



**DENNIS B. BRICKMAN, P.E.**  
**PRINCIPAL**

[dbrickman@engsys.com](mailto:dbrickman@engsys.com)

Dennis Brickman is a Principal at ESI, a proven leader with a relentless, client-focused approach and a commitment to quality that has made him a trusted advisor to individuals, businesses, manufacturers, government agencies, and law firms. An industry veteran with over 40 years of mechanical engineering and materials science experience, Mr. Brickman is a staunch safety advocate with a passion for cutting through complexity and deploying technical expertise, tools and industry best practices in service to his clients. He has developed and delivered recommendations that range from the practical to the groundbreaking, and has helped clients successfully navigate a wide range of complex safety issues.

Mr. Brickman applies strong technical knowledge and real-world understanding of the design and manufacture of consumer products to help clients resolve safety concerns across the full product lifecycle — from product design, development, and manufacture to accident investigation, failure analysis, and product recall. As product safety is often related to interactions between people, machinery, and environment during manufacture and use, Mr. Brickman is frequently engaged to assess industrial and commercial equipment and facilities and provide guidance on product risk assessment, human factors and ergonomics, safeguarding, experimental testing, safety standards, safety training, and warnings and instructions. While his career has spanned many different industries, Mr. Brickman has also developed specialized expertise in the safety of children's products, outdoor power equipment, tree care machinery, elastic cord products, and automatic door sensor systems.

Mr. Brickman's commitment to safety is not limited to his every day consulting activities – he considers education and awareness an important part of his contributions to the field of safety. In addition to chairing over 20 engineering and human factors conference sessions, Mr. Brickman has been invited to speak at forums hosted by the U.S. Consumer Product Safety Commission, the American Society for Testing and Materials, the Safety Institute, and the Human Factors and Ergonomics Society. He has also performed interlock and lockout/tagout research for the National Institute of Occupational Safety and Health and developed training modules for OSHA. Well-regarded by his peers, Mr. Brickman's safety studies have been presented in regulatory proceedings, safety standards development committee meetings, equipment manufacturer forums, and litigation proceedings in the U.S. and abroad.

Mr. Brickman has published dozens of peer-reviewed technical papers, including The Safety Hierarchy issued by The National Safety Council. He has also provided expert testimony in product liability, premises liability, class action, patent, and intellectual property matters pending before both state and federal courts.

*January 2025*



## **Areas of Specialization**

Mechanical Engineering Systems  
Accident Analysis and Reconstruction  
Human Factors and Ergonomics  
Safety Engineering and Risk Assessment  
Product Safety and Design  
Experimental Testing and Failure Analysis  
Warnings and Instruction Manuals  
Safety Standards and Literature Research

## **Education**

M.S., Mechanical Engineering, Northwestern University, 1989  
B.S.E., Mechanical Engineering and Materials Science, Duke University, 1984

## **Licensed Professional Engineer (P.E.)**

State of Illinois .....License No. 062-045746  
State of Alabama.....License No. 28148-E  
State of Arkansas.....License No. 15796  
State of South Carolina.....License No. 36099  
State of New Jersey.....License No. 24GE05857900  
State of New York.....License No. 106684

## **Professional Affiliations/Honors**

**Tau Beta Pi (National Engineering Honor Society), 1984**

**Graduation with Departmental Distinction in Mechanical Engineering and Materials Science**  
Duke University, December 1984

**Magna Cum Laude**  
Duke University, School of Engineering, 1984

**Class Honors**  
Duke University, 1982-1984

**Dean's List of the School of Engineering**  
Duke University, 1982-1984

**1983 Crane Company Engineering Scholarship**  
Duke University

**1984 R.H. Pinnix Engineering Scholarship**  
Duke University

**1987 American Society of Mechanical Engineers**  
Failure Prevention, Reliability, and Stress Analysis Award



**1991 American Society of Mechanical Engineers**  
Reliability, Stress Analysis, and Failure Prevention Award

**1993 American Society of Mechanical Engineers**  
Reliability, Stress Analysis, and Failure Prevention Award

**American Society of Mechanical Engineers (ASME)**  
Member

**American Society of Safety Professionals (ASSP)**  
Member

**National Society of Professional Engineers (NSPE)**  
Member

**Illinois Society of Professional Engineers (ISPE)**  
Member

**International Society of Arboriculture (ISA)**  
Member

**International Society for Occupational Ergonomics & Safety (ISOES)**  
Member

## **Positions Held**

### **Engineering Systems Inc., Aurora, Illinois**

Principal, 2014 – Present  
Senior Managing Consultant, 2010 – 2014  
Senior Consultant, 2005 – 2010

### **Triodyne, Inc., Northbrook, Illinois**

Mechanical Engineering Safety and Design Consultant, 1985 – 2005  
Assistant Mechanical Engineering Safety and Design Consultant, 1983 – 1984

## **Professional Development**

1. Audit: ME 419 Design for Safety in Machines, Senior/Graduate Course, Illinois Institute of Technology, Chicago, IL, Spring, 1985.
2. "The 1985 National Conference on Products Liability Law," National Practice Institute, Inc., Chicago, IL, March 22-23, 1985.
3. "Defense Seminar on Products Liability Litigation," Legal Forum International, Chicago, IL, May 1, 1985.
4. "Human Factors Engineering and the Liability Interface," American Society of Agricultural Engineers Winter Meeting, Chicago, IL, December 17, 1985.

5. "International Agricultural Safety Issues," American Society of Agricultural Engineers Summer Meeting, San Luis Obispo, CA, July 2, 1986.
6. "Design and Failure Prevention - Application," American Society of Mechanical Engineers Winter Meeting, Anaheim, CA, December 12, 1986.
7. "How Long Should a Product Last?" ASME Spring National Design Engineering Show & Conference, Chicago, IL, March 3, 1987.
8. "Fatigue and Fatigue Testing" and "Failure Prevention Through Stress Analysis and Reliability Methods," American Society of Mechanical Engineers 7th Biennial Conference on Failure Prevention and Reliability, Boston, MA, September 30, 1987.
9. "Weibull Analysis," "Design Case Studies," "Product Liability and Litigation," and "Design Procedures/Practice: Stress & Fatigue," American Society of Mechanical Engineers 8th Biennial Conference on Failure Prevention, Reliability and Stress Analysis, Montreal, Quebec, Canada, September 18, 1989.
10. "Analysis and Assessment: A Course in Practical Ergonomics," Illinois Safety Council, Chicago, IL, April 30, 1991.
11. "Reliability in Design," "Design Theory and Case Studies," and "Reliability of Engineering Materials," American Society of Mechanical Engineers 9th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Miami, FL, September 24, 1991.
12. "Design Methods - I, II, & III," American Society of Mechanical Engineers 3rd International Conference on Design Theory and Methodology, Miami, FL, September 24, 1991.
13. "A New Trend in Quality Engineering," Dr. Genichi Taguchi, ASME National Design Engineering Show and Conference, Chicago, IL, February 25, 1992.
14. "Vehicular Risk Analysis," "Safety in Manufacturing," "Plant Hazards Screening and Risk Analysis," "Engineering Applications of Risk Analysis," "Improving Freight Train Performance," and "Mechanical Design and Rehabilitation - I & II," American Society of Mechanical Engineers Winter Annual Meeting, Anaheim, CA, November 9-10, 1992.
15. "Optimization, Reliability, and Safety Techniques," "Reliability and Probabilistic Design Analysis," and "Design Methods," American Society of Mechanical Engineers 10th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Albuquerque, NM, September 20-21, 1993.
16. "Safety and Risk in the Chemical Process Industry - I," "The Role of Operator Training in Managing Technological Risk," "Failure Analysis and Prevention - I," "Symposium on Crashworthiness and Occupant Protection in Transportation Systems: Crashworthiness Methodologies," and "Product/Machine Safety," American Society of Mechanical Engineers Winter Annual Meeting, New Orleans, LA, November 29-30, 1993.
17. "Failure Analysis and Prevention," ASME 1994 International Mechanical Engineering Congress and Exposition of the Winter Annual Meeting, Chicago, IL, November 9, 1994.
18. "Design and Failure Prevention" and "Probabilistic Design, Failure Analysis, and Safety Methods," American Society of Mechanical Engineers 11th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Boston, MA, September 18, 1995.

19. "Failure Analysis/Failure Prevention - I & II" and "Safety of Mechanical Equipment," ASME 1995 International Mechanical Engineering Congress and Exposition, San Francisco, CA, November 13, 1995.
20. "Symposium on Transportation Risk," "Symposium on Risk in Emerging Technologies," "Failure Analysis and Prevention," and "Symposium on Human Factors Engineering," ASME 1996 International Mechanical Engineering Congress and Exposition, Atlanta, GA, November 20-21, 1996.
21. "Design, Failure Prevention and Stress Analysis," The 51st Meeting of the Society for Machinery Failure Prevention Technology and the 12th Biennial Conference on Reliability, Stress Analysis and Failure Prevention, Virginia Beach, VA, April 16, 1997.
22. "Symposium on Product Safety" and "Failure Analysis and Prevention - II," ASME 1997 International Mechanical Engineering Congress & Exposition, Dallas, TX, November 17-18, 1997.
23. "Symposium on Safety in Manufacturing and New Technologies" and "Symposium on Safety Analysis of Operating Systems," ASME 1998 International Mechanical Engineering Congress & Exposition, Anaheim, CA, November 19, 1998.
24. "Stress Analysis and Failure Prevention," "Application of Design in Everyday Problems," and "Application of Reliability and Stress Analysis in Everyday Life Problems," American Society of Mechanical Engineers 13th Biennial Reliability, Stress Analysis and Failure Prevention Conference, Las Vegas, NV, September 14-15, 1999.
25. "Symposium on Successfully Managing The Risk and Development of Your Business and Technology - Safety Through Design," ASME 2000 International Mechanical Engineering Congress & Exposition, Orlando, FL, November 7, 2000.
26. "The New Frontier of Product Safety at the End of Product Life," ASME 2001 International Mechanical Engineering Congress and Exposition, New York, NY, November 13, 2001.
27. "Panel on 3D: Design, Manufacturing and Safety" and "Safety Analysis and Lessons Learned After an Accident - II," ASME 2002 International Mechanical Engineering Congress & Exposition, New Orleans, LA, November 19, 2002.
28. "Applications in Safety Design," 2003 ASME Design Engineering Technical Conferences, Chicago, IL, September 4, 2003.
29. "Safety Improvement Through Design" and "Process Industry Safety Management," 2003 ASME International Mechanical Engineering Congress, Washington, DC, November 21, 2003.
30. "Accidents in Arboriculture: What's Happening And Why?" TCI EXPO '04, Detroit, MI, October 29, 2004.
31. "Returning the Space Shuttle Safely to Flight," "ASME Risk Analysis and Management for Critical Asset Protection - I & II," "Issues of Societal Vulnerability and Risk Based Methods - 1 & 2," "Space and Aerospace Risk and Reliability," "Reliability Methods and Applications," "Forensic Analysis and Product Liability Issues - 1 & 2," and "Medical and Patient Safety," 2004 ASME International Mechanical Engineering Congress and Exposition, Anaheim, CA, November 15-16, 2004.

32. "Warnings," "Vision and Ergonomics Design of Industrial Inspection Tasks," "Manual Material Handling," "Ergonomics in the Semiconductor Industry," "Slips and Falls 1 & 4," and "Human Factors 2 & 3," XIX Annual International Occupational Ergonomics and Safety Conference 2005, Las Vegas, NV, June 27-28, 2005.
33. "Risk-Informed Design," "Risk Methods and Applications," "Methods and Tools for Complex Systems Reliability," and "Safety and Risk Studies," 2005 ASME International Mechanical Engineering Congress & Exposition, Orlando, FL, November 11, 2005.
34. "Forklift Operator Safety Training," Material Handling Services, Inc., Aurora, IL, December 28, 2005.
35. "The Role of Warnings and Instructions," The University of Wisconsin-Madison, Department of Engineering Professional Development, Madison, WI, March 21-23, 2006.
36. "A Risk Case History: Decisions on the Hurricane Protection System in New Orleans Prior to Katrina," "Reliability Management and Applications," "Mobile Equipment Reliability," "Workplace and Product Safety," and "Are Risk-Based Methods Mature Enough for Engineering Applications?" 2006 ASME International Mechanical Engineering Congress & Exposition, Chicago, IL, November 5-6, 2006.
37. "Pedestrian Vehicle Traffic Collisions," Northwestern University Center for Public Safety, Evanston, IL, November 13-15, 2006.
38. "OSHA 510: Standards for Construction Industry," Construction Safety Council, Hillside, IL, June 25-28, 2007.
39. "Safety at the Walt Disney Corporation," "Risk Analysis – 1 & 2," "Product or Process Safety – 1," and "Safety Engineering – 1 & 2," 2007 ASME International Mechanical Engineering Congress and Exposition, Seattle, WA, November 12 -13, 2007.
40. "OSHA 501: Trainer Course in Occupational Safety and Health Standards for General Industry," Northern Illinois University - Naperville, Illinois, July 21 – 24, 2008.
41. "Successful Training Techniques," 20th Annual Chicagoland Safety & Health Conference, Northern Illinois University – Naperville, Illinois, September 15, 2008.
42. "Forklift Operator Safety Training," Equipment Depot, Aurora, IL, October 23, 2008.
43. "Injury Mitigation in Rollovers," "Reliability Engineering 2," "Design Improvements for Auto Safety," "Product and Process Safety," and "Risk Informed Decision Making," 2008 ASME International Mechanical Engineering Congress and Exposition, Boston, MA, November 4, 2008.
44. "The ABC's of Human Behavior and Safety Performance," TCI EXPO, Milwaukee, WI, November 13, 2008.
45. "30 Years in Ergonomics," "Ergonomic Applications and Assessment-I," "Safety Issues-I," "Falling Injuries in the Aged," "Emerging Trends in Australian Construction Safety-Opportunities for Safety Professionals," "Slips and Falls," and "Construction Symposium-II," XXIst Annual International Occupational Ergonomics and Safety Conference 2009, Dallas, TX, June 11-12, 2009.
46. "General Safety Engineering," "Auto and Truck Safety and Consumer Product Safety," "Risk Analysis," "Reliability Methods and Applications," and "Risk Analysis for Multi-Hazards," 2009

- ASME International Mechanical Engineering Congress and Exposition, Lake Buena Vista, FL, November 18, 2009.
47. "Health and Safety Issues in the Hospitality Industry and How They've Changed," "Ergonomic Applications and Assessment-I," "Safety Issues," and "Connect & Communication," XXII<sup>nd</sup> Annual International Occupational Ergonomics and Safety Conference 2010, Tempe, AZ, June 10, 2010.
  48. "Risk Analysis Topics 4," "Bobsled Special Plenary Presentation," "Mechanism Dynamics," and "Safety Engineering Topics," 2010 ASME International Mechanical Engineering Congress & Exposition, Vancouver, British Columbia, Canada, November 17, 2010.
  49. "Tree Care Safety Forum," Winn, MI, January 12, 2011.
  50. "Product Design and Testing," "Techniques and Methodology," "Ergonomics and Photography," "Ergonomic Applications and Assessment-II," and "Safety Issues," XXIII<sup>rd</sup> Annual International Occupational Ergonomics and Safety Conference, Baltimore, MD, June 9-10, 2011.
  51. "ANSI Z133 and The Every Day Tree Trimmer," TCI Expo, Hartford, CT, November 5, 2011.
  52. "Energy and Water: Two Vital Commodities," "National Occupational Research Agenda Initiatives for Safety and Health in Manufacturing," "Safety Issues and Applications," "Safety in Transportation," "Risk Analysis and Reliability Methods," and "Forensic Evaluation of Safety," ASME 2011 International Mechanical Engineering Congress and Exposition, Denver, Colorado, November 14-15, 2011.
  53. "Forklift Operator Safety Training," Equipment Depot, Aurora, IL, December 12, 2011.
  54. "Aging in the 21st Century: Opportunities and Challenges," "Human Performance," "Healthcare and Forensic Ergonomics," "Ergonomic Issues," and "Reflections of a Pioneer in Ergonomics," XXIV<sup>th</sup> Annual International Occupational Ergonomics and Safety Conference, Ft. Lauderdale, FL, June 7, 2012.
  55. "AWPT Operator Training," Stevenson Sales & Service, South Holland, IL, November 21, 2012.
  56. "A Decade of Challenges and Opportunities in Occupational Ergonomics and Safety," "Biomechanics," "Human Factors," "Accident Reconstruction," and "Comparison of Ergonomic Process Implementation in Four U.S. Corporations," XXV<sup>th</sup> Annual Occupational Ergonomics and Safety Conference, Atlanta, GA, June 6, 2013.
  57. "Chipper Operator Specialist Training Program," Tree Care Industry Association Tree Care Academy, Lisle, IL, September 18, 2013.
  58. "The Concussion Crisis in Athletics – What Have We Learned Since 2007," "Traumatic Brain Injury: From Prevention to Rehabilitation," "Medical Errors, Prevention and Recovery," "Consumer Product Safety Commission," "Current Transportation Safety Issues," "UTV/ATV Issues," "Home Safety and Children," and "Drowning Prevention – Emerging Strategies and Interventions," A National Discussion on Injury Prevention, The Safety Institute, Rosemont, IL, September 24-25, 2013.
  59. "A Systems Approach to Civil Works Transformation," "Ergonomics-1," and "Safety & Warnings," The 2<sup>nd</sup> Annual World Conference of the Society for Industrial and Systems Engineering, Las Vegas, NV, November 5-6, 2013.



60. "AEM Product Liability Seminar," AEM, Schaumburg, IL, May 1, 2014.
61. "Challenges in Major Limb Re-plantation – Treatment After Protective Measures Have Failed," "Safety-I," "Ergonomics in Construction Industry," and "Ergonomics-II," XXVI Annual International Occupational Ergonomics and Safety Conference, El Paso, TX, June 5, 2014.
62. "Human Factors & Ergonomics-I," "Quality Control in IE-I," and "Observations from Over 25 Years in Engineering Education and Administration," The 3rd Annual World Conference of the Society for Industrial and Systems Engineering, San Antonio, TX, October 20, 2014.
63. "Safety Engineering & Management and Risk Analysis" and "Forensic Applications & Failure Analysis I," ASME 2014 International Mechanical Engineering Congress & Exposition, Montreal, Quebec, Canada, November 19, 2014.
64. "A System's Approach for Evaluating and Managing Patient Transfer in a Large Hospital," "Case Studies and Applications," "Ergonomics in Construction Industry," and "Other Topics in Ergonomics & Safety," XXVIIth Annual International Occupational Ergonomics and Safety Conference, Nashville, TN, May 28, 2015.
65. "Designing for Children: What Do Human Factors Professionals Need to Know?" "Modeling Problems in the Workplace: Human Reliability, Errors, and Workload," "Interactive Posters," and "Training in Applied Settings," 2015 International Annual Meeting of the Human Factors and Ergonomics Society, Los Angeles, CA, October 29, 2015.
66. "Powered Industrial Truck Operator Safety Training Program," Atlas Toyota Material Handling, Aurora, IL, December 1, 2015.
67. "Systems Design," "Modeling and Simulation for Defense Applications," "Process Modeling and Analysis," and "Problem Solving," 2016 General Donald R. Keith Memorial Capstone Conference, Department of Systems Engineering, United States Military Academy, West Point, NY, April 28, 2016.
68. "Failure Analysis & Prevention and Plastic Pipe & Fittings: Failure Prevention and Slow Crack Growth," Society of Plastics Engineers Annual Technical Conference, Indianapolis, IN, May 23, 2016.
69. "The Ergonomics of Ergonomics: Have We Missed The Obvious?" "Case Studies and Applications – I," "Case Studies and Applications – II," "Occupational Ergonomics," and "A Picture is Worth 1000 Words: Demonstrative Exhibits in Litigation," XXVIIIth Annual International Occupational Ergonomics and Safety Conference, Chicago, IL, June 9, 2016.
70. "Arborist Safety: May The Odds Always Be In Your Favor," TCI Expo, Baltimore, MD, November 10, 2016.
71. "Failure Analysis: Case Studies and Expert Panel," Society of Plastics Engineers Annual Technical Conference, Anaheim, CA, May 10, 2017.
72. "Neck Biomechanics for Ergonomics: Lessons Learned and Challenges Ahead," "Prevention Through Design and Reconstruction," "Employee Health and Wellness," "Risk Assessment and Risk Perception," "Education/Training – Ergonomics, Safety and Sustainability," "Panel Discussion – Research to Practice to Research," and "From Patient Handling to Materials Handling – A Journey of an Ergonomist," XXIXth Annual International Society of Occupational Ergonomics & Safety Conference, Seattle, WA, June 1, 2017.



73. "IPAF AWP Operator Training," Skyjack Equipment Inc., St. Charles, IL, October 31, 2017.
74. "Machinery Safety – Virtual Symposium," The American Society of Safety Engineers, March 20, 2018.
75. "Human Dimensional Variability: A Safety Problem and Opportunity," "Occupational Ergonomics," "Biomechanics and Work Physiology," "Workplace Safety and Health," "Case Studies and Applications," and "From Research to Design: Footwear and Ladder Design for Preventing Falling Accidents," XXXth Annual International Occupational Ergonomics and Safety Conference, Pittsburgh, PA, June 7, 2018.
76. "Webinar: Risk Management Tools for Safety Professionals," American Society of Safety Professionals, September 6, 2018.
77. "Powered Industrial Truck Operator Safety Training Program," Atlas Toyota Material Handling, Aurora, IL, January 22, 2019.
78. "CPSC Lab Tour," "Reverse Recall: An Analysis of Product Recall from End to Beginning," "A Computer Generated Reality is Worth 1000 Words," "CPSC Keynote Presentation," "CPSC Plenary Session: #ASKCPSC," "CPSC Plenary Session: Compliance Programs and FOIA," "Two Philosophies: One Goal," "Technology: A Powerful Tool for Improving Recall Effectiveness," and "Think Like a Consumer: Proactive Safety Engineering," 2019 ICPHSO Annual Meeting and Training, Washington, DC, February 25-27, 2019.
79. "Machine Safeguarding Seminar" and "Risk Control Agricultural Equipment Guarding Damage/Removal," ASSP Safety 2019 Professional Development Conference, New Orleans, LA, June 12, 2019.
80. "Occupational Safety and Health," "Prevention Through Design I," "Prevention Through Design II," "Virtual/Augmented Reality – Wearable Technology," and "Application of Ergonomics," XXXIst Annual International Occupational Ergonomics and Safety Conference, New Orleans, LA, June 12, 2019.
81. "Concrete Power Buggy Safety Training," Safety Provisions, Inc., April 1, 2020.
82. "Fall Protection Safety for the Competent Person," Construction Safety Council, Aurora, IL, October 2, 2020.
83. "Navigating Consumer Product Safety & Compliance During a Global Pandemic," "A Global View of Product Safety Policy and Enforcement in 2021," "Biomechanics Research to Improve Product Safety," "Sounds Good but Will it Work? Using Scientific Methods to Objectively Evaluate Product Warnings and Safety Information for Cutting Edge Products and Those Without Mandatory Warnings," "Mitigating the Risk of Enforcement Action at the CPSC," "CPSC Keynote Presentation," "What to Expect from Compliance in FY21," "Ask the CPSC Session," "Dynamic Communications with the CPSC," "What is Misuse?," and "Testing Comparison US-EU," 2021 ICPHSO Virtual Annual Symposium, February 23-24, 2021.
84. "Vibration and Occupational Hazards," "Occupational Health and Safety: Case Studies," and "Safety/Assistive Product and Evaluation," XXXIIIrd Annual International Occupational Ergonomics and Safety Conference, September 17, 2021.
85. "Powered Industrial Truck Operator Safety Certification Training", Atlas Toyota Material Handling, Aurora, IL, March 3, 2022.

86. "Ergonomics: An OSHA Review," "Biomechanics & MSKs," "Context Matters: Considerations for Applying Workplace Health and Safety Frameworks," "Occupational Health & Safety Case Studies," and "Ergonomics & Human Factors," XXXIVth Annual International Occupational Ergonomics and Safety Conference, September 15-16, 2022.
87. "Mobile Elevating Work Platform Equipment (MEWP) Operator Training," Atlas Toyota Material Handling, Bedford Park, IL, October 10, 2022.
88. "Human Factors and Ergonomics 1 & 2," "Standing Work with Varying Walking Situations," "Occupational Safety and Health 1 & 2," "Manufacturing," "Reliability," and "Systems Engineering 1 & 2," XXXVth Annual International Occupational Ergonomics and Safety Conference, Munich, Germany / Hybrid, October 9-10, 2023.
89. "OSHA Industrial Sweeper and Scrubber Safety Training," Safety Provisions, Inc., November 11, 2023.
90. "Industry Safety Update," TCI Expo, St. Louis, MO, November 16, 2023.
91. "Introduction to Arboriculture Safety," TCIA, November 20, 2023.
92. "The Art and Science of Selling Occupational Ergonomics," "Occupational Health & Safety 1," "Safety/Ergo Modeling & Design," "Ergonomics & Human Factors," and "Connected Worker Tech: Because Safety, Productivity, and Efficiency are Interdependent," XXXVIth Annual Occupational Ergonomics and Safety Conference, Denver, CO / Hybrid, August 5, 2024.

## **Professional Activities**

1. Vice-Chairman, "Fatigue and Fatigue Testing," American Society of Mechanical Engineers 7th Biennial Conference on Failure Prevention and Reliability, Boston, MA, September 30, 1987.
2. Chairman, "Design Procedures/Practice: Stress & Fatigue," American Society of Mechanical Engineers 8th Biennial Conference on Failure Prevention, Reliability and Stress Analysis, Montreal, Quebec, Canada, September 18, 1989.
3. Chairman, "Reliability in Design," American Society of Mechanical Engineers 9th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Miami, FL, September 24, 1991.
4. American Society of Mechanical Engineers, Reliability, Stress Analysis, and Failure Prevention Steering Committee, September 11, 1992 to present.
5. Vice-Chairman, "Optimization, Reliability, and Safety Techniques," American Society of Mechanical Engineers 10th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Albuquerque, NM, September 20, 1993.
6. Chairman, "Probabilistic Design, Failure Analysis, and Safety Methods," American Society of Mechanical Engineers 11th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Boston, MA, September 18, 1995.
7. Chairman, "Symposium on Product Safety," American Society of Mechanical Engineers 1997 International Mechanical Engineering Congress & Exposition, Dallas, TX, November 17, 1997.

8. Chairman, "Symposium on Safety in Manufacturing and New Technologies," American Society of Mechanical Engineers 1998 International Mechanical Engineering Congress & Exposition, Anaheim, CA, November 19, 1998.
9. Co-Chairman, "Application of Design in Everyday Problems," American Society of Mechanical Engineers 13th Biennial Reliability, Stress Analysis and Failure Prevention Conference, Las Vegas, NV, September 14, 1999.
10. Co-Chairman, "Applications in Safety Design," 2003 American Society of Mechanical Engineers Design Engineering Technical Conferences, Chicago, IL, September 4, 2003.
11. Co-Chairman, "Human Factors 3," XIX Annual International Occupational Ergonomics and Safety Conference 2005, Las Vegas, NV, June 28, 2005.
12. Chairman, "Safety and Risk Studies," 2005 ASME International Mechanical Engineering Congress & Exposition, Orlando, FL, November 11, 2005.
13. Co-Chairman, "Workplace and Product Safety," 2006 ASME International Mechanical Engineering Congress & Exposition, Chicago, IL, November 6, 2006.
14. Co-Chairman, "Product or Process Safety – 1," 2007 ASME International Mechanical Engineering Congress and Exposition, Seattle, WA, November 13, 2007.
15. Topic Co-Organizer, "Product and Process Safety," 2008 ASME International Mechanical Engineering Congress and Exposition, Boston, MA, November 4, 2008.
16. Session Co-Organizer, "General Safety Engineering," 2009 ASME International Mechanical Engineering Congress and Exposition, Lake Buena Vista, FL, November 18, 2009.
17. Chair, "Ergonomic Applications and Assessment-II," XXIIIrd Annual International Occupational Ergonomics and Safety Conference, Baltimore, MD, June 9, 2011.
18. Chair, "Accident Reconstruction," XXVth Annual Occupational Ergonomics and Safety Conference, Atlanta, GA, June 6, 2013.
19. Chair, "Safety-I," XXVI Annual International Occupational Ergonomics and Safety Conference, El Paso, TX, June 5, 2014.
20. Chair, "Human Factors & Ergonomics-I," The 3rd Annual World Conference of the Society for Industrial and Systems Engineering, San Antonio, TX, October 20, 2014.
21. Chair, "Case Studies and Applications," XXVIIth Annual International Occupational Ergonomics and Safety Conference, Nashville, TN, May 28, 2015.
22. Judge, 2016 General Donald R. Keith Memorial Capstone Conference, Department of Systems Engineering, United States Military Academy, West Point, NY, April 28, 2016.
23. Chair, "Case Studies and Applications – I," XXVIIIth Annual International Occupational Ergonomics and Safety Conference, Chicago, IL, June 9, 2016.
24. Chair, "Prevention Through Design and Reconstruction," XXIXth Annual International Society for Occupational Ergonomics & Safety Conference, Seattle, WA, June 1, 2017.

25. Judge, 2023 Winter Design Thinking and Communication (DTC) Expo, Northwestern University, Segal Design Institute, Evanston, IL, March 11, 2023.

## Publications

1. Brickman, Dennis, "Press Rolls and Petrography," Vertices, Spring, 1985, p. 33.
- 2a. Barnett, Ralph L., and Brickman, Dennis B., "Safety Hierarchy," Triodyne Safety Brief, Vol. 3, No. 2, June 1985, pp. 1-6.
  - b. Journal of Safety Research, Vol. 17, No. 2, Summer, 1986, pp. 49-55.
- 3a. Brickman, Dennis B., and Barnett, Ralph L., "On Rubber Augers - Failure Modes and Effects," ASAE 86-5018, St. Joseph, MI, American Society of Agricultural Engineers, 1986, pp. 1-15.
  - b. Triodyne Safety Brief, Vol. 4, No. 2, June 1986, pp. 1-7.
  - c. Transactions of the ASAE, Vol. 29, No. 5, September-October 1986, pp. 1208-1212.
4. Brickman, Dennis B., and Pearsall, George W., "Stress and Strength Analysis of a Granite Press Roll," ASME 86-WA/DE-21, New York, American Society of Mechanical Engineers, 1986, pp. 1-4.
5. Brickman, D.B., "Effect of Tensile Prestress on the Fatigue of Rock Drill Bits," Failure Prevention and Reliability-1987, New York, American Society of Mechanical Engineers, 1987, pp. 91-93.
- 6a. Barnett, Ralph L., and Brickman, Dennis B., "Deadman Controls on Lawn Mowers and Snowblowers," Triodyne Safety Brief, Vol. 5, No. 2, July 1988, pp. 1-13.
  - b. Failure Prevention and Reliability - 1989, New York, American Society of Mechanical Engineers, 1989, pp. 59-68.
7. Brickman, Dennis B., "Use of Extreme Value Statistics in the Characterization of Ergonomic Strength Data," Master's Thesis, Northwestern University, 1989.
8. Brickman, Dennis B., "Ergonomic Studies of Grip Strength - Literature Review," Triodyne Safety Brief, Vol. 6, No. 2, June 1990, pp. 1-15.
- 9a. Brickman, Dennis B., and Barnett, Ralph L., "Auger Elevator-Failure Modes and Effects Case Study," Reliability, Stress Analysis, and Failure Prevention - 1991, DE-Vol. 30, New York, American Society of Mechanical Engineers, 1991, pp. 95-102.
  - b. Triodyne Safety Brief, Vol. 9, No. 2, January, 1994, pp. 1-8.
- 10a. Brickman, Dennis B., and Barnett, Ralph L., "On the Problem of Guarding Three Roll-Bending Machines," ASME 92-WA/SAF-3, New York, American Society of Mechanical Engineers, 1992, pp. 1-8.
  - b. Triodyne Safety Brief, Vol. 9, No. 3, January, 1994, pp. 1-9.
- 11a. Brickman, Dennis B., "Design Methodology For Predicting Ergonomic Grip Strength," 1992 Advances in Bioengineering, BED-Vol. 22, New York, American Society of Mechanical Engineers, 1992, pp. 517-519.

- b. Triodyne Safety Brief, Vol. 8, No. 4, July, 1993, pp. 13-15.
- 12a. Brickman, Dennis B., and Barnett, Ralph L., "Quantification Versus Go/No-Go Criteria," Reliability, Stress Analysis, and Failure Prevention - 1993, DE-Vol. 55, New York, American Society of Mechanical Engineers, 1993, pp. 9-15.
- b. Triodyne Safety Brief, Vol. 10, No. 4, April, 1995, pp. 1-7.
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3. "Stress and Strength Analysis of a Granite Press Roll," Design and Failure Prevention - Application, American Society of Mechanical Engineers Winter Annual Meeting, Anaheim, CA, December 12, 1986.
4. "Effect of Tensile Prestress on the Fatigue of Rock Drill Bits," Fatigue and Fatigue Testing, American Society of Mechanical Engineers 7th Biennial Conference on Failure Prevention and Reliability, Boston, MA, September 30, 1987.
5. "The Expert Witness and Engineering Ethics," Illinois Society of Professional Engineers North Shore Chapter Meeting, Mt. Prospect, IL, October 15, 1987.
6. "Deadman Controls on Lawn Mowers and Snowblowers," Design Case Studies, American Society of Mechanical Engineers 8th Biennial Conference on Failure Prevention, Reliability and Stress Analysis, Montreal, Quebec, Canada, September 18, 1989.
7. "Auger Elevator-Failure Modes and Effects Case Study," Design Theory and Case Studies, American Society of Mechanical Engineers 9th Biennial Conference on Reliability, Stress Analysis, and Failure Prevention, Miami, FL, September 24, 1991.
8. "On the Problem of Guarding Three Roll-Bending Machines," Safety in Manufacturing, American Society of Mechanical Engineers Winter Annual Meeting, Anaheim, CA, November 9, 1992.
9. "Design Methodology for Predicting Ergonomic Grip Strength," Mechanical Design and Rehabilitation - II, American Society of Mechanical Engineers Winter Annual Meeting, Anaheim, CA, November 10, 1992.
10. "Auger Elevator - Failure Modes and Effects Case Study," and "On the Problem of Guarding Three Roll-Bending Machines," guest lecturer, ME 419 Design for Safety in Machines, Illinois Institute of Technology, Chicago, IL, February 2, 1993.

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17. "Portable Luggage Cart Safety – An Application of the Safety Hierarchy," Failure Analysis/Failure Prevention II, ASME 1995 International Mechanical Engineering Congress and Exposition, San Francisco, CA, November 13, 1995.
18. "On the Safety of a Portable Grinder Guard," Safety of Mechanical Equipment, ASME 1995 International Mechanical Engineering Congress and Exposition, San Francisco, CA, November 13, 1995.
19. "Product Safety," Children's Memorial Hospital, Chicago, IL, February 27, 1996.
20. "Failure Analysis of a Shaper Collar-Knife System," Failure Analysis and Prevention, ASME 1996 International Mechanical Engineering Congress and Exposition, Atlanta, GA, November 20, 1996.
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24. "Pen Cap Failure Analysis and Prevention," Failure Analysis and Prevention - II, ASME 1997 International Mechanical Engineering Congress & Exposition, Dallas, TX, November 18, 1997.
25. "Safety Analysis of Roller Compactors Exposed to Rollover," Construction Industry Manufacturers Association Winter Week '97 Product Safety Council Seminar, Niles, IL, December 11, 1997.

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57. "Residential Elevator Presentation," U.S. Consumer Product Safety Commission, Bethesda, MD, March 18, 2013.
58. "Crib Mattress Support Collapse Accident Reconstruction," Accident Reconstruction, XXVth Annual Occupational Ergonomics and Safety Conference, Atlanta, GA, June 6, 2013.
59. "Residential Elevator Child Entrapment Accident Reconstruction," Accident Reconstruction, XXVth Annual Occupational Ergonomics and Safety Conference, Atlanta, GA, June 6, 2013.
60. "Home Safety and Children," A National Discussion on Injury Prevention, The Safety Institute, Rosemont, IL, September 25, 2013.
61. "Product Warning Label Development for Blade Strike Fire Hazard," Safety & Warnings, The 2nd Annual World Conference of the Society for Industrial and Systems Engineering, Las Vegas, NV, November 6, 2013.
62. "Bungee Cord Eye Injury Accident Reconstruction," Safety-I, XXVI Annual International Occupational Ergonomics and Safety Conference, El Paso, TX, June 5, 2014.
63. "Residential Elevator Child Entrapment Prevention Human Factors Testing," Human Factors & Ergonomics-I, The 3rd Annual World Conference of the Society for Industrial and Systems Engineering, San Antonio, TX, October 20, 2014.
64. "Household Cooking Range Tipover Accident Reconstruction Case Study," Forensic Applications & Failure Analysis I, ASME 2014 International Mechanical Engineering Congress & Exposition, Montreal, Quebec, Canada, November 19, 2014.
65. "Dresser Tipover Child Accident Reconstruction Case Study," Case Studies and Applications, XXVIIth Annual International Occupational Ergonomics and Safety Conference, Nashville, TN, May 28, 2015.
66. "Commercial Hand-Fed Chipper Winch Line Accident Reconstruction," Case Studies and Applications, XXVIIth Annual International Occupational Ergonomics and Safety Conference, Nashville, TN, May 28, 2015.
67. "Designing for Children: What Do Human Factors Professionals Need to Know?" Discussion Panel, 2015 International Annual Meeting of the Human Factors and Ergonomics Society, Los Angeles, CA, October 29, 2015.
68. "Aboveground Swimming Pool Ladder Safety: The Application of Child Resistance to a Consumer Product Used by Children," Interactive Posters, 2015 International Annual Meeting of the Human Factors and Ergonomics Society, Los Angeles, CA, October 29, 2015.
69. "Failure Analysis of a Plastic Toy Helicopter," Failure Analysis & Prevention and Plastic Pipe & Fittings: Failure Prevention and Slow Crack Growth, Society of Plastics Engineers Annual Technical Conference, Indianapolis, IN, May 23, 2016.

70. "Automatic Sliding Door Sensor Safety Analysis," Case Studies and Applications – I, XXVIIIth Annual International Occupational Ergonomics and Safety Conference, Chicago, IL, June 9, 2016.
71. "Shelving Cart Design and Manufacturing Safety Analysis," Case Studies and Applications – I, XXVIIIth Annual International Occupational Ergonomics and Safety Conference, Chicago, IL, June 9, 2016.
72. "Beach Rental Elevator Child Entrapment Safety Analysis," Case Studies and Applications – I, XXVIIIth Annual International Occupational Ergonomics and Safety Conference, Chicago, IL, June 9, 2016.
73. "Preventing Failures in Elastomeric Resistance Bands," Failure Analysis: Case Studies and Expert Panel, Society of Plastics Engineers Annual Technical Conference, Anaheim, CA, May 10, 2017.
74. "Tanker Truck Loading Platform Fall Protection Accident Reconstruction Analysis," Prevention Through Design and Reconstruction, XXIXth Annual International Society for Occupational Ergonomics & Safety Conference, Seattle, WA, June 1, 2017.
75. "A Picture is Worth 1000 Words: Seeing the Unwitnessed Facts in Accidents," PLP&D 2017 Fall Workshop, Rosemont, IL, October 12, 2017.
76. "Stump Grinder Accident Reconstruction and Design Testing Methodologies," Case Studies and Applications, XXXth Annual Occupational Ergonomics and Safety Conference, Pittsburgh, PA, June 7, 2018.
77. "Seeing the Unwitnessed Hand and Power Tool Accident," DRI Product Liability Conference, Austin, TX, February 6, 2019.
78. "A Computer Generated Reality is Worth 1000 Words," 2019 ICPHSO Annual Meeting and Training, Washington, DC, February 26, 2019.
79. "Residential Elevator Safety," U.S. Consumer Product Safety Commission, Bethesda, MD, February 26, 2019.
80. "Residential Elevator Safety," U.S. Consumer Product Safety Commission, Bethesda, MD, April 8, 2019.
81. "Residential Elevator Child Entrapment Virtual Reality Accident Reconstruction Methodology," Virtual/Augmented Reality – Wearable Technology, XXXIst Annual Occupational Ergonomics and Safety Conference, New Orleans, LA, June 12, 2019.
82. "Optional Safety Equipment," DRI Product Liability Conference, New Orleans, LA, February 5, 2020.
83. "Engineering Technology and Visual Learning in Residential Elevator Product Cases," AAJ 2020 Amped-Up Virtual Experience, July 13-15, 2020.
84. "Collaborative Case Investigations: The Art of Virtual Inspections," DRI Product Liability Conference, Nashville, TN, August 21, 2021.

85. "Concrete Buggy Operator Presence Control 3-Dimensional Convergence of Accident Reconstruction Technology," XXXIIIrd Annual International Occupational Ergonomics and Safety Conference, September 17, 2021.
86. "ASTM F1427 Standard Consumer Safety Specification for Bunk Beds," ASTM F15.30 Subcommittee on Bunk Beds Meeting, West Conshohocken, PA / Virtual, May 5, 2023.
87. "Residential Bunk Bed Child Entrapment Hazard Safety Test Methods," XXXVth Annual International Occupational Ergonomics and Safety Conference, Munich, Germany / Hybrid, October 9, 2023.
88. "Best Safety Practices for Stability of PVC Pipe Bundles During Transport," XXXVth Annual International Occupational Ergonomics and Safety Conference, Munich, Germany / Hybrid, October 9, 2023.
89. "Aboveground Swimming Pool Child Access Prevention Through Product Design," XXXVIth Annual International Occupational Ergonomics and Safety Conference, Denver, CO / Hybrid, August 5, 2024.
90. "Industrial Tugger 3-Dimensional Convergence Accident Reconstruction Technology," XXXVIth Annual International Occupational Ergonomics and Safety Conference, Denver, CO / Hybrid, August 5, 2024.