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).
- Miller, J.M. (1971). Student visual and control behavior in the real aircraft instrument landing task, The Ohio State University, 1971. [Doctoral dissertation]
- Miller, J.M. (1965). Capacity concept for improved production management decision making, The Ohio State University, 1965. [Master's thesis]

Other Publications (Technical Reports, Technical Bulletins, Proceedings, Contracts, etc.)

- 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, J.M. (2011). *Implementing a hazard communication program* (Miller Engineering Technical Bulletin). Ann Arbor, MI: Miller Engineering, Inc.
- Miller, J.M. (2010). *Auto/truck accident reconstruction & analysis* (Miller Engineering Technical Bulletin). Ann Arbor, MI: Miller Engineering, Inc.
- Miller, J.M. (2010). *Common household hazards for children* (Miller Engineering Technical Bulletin). Ann Arbor, MI: Miller Engineering, Inc.
- Miller, J.M. (2010). *Evaluating compliance of chemical labels & MSDS (OSHA, ANSI, and the new GHS)* (Miller Engineering Technical Bulletin). Ann Arbor, MI: Miller Engineering, Inc.
- Miller, J.M. (2010). *How to design a warning label* (Miller Engineering Technical Bulletin). Ann Arbor, MI: Miller Engineering, Inc.
- Miller, J.M. (2010). *Occupational exposure to benzene* (Miller Engineering Technical Bulletin). Ann Arbor, MI: Miller Engineering, Inc.
- 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.
- 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, 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., 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.
- J.M. Miller Engineering. (1990). *Static testing – Boat seating systems*. Westland, MI: Defiance – STS. (Test #7269)
- 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., & 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. (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.
- 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*.
- Miller, J.M. (1985, March). *The application of safety ergonomic methodologies to the analysis of accidents resulting in litigation*. Paper presented to the staff of the Office of General Counsel of Ford Motor Company, Dearborn, MI.
- 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., & 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. (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. (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., Boydston, L., & Kochhar, D. (1981). *Simulator based evaluation of perceptually disabled drivers* (IEEE

- Miller, J.M., Boydston, L., & Kochhar, D. (1981). An approach to training the disabled driver. *International Conference – IEEE Systems, Man and Cybernetics*.
- Miller, J.M., Boydston, 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., Boydston, 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., Boydston, 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*.
- Miller, J.M. (1979). Human factors implications for power boat designer. *Proceedings, Symposium on Power Boat Design, Boating Industry Association, Ann Arbor, MI*.
- 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]
- Editor for the program and *Proceedings of the Human Factors Society 22nd Annual Meeting* (1978).
- 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]
- 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., & 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. (1977). The visual behavior of recreational boat operators: Final report. Washington, DC: U.S. Coast Guard.
- Miller, J.M., & Pfauth, M. (1975). Safety research requirements relevant to industrial floor friction. Atlanta, GA: NIOSH.
- 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. (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., & 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., & 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., & 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.
- 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*.
- 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.
- Miller, J.M. (1973). Visual behavior changes of student pilots flying instrument approaches. *Proceedings, Human Factors Society, Washington, DC, 17*.
- 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., & 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, 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.

Technical In-House Articles

- J.M. Miller Engineering. (2019). *Button batteries & children*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/button-batteries-children>
- J.M. Miller Engineering. (2019). *Vaping E-cigarettes & vaporizers, and their lithium ion batteries*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/vaping-e-cigarettes-and-vaporizers>
- Miller Engineering, Inc. (2011). *Technical bulletin: Implementing a hazard communication program*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/implementing-a-hazard-communication-program>
- Miller Engineering, Inc. (2010). *Technical bulletin: Auto/truck accident reconstruction & analysis*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/auto-truck-accident-reconstruction-analysis>
- Miller Engineering, Inc. (2010). *Technical bulletin: Common household hazards for children*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/common-household-hazards-for-children>
- Miller Engineering, Inc. (2010). *Technical bulletin: Evaluating compliance of chemical labels & MSDS (OSHA, ANSI, and the new GHS)*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/evaluating-compliance-of-chemical-labels-msdss>
- Miller Engineering, Inc. (2010). *Technical bulletin: How to design a warning label*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/how-to-design-a-warning-label>
- Miller Engineering, Inc. (2010). *Technical bulletin: Occupational exposure to benzene*. Retrieved from <http://www.millerengineering.com/sample-page/technical-bulletins/occupational-exposure-to-benzene>