

MILLER ENGINEERING

2392 Fuller Court
Ann Arbor, MI 48105

www.millerengineering.com

888-206-4394 (toll free) or 734-662-6822

30 years of Engineering and Forensic Services



Miller

Lehto

Cook



VEHICLES:

Car / Truck Accident Reconstruction
Crash Data Retrieval (CDR)
Truck & Off Road Vehicle Egress / Ingress
Vehicle Speed Determination / Calculation
Traffic Signing and Control
Construction Zones

CHEMICALS, SDS and FIRE:

NEW OSHA HAZCOM 2012 - GHS Review
SDS and Product Label Compliance
Hazcom 2012 Employee Training
Labels and MSDS Work Product Examples
Fire and Explosion Investigations
Toxic Tort Litigations - Warnings
Chemical Exposure- Inhalation, Ingestion,
and Dermal
Contamination -Water and Environmental
Workplace Carcinogens -Benzene, Asbestos,
Lead

MECHANICAL and ELECTRICAL SAFETY:

Machinery - Metal, Wood, Plastic Molding
Material Handling - Fork Lifts, Conveyors
Guarding & Entanglement
Electrical Distribution & Transmission
Hazards
Equipment Services & Maintenance
Static Electricity
Hazard and Risk Analysis

AGRICULTURE:

Tractor & Equipment Accidents
Chemical Applications and Exposures
Crop Storage and Harvesting Accidents

WORKPLACE SAFETY & CHEMICAL EXPOSURES:

OSHA Safety Compliance
Slips, Falls and Entanglements
Production/Process Line Accidents
Lockout/Tagout Accidents/Injuries

CONSTRUCTION:

Vehicle Visibility Accidents
Slips and Falls
Power Tool Repetitive Trauma and Accidents
Scaffolding - Cranes - Hoisting - Rigging
Personal Protective Equipment

RAILROADS & MINES:

Accident Investigations
Back Injuries
Train - Car Accidents
Explosions
Chemical Release

WARNINGS and INSTRUCTIONS:

Warning Labels & User Manual Design
Product Label Designs
Medical Device and Drug Warnings &
Instructions
Inadequate Warnings Analysis
Compliance with US and Global Standards
Product Recall Information and Strategies

CONSUMERS-HOUSEHOLD SAFETY:

Appliances & Power Tools
Child Furniture, Choking and Playground
Swimming Pool and Exercise Equipment
Drug and Medical Warnings
Recreation - ATV, Boats, Bicycles, Boards
Ladder, Stairway, Walkway Falls
Restaurant, Retail & Merchandise Accidents

HUMAN FACTORS-ERGONOMICS:

Human Factors, Ergonomics & Biomedical
Engineering
Hospital Engineering & Clinical Nursing
Practices
Elderly Living Space Safety

INSURANCE SUBROGATION & FORENSICS:

Accident Investigations
Electrical and Fire Causation
Chemical Leakage or Exposure Damage
Defective Equipment Injuries
Premise Liability
Worker's Compensation

ENERGY:

Green/Alternative: Wind, Solar, Hydroelectric
Mechanical/Electrical Energy System Design
Miller Hydroelectric Power Facility

GRAPHIC CAPABILITIES with Examples:

2D & 3D Trial Exhibits
Accident Reconstruction

WHO WE ARE

President: James M. Miller, PE, PhD; Industrial and Operations Engineering, Emeritus Professor University of Michigan

Co-Founder: Mark R. Lehto, PhD; Industrial and Systems Engineering, Professor, Purdue University

Managing Engineer: Bradley T. Cook, PE; BSME

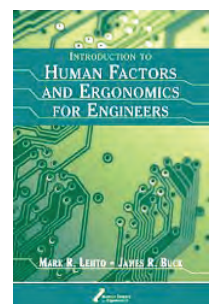
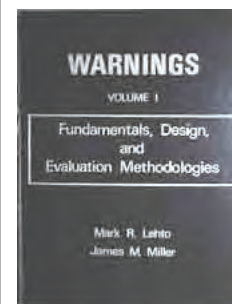
Staff and Support Engineers & Degree Areas:

Adam M. Olshove - Mechanical
Jamie Sleder - Civil
Kelley S. Lodge - Packaging, Safety & Health
David N. Lehto - Agricultural
Timothy Trokey, PE- Structural
Warren C. Wagner - Metallurgy, Material Science

WARNINGS - INSTRUCTIONS - ERGONOMICS BOOKS BY MILLER & LEHTO

James Miller & Mark Lehto have coauthored four books on the topic of warnings, instructions and labeling. Their first book *Warnings: Volume 1: Fundamentals, Design and Evaluation Methodologies* may have been the first scholarly book totally devoted to the topic of warnings.

In addition, Dr. Lehto authored the 2007 book: *Introduction to Human Factors & Ergonomics for Engineers*, a text book used in college classrooms and by practitioners across the country.



MILLER ENGINEERING TECHNICAL BULLETINS

- How to Design a Warning Label
- Automobile Accident Reconstruction
- Evaluating Compliance of Chemical Labels & SDS (OSHA, ANSI, & GHS)
- Implementing a Hazard Communication Program
- Occupational Exposure to Benzene
- Common Household Hazards for Children





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Miller Engineering Woodchipper Labels

JAMES M. MILLER, PE, PhD

Dr. Miller is an Emeritus Engineering Professor at the University of Michigan and a registered mechanical professional engineer with over 30 years of experience. He has served as a consultant to industry and government and is highly qualified to give engineering testimony. He and his engineering staff specialize in: designing warnings, instruction manuals and labeling (including the new OSHA-12 GHS requirements); auto and truck accident reconstruction; mechanical and electrical safety; fire, explosion and chemical process accident analysis; slip and fall prevention; marine, swimming and recreational vehicle accidents (boats, ATVs and personal watercraft); farm accidents, and compliance with governmental and consensual safety standards (OSHA, ANSI, ASTM, UL, CPSC, ASABE).

Dr. Miller has recently authored a chapter titled "Hazard Communication Compliance" in the American Society of Safety Engineering Safety Engineering Handbook. Dr. Miller has also authored five books on the topic of Warnings and Safety Instructions and written numerous journal articles. He is also currently a committee member of the ASTM Technical Committee F15 on Consumer Products.

His holds a Bachelor of Mechanical Engineering and Ph.D. in Industrial Engineering from Ohio State University, where he was one of the first US PhD graduates specializing in transportation and consumer accident research. He became a professor at the University of Michigan's Department of Industrial and Operations Engineering (IOE), where he taught courses in human factors/ergonomics, safety engineering, methods engineering and law for engineers (1970-1998). On leave from the University (1975-1977) at the U.S. Department of Labor, he was appointed as Special Assistant for Safety to OSHA's Assistant Secretary of Labor, where he had responsibility, among other things, for revising the OSHA General Industry (29CFR1910) and Construction (29CFR1926) Safety Standards. He also participated in the early formation of the OSHA HazCom standard (29CFR1200) and original chemical labels and MSDS sheets.

MARK R LEHTO, EIT, PhD

B.S. in Industrial Engineering (1978), Oregon State University; M.S. in Industrial Engineering (1981), Purdue University; Ph.D. in Industrial and Operations Engineering (1985), The University of Michigan. Purdue University (1986-present): Associate Professor of Industrial Engineering. Commercial Boating (1965-1975).

Special Expertise: Knowledge engineering, warnings and instructions, structuring expert systems, accident modeling, accident statistical analysis, consumer product safety, boating safety, in-field national surveys of product usage and product information effectiveness.

BRADLEY T. COOK, PE, BSME (Mechanical Engineering)

Bradley is a registered professional engineer and consultant with extensive experience in accident reconstruction. He specializes in vehicular accident reconstruction and has investigated hundreds of vehicle accidents involving cars, trucks, pedestrians, bicyclists, motorcycles, etc. The investigations have involved issues of nighttime visibility, downloading of crash data (black box data). He holds a Bachelor of Science in Mechanical Engineering from the University of Michigan and is currently pursuing a Masters of Science in Engineering with a concentration in Biomedical from Purdue University.

Bradley has recently co-authored a chapter titled Occupational Health and Safety Management in the Handbook of Human Factors & Ergonomics. He is also currently a committee member of the Underwriters Laboratories (UL) Standards Technical Panel (STP) 2201: Engine, Generator Requirements and the ASTM Technical Committee E58 on Forensic Engineering.

Bradley also has experience in product safety and hazard analysis; occupational safety and health (OSHA) compliance; pedestrian and worker slip and fall prevention; investigation and reconstruction of industrial and consumer product accidents.

ADAM M. OLSHOVE, BSME (Mechanical Engineering)

Bachelor of Science in Mechanical Engineering, University of Michigan (2012). RheTech, Inc. (2011): Economy, Energy, and Environment (E3) Intern. Caterpillar, Inc. (2011): Product Development Intern. University of Michigan Composite Structures Lab (2009-2010): Research Assistant.

JAMIE SLEDER, EIT, BSCE (Civil Engineering)

*Bachelor of Science in Civil Engineering, Michigan State University (2010). Michigan Department of Transportation: Transportation Engineering Internship (2011). **Special Expertise:** Transportation and environmental engineering. Product safety and instruction manuals.*

KELLEY S. LODGE, BSE (Packaging), MSE (Safety and Health)

Master of Science in Engineering (MSE) Industrial Engineering (Occupational Safety and Health) (1993), The University of Michigan. Bachelor of Science in Engineering Arts (1992), Michigan State University. Bachelor of Science in Packaging (1992), Michigan State University. Kraft Foods (1996-1997): Research Engineer. Post Cereal Division, Package Premiums Ford Motor Company (1993-1996): Customer Service Division, Warehouse Supervisor. Pillsbury (1990) Packaging Summer Intern

***Special Expertise:** Child safety packaging. Competitive products packaging analysis. Hazard Communication and Right to Know Issues. Operator manual and label design: Electrician and chemical-resistant gloves, Air compressors, Traffic control barriers, Woodchippers, Stump grinders, Log splitters, Geothermal piping.*

DAVID N. LEHTO, BSE (Agriculture)

*Bachelor of Agricultural Engineering, Purdue University (1996). Manager of Miller Engineering Western Office, Twin Falls - Idaho (1996-1999). **Special Expertise:** Agricultural equipment safety, machinery design. Pressurized irrigation system design. Crop and soil science. Agronomy and biogenetic engineering.*

TIMOTHY TROKEY, PE (Structural)

Registered Professional Engineer. Master of Science in Civil/Structural Engineering (1990), Bachelors of Science in Civil Engineering (1986). Associate Engineer, Fitzpatrick Structural Engineering (2005-Present). Senior Project Engineering, W.A. Kibbe & Associates (2002-2005)/ Information Technology Project Leader, Dow Corning Corp (1992-2002).