

# RICHARD M. ZIERNICKI, Ph.D., P.E., DFE

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## EDUCATION:

Ph.D. Technical Science, magna cum laude, specialty in dynamic analysis, 1979  
M.S. Mechanical Engineering, specialty in design of heavy industry and foundry machinery, 1975  
B.Sc. Mechanical Design, 1972. All degrees obtained at University of Mining and Metallurgy, Krakow, Poland.  
Dr. Ziernicki has attended a number of additional technical seminars on biomechanics, manufacturing technology, vibrations, and vehicle accident reconstruction including Traffic Institute, Northwestern University, Evanston, Illinois.



## REGISTRATION:

Dr. Ziernicki is or has been a Registered Professional Engineer in the States of California, Colorado, Florida, and Texas.  
Dr. Ziernicki is certified by the National Council of Examiners for Engineering and Surveying; Certification No. 30881.  
Dr. Ziernicki is Board Certified Diplomate in Forensic Engineering by the National Academy of Forensic Engineers.

## EXPERIENCE:

Principal Engineer 1994 to present, Knott Laboratory, LLC, Centennial, Colorado President and CEO, Knott Laboratory, LLC, 1994 through 2019; Senior Consultant, Knott Laboratory, Inc., 1984-1994; Manager of Mechanical Engineering, Over-Lowe Company, Denver, Colorado, 1981-1984; Manager of Research and Development Group, Institute of Technology, Krakow, Poland, 1980-1981; Assistant Professor, Institute of Vibrations and Acoustics, University of Mining and Metallurgy, Krakow, Poland, 1975-1980.

## ENGINEERING AND DESIGN:

Dr. Ziernicki taught mechanics, stress analysis, strength of materials, and vibrations at the Institute of Vibrations and Acoustics. While Manager of the Research and Development Group in Krakow, he developed techniques for dynamic modeling, analysis of vibrations, and optimization of mechanical systems. He was actively involved in the modeling of engine-gearbox systems and vehicle suspensions, and in pneumatic tire testing. As Manager of Mechanical Engineering with Over-Lowe, Dr. Ziernicki was in charge of mechanical design, dynamic analysis, and testing of product lines including engine generator sets, transport carriers, trailers, portable lighting equipment, pneumatic towers, and light construction equipment. He prepared technical proposals for the Department of Defense in the areas of torsional and transverse vibrations, rotor balancing, noise control, machine design, dynamic modeling, tolerance analysis, and testing. Currently with Knott Laboratory, Dr. Ziernicki is consulting in the areas of patent and trade secret issues related to mechanical engineering.

## ACCIDENT RECONSTRUCTION:

Dr. Ziernicki has evaluated several thousand industrial and vehicular accidents. He conducts and directs investigations of vehicular accidents, which include automobiles, tractor-trailers, buses, motorcycles, bicycles, and pedestrians. He is very familiar with Federal Motor Carrier Safety Regulations (FMCSR). He also consults on industrial accidents and machinery failures and machine safety (including cranes, forklifts, skid steers, woodchippers, balers, other industrial and construction equipment). In safety analysis he applies industry safety standards and regulations including Occupational Safety and Health Administration (OSHA), American National Standards Institute (ANSI), International Organization for Standardization (ISO,) and Society of Automotive Engineers (SAE) and more. Dr. Ziernicki performed research and field investigations for the National Highway Traffic Safety Administration (NHTSA) as an investigator and team member for NHTSA's Crash Injury Research and Engineering Network (CIREN), which is comprised of engineers and trauma doctors. He investigated high profile motor vehicle accident in Germany on behalf of United States Department of Defense. Dr. Ziernicki investigated an explosion that destroyed a 450 W boiler of a coal-and-gas fired power plant, a \$600 million lawsuit. He investigated the Princess Diana accident in Paris, France, and collapse of "Big Blue" crane in Miller Park, Milwaukee, and recently the NASCAR case Kevin Ward, Jr. vs. Tony Stewart.

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## EXPERT TESTIMONY:

As a result of his investigations, Dr. Ziernicki has testified in court as an expert witness in a few hundred cases and was deposed over 500 times. He works as an expert witness for clients such as US Department of Justice, US Department of Defense, State of Colorado Attorney General's Office, District Attorneys, and Public Defenders.

## ACHIEVEMENTS:

A functional knowledge of manufacturing processes and design interface has allowed him to obtain design patents in the USA and Canada. Dr. Ziernicki has presented papers and lectured at a number of technical conferences in the United States, Canada, Europe, and South America. He has been invited to speak at seminars and conferences including Johns Hopkins University, the SAE International in Sao Paulo, Brazil, ICRASH 2000 in London, and the Five State Judicial Conference where he also served as a faculty member for the Harvard Law School. He has also lectured at the university level including the Technical Institute in Vienna, the University of Mining and Metallurgy in Krakow, Poland, Purdue University in Lafayette, Indiana, the University of Denver, and the University of Colorado at Denver. He is the author of eighty publications, primarily in the fields of mechanical engineering, and vehicle accident reconstruction. Dr. Ziernicki is a contributing author of five books on forensic engineering. Dr. Ziernicki's accident reconstruction expertise has been featured over thirty times on local and national television, including Discovery Channel, Dateline NBC, Dr. Oz Show, MSNBC, FOX News, and National Geographic. He was awarded a grant for research in biomechanics by the National Science Foundation. Dr. Ziernicki was a member of several past SAE Standards Committees. Dr. Ziernicki is Past President and past board member for the National Academy of Forensic Engineers and also serves on Committees for the organization. Dr. Ziernicki received an award in 2012 in Appreciation of Distinguished Leadership as National Academy of Forensic Engineers President. In 2015, he received the prestigious award for Manager of the Year from the National Society of Professional Engineers-Colorado (NSPE-CO). In 2016, he received an award for his commitment with APITLA to promote the mission of "Putting the Brakes on Unsafe Trucking Companies." Dr. Ziernicki was awarded the 2016 Private Sector Project of the Year for its "Advanced Forensic Engineering Analysis of a Shooting Incident" project, by the National Society of Professional Engineers-Colorado (NSPE-CO). Dr. Ziernicki was awarded the NAFE Best Technical Conference Presentation Award for the Tony Stewart fatal accident presentation at the 2019 NAFE Summer Conference in Denver CO.

## PROFESSIONAL AFFILIATIONS:

Dr. Ziernicki currently is or has been a member of the following technical and professional societies:

NAFE	National Academy of Forensic Engineers; - Fellow & past President	SAE	Society of Automotive Engineers
NSPE	National Society of Professional Engineers	ASME	American Society of Mechanical Engineers
PEC	Professional Engineers of Colorado	SEM	Society for Experimental Mechanics
NAPARS	National Association of Professional Accident Reconstruction	SME	Society of Manufacturing Engineers

### PUBLICATIONS

1. Richard M. Ziernicki and Ricky Nguyen. "Application of Matchmoving for Forensic Video Analysis with Recorded Event Data." Journal of the National Academy of Forensic Engineers. Journal of the National Academy of Forensic Engineers. (July 2023).
2. Richard M. Ziernicki and Ricky Nguyen. "Current Assessment of Stand-Up Forklift Underride Accidents. Journal of the National Academy of Forensic Engineers. (December 2022).
3. Richard M. Ziernicki, Martin E. Gordon, Steve Knapp, and Angelos G. Leiloglou. "The Application of Matchmoving for Forensic Video Analysis of a Fatal Sprint Car Accident. Part I." Journal of the National Academy of Forensic Engineers. (June 2021).
4. Richard M. Ziernicki, Martin E. Gordon, Steve Knapp, and Angelos G. Leiloglou. "The Application of Matchmoving for Forensic Video Analysis of a Fatal Sprint Car Accident. Part II." Journal of the National Academy of Forensic Engineers. (June 2021).
5. Richard M. Ziernicki and Ricky Nguyen. "Forensic Engineering Analysis of a Fatal, Overhead Crane Accident." Journal of the National Academy of Forensic Engineers. (December 2020).
6. Richard M. Ziernicki and William H. Pierce. "Forensic Engineering Analysis of Right-Turning Trucks Impacting Bicyclists or Pedestrians." Journal of the National Academy of Forensic Engineers. (December 2020).
7. Richard M. Ziernicki, William H. Pierce, and Angelos G. Leiloglou. "Forensic Engineering Analysis of Projectile Thrown from Phantom Vehicle." Journal of the National Academy of Forensic Engineers. (December 2020).
8. Richard M. Ziernicki, Angelos G. Leiloglou, Taylor Spiegelberg, and Kurt Twigg. "Forensic Engineering Application of Matchmoving Process." Journal of the National Academy of Forensic Engineers. (December 2018).
9. Richard M. Ziernicki and William H. Pierce. "Engineering a Pool Ladder to Prevent Drownings in Above-Ground Pools." Journal of the National Academy of Forensic Engineers. (November 2018).
10. Ben T. Railsback, Ricky Nguyen, Steve D. Knapp, and Richard M. Ziernicki. "Forensic Engineering Analysis of Unintended Movement of Powered Industrial Trucks." Journal of the National Academy of Forensic Engineers. (June 2018).
11. Steve D. Knapp, Richard M. Ziernicki, and Ben T. Railsback. "Forensic Engineering Analysis of a Motorsports Racing Incident." Journal of the National Academy of Forensic Engineers. (December 2017).
12. Richard M. Ziernicki and Angelos G. Leiloglou. "Newest Technologies Utilized in the Reconstruction of an Officer Involved Shooting Incident." Journal of the National Academy of Forensic Engineers. (December 2017).
13. Richard M. Ziernicki, William H. Pierce and Angelos G. Leiloglou. "Advanced Forensic Engineering Analysis of a School Bus/Tractor Trailer Crash." Journal of the National Academy of Forensic Engineers. (June 2016).
14. Richard M. Ziernicki and Ben T. Railsback. "Forensic Engineering Evaluation and Testing of Horizontal Intrusion Protection Equipment for Stand-Up Forklifts." Journal of the National Academy of Forensic Engineers. Vol. 32, No. 2, (December 2015).
15. Richard M. Ziernicki and William H. Pierce. "Forensic Engineering Investigation of Above-Ground Pool Submersion Accidents." Journal of the National Academy of Forensic Engineers. (December 2015).
16. Richard M. Ziernicki. "An Insight into Knott Laboratory with Dr. Ziernicki." The Lawyer's Logbook. (Vol. 5, No. 3 Aug.-Sep. 2015).
17. Richard M. Ziernicki. "Forensic Engineering Investigation of Workplace Incidents Involving Machinery." Journal of the National Academy of Forensic Engineers. (June 2015).

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18. Richard M. Ziernicki. "The Forensic Engineer in State and Federal Court." Journal of the National Academy of Forensic Engineers. (Dec. 2014).
19. Richard M. Ziernicki, William H. Pierce and Angelos G. Leiloglou. "Forensic Engineering Usage of Surveillance Video in Accident Reconstruction." Journal of the National Academy of Forensic Engineers. (Dec. 2014).
20. Richard M. Ziernicki, Ben T. Railsback, Steve D. Knapp, William H. Pierce, and Ricky L. Nguyen. "Stand-Up Forklift Egress Times as a Function of Operator Compartment Guarding." 2014 ASME International Mechanical Engineering Congress and Exposition IMECE2014-38847. (Nov. 19, 2014).
21. Richard M. Ziernicki. "Who Can Be A Forensic Expert?" P.E. Magazine, Published by National Society of Professional Engineers. October 2014.
22. Richard M. Ziernicki. "Falling Cargo. Is the Driver or Shipper Liable?" The Lawyer's Logbook. (Vol. 4, No. 3 Aug.-Sept. 2014).
23. Richard M. Ziernicki and Timothy Whiting, Esquire. "The Nuts and Bolts of Cargo Loading and Securement Cases." The Lawyer's Logbook. (Vol. 4, No. 1, Apr. – May 2014).
24. Richard M. Ziernicki. "Trucking Accidents and Regulations." The Lawyer's Logbook. (Vol. 3, No. 4, Oct. – Nov. 2013).
25. Richard M. Ziernicki. "Expert Witnesses in the US Justice System." Proceedings of XIII Bi-annual conference, Problems of Reconstruction of Road Accidents. Zakopane, Poland. (September 2013).
26. Richard M. Ziernicki and Angelos G. Leiloglou. "New Technologies in Expert Opinion Preparation in the USA." Proceedings of XIII Bi-annual conference, Problems of Reconstruction of Road Accidents. Zakopane, Poland. (September 2013).
27. Richard M. Ziernicki. "Newest Trends in Accident Reconstruction." The Lawyer's Logbook. (Vol. 2, No. 5, Winter 2013).
28. Richard M. Ziernicki, Ben T. Railsback. "Forensic Engineering Investigation of Incidents Involving Corded Window Coverings." Journal of the National Academy of Forensic Engineers. (June 2013).
29. Richard M. Ziernicki. "Forensic Engineering Analysis of Trucking Accidents and Regulations." Journal of the National Academy of Forensic Engineers. (December 2012).
30. Richard M. Ziernicki and Ashley Heist. "Fatigued Drivers and Consequences." The Lawyer's Logbook. (Vol. 1, No. 5, Winter 2012).
31. Ashley M. Heist, Richard M. Ziernicki and Ben T. Railsback. "Analysis of the Hazards of Woodchipper Accidents." 2011 ASME International Mechanical Engineering Congress and Exposition. Paper Number IMECE2011-62786. (November 2011).
32. Richard M. Ziernicki and Ashley Heist. "Danger! Falling Cargo. The Importance of Proper and Safe Securement of Your Load." The Lawyer's Logbook. (April 2011).
33. Ben T. Railsback and Richard M. Ziernicki. "Stand-Up Forklift Acceleration." 2010 ASME International Mechanical Engineering Congress and Exposition. Paper Number IMECE2010-38940. (November 2010).
34. Joseph M. Tremblay, Richard M. Ziernicki, Ben T. Railsback and Mark H. Kittel. "Wind Effects on Dynamic Stability of Tractor Trailers in Winter Conditions." SAE Paper 2009-01-2915. (October 2009).
35. Richard M. Ziernicki and Ben T. Railsback. "Re-Construction Using CDR." Proceedings of Forensic Engineering Tools & Techniques "Advanced Accident Re-Construction For Forensic Engineers Series." Presented by the: Education Committee of The National Academy of Forensic Engineers. St. Louis, MO (July 2009).
36. Richard M. Ziernicki and Ben T. Railsback. "Forensic Engineering Investigation of Product Liability Cases." Journal of the National Academy of Forensic Engineers. (Dec. 2008).

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37. Ben T. Railsback and Richard M. Ziernicki. "Hazard Analysis and Risk Assessment for the Operators of Stand-Up Forklifts." 2008 ASME International Mechanical Engineering Congress and Exposition. Paper Number IMECE2008-66427. (November 2008).
38. Richard M. Ziernicki and Ben T. Railsback. "Forensic Engineering Assessment of Safety for Stand-Up Forklifts." Journal of the National Academy of Forensic Engineers. (June 2008).
39. Richard M. Ziernicki, David A. Danaher and Jeffrey K. Ball. "Forensic Engineering Evaluation of Physical Evidence in Accident Reconstruction." Journal of the National Academy of Forensic Engineers. (December 2007).
40. Richard M. Ziernicki and Jeffrey K. Ball. "Limitations of the Possibility of Applying the Monte Carlo Simulation in Vehicle Accident Reconstruction." XVI EVU Annual Meeting. Krakow, Poland. (9 November 2007).
41. Jeffrey K. Ball, David A. Danaher, and Richard M. Ziernicki. "A Method for Determining and Presenting Driver Visibility in Commercial Vehicles." SAE Paper 2007-01-4232. (2007).
42. Jeffrey K. Ball, David A. Danaher, and Richard M. Ziernicki. "Considerations for Applying and Interpreting Monte Carlo Simulation Analyses in Accident Reconstruction." SAE paper 2007-01-0741. (2007).
43. Richard M. Ziernicki and David A. Danaher. "Forensic Engineering Use of Computer Animations and Graphics." Journal of the National Academy of Forensic Engineers. (December 2006).
44. Richard M. Ziernicki, "Visualization Technology in Accident Reconstruction in American Courts." Proceedings of 10 Conference on Problems in Reconstruction of Motor Vehicle Accidents. Szczyrk, Poland. (October 2006).
45. Nathan A. Rose, Stephen J. Fenton, and Richard M. Ziernicki. "Crush and Conservation of Energy Analysis: Toward a Consistent Methodology." SAE paper number 2005-01-1200. Warrendale, PA. (2005).
46. Richard M. Ziernicki, Stephen J. Fenton, Wendy S. Johnson, James M. LaRocque, David A. Danaher, Nathan A. Rose, and Robert S. Hoit. "Reconstruction of a Motor Vehicle Accident Involving Police Shooting Using Photogrammetry and 3-D Computer Modeling." Accident Reconstruction Journal. (In press).
47. Jeffrey K. Ball and Richard M. Ziernicki. "An Innovative Technique for Using Experts in Patent Litigation." Intellectual Property Today. (September 2004).
48. Nathan A. Rose, Stephen J. Fenton, and Richard M. Ziernicki. "An Examination of the CRASH3 Effective Mass Concept." SAE paper 2004-01-1181 (2004).
49. David A. Danaher, Wendy S. Johnson, Ben T. Railsback and Richard M. Ziernicki. "A New Polycarbonate and Glass Laminate and its Affects on the Relationship Between Residual Tensile Stresses and Impact Resistance of Windshields." Proceedings of the 2002 SAE International Body Engineering Conference and Automotive & Transportation Technology Conference, Paper 2002-01-1991. (July 2002).
50. Richard M. Ziernicki and Wendy S. Johnson. "Forensic Engineering Techniques to Reconstruct Shooting Incidents." Journal of the National Academy of Forensic Engineers. (June 2001).
51. Richard M. Ziernicki and Stephen J. Fenton. "Two & Three Dimensional Photogrammetric Accident Analysis." Journal of the National Academy of Forensic Engineers. (June 2000).
52. Stephen J. Fenton, Richard M. Ziernicki, Nathan Rose and Wendy S. Johnson. "Using Digital Photogrammetry to Determine Crash Severity." International Journal of Crashworthiness. REF: 2173 (2000).
53. Stephen J. Fenton, Wendy S. Johnson, James LaRocque, Nathan Rose, and Richard M. Ziernicki. "Using Digital Photogrammetry to Determine Vehicle Crush and Equivalent Barrier Speed." SAE (SAE) paper 1999-01-0439. (1999).
54. Richard M. Ziernicki, Carl Finocchiaro, Jubal Hamernik and Stephen J. Fenton. "Automotive Airbags." Accident Investigation Quarterly. 16 (Fall 1997).

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55. Richard M. Ziernicki and Olof Jacobson. "Field Investigation of Automotive Seat Belts." Accident Investigation Quarterly. 9 (Winter 1996).
56. Richard M. Ziernicki, Olof Jacobson and Jubal Hamernik. "Head Injury Risk Assessment and Prevention in Automobile Accidents." Accident Reconstruction Journal. 8 No. 5 (September/October 1996).
57. Richard M. Ziernicki, Olof Jacobson and Jubal Hamernik. "Head Injury Risk Assessment and Prevention in Automobile Accidents." Proceedings of the 29th International Symposium on Automotive Technology and Automation (ISATA). (June 1996).
58. Richard M. Ziernicki and Olof Jacobson. "Head Injury Prevention and Future Design Trends in Automotive Industry." Journal of the National Academy of Forensic Engineers. (June 1996).
59. Olof Jacobson and Richard M. Ziernicki. "Seat Belt Investigation in Automobile Accidents." Journal of the National Academy of Forensic Engineers. (June 1995).
60. Richard M. Ziernicki, C. Cotter, and I. Szczyrba. "Head-Brain Simulator." Awarded Grant, National Science Foundation Grant #DMI-9461718. (January 1995).
61. Olof Jacobson and Richard M. Ziernicki. "Seat Belt Development and Current Design Features." Accident Reconstruction Journal. 6 No. 1 (January/February 1994).
62. Richard M. Ziernicki and Olof Jacobson. "Head Injury in Automobile Accidents." SAE paper 942377. (1994).
63. Richard M. Ziernicki. "The Forensic Engineer's Relationship to Manufacturers in Product Cases." Journal of the National Academy of Forensic Engineers. (June 1992).
64. Richard M. Ziernicki. "The Lyons, Colorado School Bus Accident." Accident Reconstruction Journal. 4 No. 1 (January/February 1992).
65. Richard M. Ziernicki. "An Overview of Heavy Truck Braking Performance." Journal of the National Academy of Forensic Engineers. (June 1991).
66. Richard M. Ziernicki. "Working with the Manufacturer in Product Cases." Forensic Engineering, The International Journal. 3 No. 4 (1991).
67. Richard M. Ziernicki. "Lyons School Bus: An Avoidable Accident." Colorado Engineering. 8 No. 6 (April 1990).
68. Richard M. Ziernicki. "The Effect of Variables on Vehicular Accident Reconstruction." Forensic Engineering, The International Journal. 2 No. 3 (1990).
69. Richard M. Ziernicki, K. Rozemski and P. Radulovic. "Digital and Analog Model of the Suspension of Heavy Vehicles." Motor Vehicle Motors.
70. Richard M. Ziernicki, St. Kasprzyk and J. Wapiennik. "Vibration Isolating of Machinery Supported on a Beam with Moving Ends." Rozprawy Inzynierskie. (1982).
71. Richard M. Ziernicki, K. Rozemski and St. Staruch. "Some Generalizations in Analysis of Vibrations of Discrete-Continuous Systems of Type (n, (00))." Nonlinear Vibration Problems. 22 (1982).
72. Richard M. Ziernicki, K. Rozemski and P. Radulovic. "A Discrete-Continuous Model of Suspension of the Heavy Trucks." 19th International FISIT A Congress. (1982)
73. Richard M. Ziernicki and St. Staruch. "Analytical-Numerical Method of Transverse Vibration Analysis of a Beam with a Moving Mass Supported on a Spring." 13th International Conference of Machine Dynamics Interdynamics '81. (1981).
74. Richard M. Ziernicki and St. Kasprzyk. "Beam Vibration Under a Moving Discrete System." Mechanika Teoretyczna i Stosowana. 3 (1981).

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75. Richard M. Ziernicki. "Dynamic Behavior of a Beam Subjected to a Traveling Discrete System with Five Degrees of Freedom." Vibroakustyka. 5 (1981).
76. Richard M. Ziernicki, K. Rozemski and A. Stefanovic. "Modeling, Analysis and Oscillatory Optimization of an Engine-Gearbox Assembly of a Heavy Truck." Science and Motor Vehicles 1981. (1981).
77. Richard M. Ziernicki. "Influence of a Polyharmonic Excitator, Conservative Discrete Continuous System Moving on an Elastic Beam on a Function and on the Eigenvalues of the System." Scientific Bulletin, University of Mining and Metallurgy. 785, 129 (1980).
78. Richard M. Ziernicki. "The Analysis of Free Vibrations of a Discrete-Continuous System of the Type (5. (00))." Scientific Bulletin, University of Mining and Metallurgy. 775, 125 (1980).
79. Richard M. Ziernicki. "The Influence of Parameters of a Discrete System on Eigenvalues of a Discrete-Continuous System of the Type (1. (00))." Scientific Bulletin, University of Mining and Metallurgy. 785, 129 (1980).
80. Richard M. Ziernicki and J. Wapiennik. "Comparison of Spring Force in a Discrete System and in a Continuous-Discrete System of the Type (1. (00))." Scientific Bulletin, University of Mining and Metallurgy. 728, 112 (1979).

**BOOKS**

1. Forensic Engineering Accident Reconstruction Edition Vol. II. Contributing Author. ISBN: 978-0-9839548-5-9. 2011 National Academy of Forensic Engineers, NAFE.
2. Forensic Engineering BioMedical Edition. Contributing Author. ISBN: 978-0-9839548-0-4. 2011 National Academy of Forensic Engineers, NAFE.
3. Forensic Engineering Legal/Ethical Edition. Contributing Author. ISBN: 978-0-9839548-6-6. 2011 National Academy of Forensic Engineers, NAFE.
4. Forensic Engineering Mechanical Engineering Edition Vol. III. Contributing Author. ISBN: 978-0-9839548-9-7. 2011 National Academy of Forensic Engineers, NAFE.
5. Forensic Engineering Mechanical Engineering Edition Vol. V. Contributing Author. ISBN: 978-0-9840490-1-1. 2011 National Academy of Forensic Engineers, NAFE.

**COMMITTEE PUBLICATIONS**

1. SAE Accident Investigation and Reconstruction Practices Committee. Joe Marsh, Sponsor. SAE Standard J1676 – Generalized Vehicle Damage Documentation Guidelines. Society of Automotive Engineers.
2. SAE Accident Investigation and Reconstruction Practices Committee. Joe Marsh, Sponsor. Reaffirmation of J1674 – Early Acquisition and Preservation of Information in a Motor Vehicle Crash. Society of Automotive Engineers.
3. SAE Accident Investigation and Reconstruction Practices Committee. Joe Marsh, Sponsor. Reaffirmation of J1301 - Truck Deformation Classification. Society of Automotive Engineers.
4. SAE Accident Investigation and Reconstruction Practices Committee. Joe Marsh, Sponsor. SAE Standard J2433 - Equidistant Crush Measurement Techniques. Society of Automotive Engineers.
5. SAE Accident Investigation and Reconstruction Practices Committee. Joe Marsh, Sponsor. Reaffirmation of J224 - Collision Deformation Classification. Society of Automotive Engineers.

**TECHNICAL CONFERENCES AND PRESENTATIONS**

1. "Application of Matchmoving for Forensic Video Analysis of Pedestrian/Train Collision and Verification with Recorded Event Data." Journal of the National Academy of Forensic Engineers. Presented by Ricky L. Nguyen. National Academy of Forensic Engineers Annual Meeting (NAFE). San Antonio, TX. 7 Jan. 2023.
2. "Ground Breaking Technology to Analyze Video of Tony Stewart Accident." Speaker. Inner Circle of Investigators, Inc., 2019 Platinum Anniversary Educational Conference. Denver, CO. 25 Oct. 2019.
3. "Ground Breaking Technology to Analyze Video of Tony Stewart Accident." Speaker. Trial Lawyer Nation, The Most Important Juror. San Antonio, TX. 14 Oct. 2019.
4. "Proving Liability Through Engineering and Accident Reconstruction." Speaker. *Ferrer & Trucking Seminar*. Colorado Trial Lawyers Association (CTLA). Denver, CO. 4 Oct. 2019.
5. "The Application of Matchmoving for Forensic Video Analysis of a Fatal Sprint Car Accident. Part I." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Denver, CO. 27 Jul. 2019.
6. "The Application of Matchmoving for Forensic Video Analysis of a Fatal Sprint Car Accident. Part II." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Denver, CO. 27 Jul. 2019.
7. "Forensic Engineering Analysis of a Fatal, Overhead Crane Accident." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Denver, CO. 27 Jul. 2019.
8. "How the Application of the Newest Technology Can Help You." Speaker. Attorneys Information Exchange Group (AIEG) 2019 Spring Seminar. Charleston, SC. 12 Apr. 2019.
9. "Danger, Right Turning Semis." Speaker. APITLA National Interstate Trucking Super Summit. Galveston, TX. 6 Aug. 2018.
10. "Forensic Engineering Analysis of Right-Turning Trucks Impacting Bicyclists or Pedestrians." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Buffalo, NY. 28 Jul. 2018.
11. "Forensic Engineering Application of Matchmoving Process." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Phoenix, AZ. 13 Jan. 2018.
12. "Forensic Engineering Analysis of Projectile Thrown from Phantom Vehicle." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Phoenix AZ. 13 Jan. 2018.
13. "Heavy Trucks vs. Bike/Pedestrian Accidents – Application of Modern Technology." Speaker. APITLA National Trucking Conference Super Summit. Tampa, FL. 19 May 2017.
14. "Newest Technologies Utilized in the Reconstruction of an Officer Involved Shooting Incident." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). New Orleans, LA. 14 Jan. 2017
15. "Fatal School Bus Accident: One More Cry for Usage of Seatbelts." Speaker. APITLA National Interstate Trucking Conference Super Summit V. St. Augustine, FL. 17 May 2016.
16. "Advanced Forensic Engineering Analysis of a School Bus/Tractor Trailer Crash." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Tampa, FL. 23 Jan. 2016.
17. "Forensic Engineering Evaluation and Testing of Horizontal Intrusion Protection Equipment for Stand-Up Forklifts." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Seattle, WA. 18 Jul. 2015.
18. "Forensic Engineering Investigation of Above-Ground Pool Submersion Accidents." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Seattle, WA. 18 Jul. 2015.
19. "Double Fatality at Zero Speed." Speaker. The National Trial Lawyers Summit. Miami Beach, FL. 21 Jan. 2015.

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20. "Forensic Engineer Investigation of Product Liability Cases." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Hollywood, FL. 10 Jan. 2015.
21. "Stand-Up Forklift Egress Times as a Function of Operator Compartment Guarding." Speaker. 2014 ASME International Mechanical Engineering Congress and Exposition. Montreal, Quebec, Canada. Nov. 19, 2014.
22. "The Forensic Engineer in State and Federal Court." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Washington, DC. 6 Jul. 2014.
23. "Forensic Engineering Usage of Surveillance Video in Accident Reconstruction." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Washington, DC. 6 Jul. 2014.
24. "Effectiveness of Science & Regulations in Investigating Trucking Accidents." Speaker. APITLA National Interstate Trucking Conference Super Summit III. St. Louis, MO. 07 June. 2014.
25. "Selecting and Working with an Accident Reconstruction Expert." Speaker. APITLA National Interstate Trucking Conference Super Summit III. St. Louis, MO. 07 June. 2014.
26. "Effective Use of Newest Technologies in Courts by Experts." Speaker. Use of Newest Technology by Accident Reconstruction Expert, Videography and Trial Management in Mediation and Court. Illinois Trial Lawyers Association. Chicago, IL. 20 Jan. 2014.
27. "Newest Technologies Used in Courts by Experts." Speaker. The Latest In Litigation Technology Including iPads. Rhode Island Association For Justice. Providence, RI. 15 Nov. 2013.
28. "Investigation of Trucking Accidents." Speaker. The Keys to Winning. Arkansas Trial Lawyers Association. Rogers, AR. 11 Oct. 2013.
29. "Experts in the U.S. Court System." Keynote Speaker. XIII Bi-annual conference, Problems of Reconstruction of Road Accidents. Zakopane, Poland. 26 Sep. 2013.
30. "New Technologies Used in U.S. Courts by Experts." Speaker. XIII Bi-annual conference, Problems of Reconstruction of Road Accidents. Zakopane, Poland. 26 Sep. 2013.
31. "Analysis of Trucking Accidents and Regulations." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Minneapolis, MN. 20 Jul. 2013.
32. "Newest Technology in Forensic Investigations." Speaker. Rocky Mountain Health & Safety Conference by Colorado Safety Association (CSA). Westminster, CO. 20 May 2013.
33. "Trucking Accidents: What You Need To Know And Why." Speaker. APITLA National Interstate Trucking Conference Super Summit II. St. Louis, MO. 27 Apr. 2013.
34. "Overview of Trucking Accidents." Speaker. Attorneys Information Exchange Group (AIEG). Miami, FL. 9 Apr. 2013.
35. "Reports of Round Table Discussions and Colloquium on Forensic Engineering Practices." Speaker & Mediator. National Academy of Forensic Engineers Annual Meeting (NAFE). Newport Beach, CA. 19 Jan. 2013.
36. "Report of NAFE Activities In Forensic Engineering." Speaker & Mediator. National Academy of Forensic Engineers Annual Meeting (NAFE). Newport Beach, CA. 19 Jan. 2013.
37. "Current Technology in Accident Reconstruction." Invited Speaker. American Association for Justice 2012 Annual Convention (AAJ). Chicago, IL. 30 Jul. 2012.
38. National Society of Professional Engineers Board of Directors Meeting. Invited Speaker. National Society of Professional Engineers 2012 Annual Meeting (NSPE). San Diego, CA. 14 Jul. 2012.

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39. "Reports of Round Table Discussions and Colloquium on Forensic Engineering Practices." Speaker & Mediator. National Academy of Forensic Engineers Annual Meeting (NAFE). San Diego, CA. 14 Jul. 2012.
40. "Report of NAFE Activities In Forensic Engineering." Speaker & Mediator. National Academy of Forensic Engineers Annual Meeting (NAFE). San Diego, CA. 14 Jul. 2012.
41. "Ethics & The Expert Witness." Speaker. National Trial Lawyers Summit. NTL and APITLA. South Beach, FL. 24 Jan. 2012.
42. "Forensic Engineering Investigation of Accidents Involving Corded Window Coverings." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Miami Beach, FL. 07 Jan. 2012.
43. "Analysis of the Hazards of Woodchipper Accidents." 2011 ASME International Mechanical Engineering Congress and Exposition. Co-Author. Denver, CO. 15 Nov. 2011.
44. "Effective Use of the Latest Technology in Reconstructing Trucking Accidents." Speaker. National Interstate Trucking Super Summit. NTL and APITLA. St. Louis, MO. 15 Sep. 2011.
45. "Ethics & The Expert Witness." Speaker. Colorado Trial Lawyers Association (CTLA). Colorado Springs, CO. 27 Jul. 2011.
46. "Advanced Techniques in Forensic Engineering & Animation." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Las Vegas, NV. 17 Jul. 2011.
47. "Ethics & The Expert Witness." Speaker. Missouri Association of Trial Attorneys (MATA). Lake Ozark, MO. 23-26 Jun. 2011.
48. Forensic Engineering Seminar. Attendee. National Academy of Forensic Engineers Annual Meeting (NAFE). Tucson, AZ. 15-16 Jan. 2011.
49. "Effective Use of Electronic Data Recording In Reconstructing Accidents." Speaker. Advanced Interstate Trucking Combat Training for the Courtroom. NCAJ and APITLA. Raleigh, NC. 10 Sep. 2010.
50. "Considering EDR Data In Reconstructing Trucking Accidents." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Orlando, FL. 16-18 Jul. 2010.
51. Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exposition. Cobo Hall. Detroit, MI. 14 Apr. 2010.
52. Forensic Engineering Seminar. Attendee. National Academy of Forensic Engineers Annual Meeting (NAFE). New Orleans, LA. 15-16 Jan. 2010.
53. "Visual Representation of Trucking Accidents Involving Driver Fatigue." Speaker. (APITLA). Las Vegas, NV 13 Sep. 2009.
54. "Re-Construction Using CDR." Speaker. Forensic Engineering Tools & Techniques "Advanced Accident Re-Construction For Forensic Engineers Series." Presented by the: Education Committee of The National Academy of Forensic Engineers. National Academy of Forensic Engineers Annual Meeting (NAFE). St. Louis, MO. 16-18 Jul. 2009.
55. American Academy of Forensic Sciences (AAFS). 2009 61<sup>st</sup> Annual Scientific Meeting. Colorado Convention Center. Denver, CO. 19 Feb. 2009.
56. Forensic Engineering Tools & Techniques. "Forensic Engineering Evidence: Gathering, Storing, Analyzing, Documenting, Reporting, Copyright, & Patent Rights." Presented by the: Education Committee of The National Academy of Forensic Engineers. National Academy of Forensic Engineers Annual Meeting (NAFE). Austin, TX. 15-17 Jan. 2009.

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57. "Use of State of the Art Technology in Investigating Trucking Accidents." Speaker. Association of Interstate Trucking Lawyers of America (AITLA). Atlanta, GA. 24-26 Oct. 2008.
58. "Forensic Engineering Investigation of Product Liability Cases." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Portland, OR. 24-26 Jul. 2008.
59. Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exposition. Cobo Hall. Detroit, MI. 15-16 Apr. 2008.
60. "Forensic Engineering Assessment of Safety for Stand-Up Forklifts." Speaker. National Academy of Forensic Engineers Winter Convention. San Juan, Puerto Rico. 5 Jan. 2008.
61. "Expert Opinions in Visual Form: State of the Art Animation." Speaker. Wilson Elser Moskowitz Edelman & Dicker, LLP Law Firm. White Plains, NY. 20 Nov. 2007.
62. "Limitations of the Possibility of Applying the Monte Carlo Simulation in Vehicle Accident Reconstruction." Speaker. XVI EVU Annual Meeting. Krakow, Poland. 9 Nov. 2007.
63. "Forensic Engineering Evaluation of Physical Evidence in Accident Reconstruction." Speaker. National Academy of Forensic Engineers Annual Meeting (NAFE). Denver, CO. 28 Jul. 2007.
64. "Considerations for Applying and Interpreting Monte Carlo Simulation Analyses in Accident Reconstruction." Co-author of presented paper. SAE World Congress: International Congress and Exposition. Cobo Hall, Detroit, MI. 16-19 Apr. 2007.
65. "Forensic Engineering Use of Computer Animations and Graphics." Speaker. Purdue University. Lafayette, IN. 13 Nov. 2006.
66. "Visualization Technology in Accident Reconstruction in American Courts." Speaker. 10<sup>th</sup> Conference on Problems in Reconstruction of Motor Vehicle Accidents. Szczyrk, Poland. 26-28 Oct. 2006.
67. "Use of Animation and Computer Graphics." Speaker. National Academy of Forensic Engineers (NAFE). Boston, MA. 10 Jul. 2006.
68. "Accident Reconstruction Overview." Invited Speaker. Televised seminar throughout the state of Wyoming. Wyoming Trial Lawyers Association. Cheyenne, WY. 26 Apr. 2006.
69. "How to Read and Understand an Expert's Report on Accident Reconstruction." Invited Speaker. Televised seminar throughout the state of Wyoming. Wyoming Trial Lawyers Association. Cheyenne, WY. 26 Apr. 2006.
70. Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exposition. Cobo Hall. Detroit, MI. 3-5 Apr. 2006.
71. "Defining Forensic Engineering and Animation." Speaker. Purdue University. Lafayette, IN. 3 Nov. 2005.
72. "Crush and Conservation of Energy Analysis: Toward a Consistent Methodology." Co-author of presented paper, Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exposition. Cobo Hall. Detroit, MI. 8-11 Mar. 2004.
73. "An Examination of the CRASH3 Effective Mass Concept." Co-author of presented paper, Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exposition. Cobo Hall. Detroit, MI. 3-6 Mar. 2003.
74. Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exhibition, Cobo Hall. Detroit, MI. 5-7 Mar. 2002.

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75. "A New Polycarbonate and Glass Laminate and its Affects on the Relationship Between Residual Tensile Stresses and Impact Resistance of Windshields." Co-author of presented paper. International Body Engineering Conference & Exhibition and Automotive & Transportation Technology Conference. Paris, France. July 9-11, 2002.
76. "Hot Topics in Auto Litigation." Speaker. Professional Educations Systems Institute (PESI). Denver, CO. 29 Nov. 2001.
77. "Selected Topics in Auto Litigation." Speaker. Professional Educations Systems Institute (PESI). Aurora, CO. 29 Jun. 2001.
78. Society of Automotive Engineers (SAE). SAE World Congress: International Congress and Exhibition. Cobo Hall. Detroit, MI. 5-8 Mar. 2001.
79. "Forensic Engineering Techniques to Reconstruct Shooting Incidents." Speaker. National Academy of Forensic Engineers (NAFE). Los Angeles, CA. 20 Jan. 2001.
80. "Using Digital Photogrammetry to Determine Crash Severity." Paper, ICRASH2000." Presented paper. The Royal Aeronautical Society. London, UK. 6 Sept. 2000.
81. "Technology in Product Liability Cases." Speaker. 2000 Colorado Defense Lawyers Association Annual Conference. Steamboat Springs, CO. 19 Aug. 2000.
82. "State of the Art Technologies in Accident Reconstruction." Speaker. National Association of Independent Insurance Adjusters. 63rd Annual Convention. Keystone, CO. 25 May 2000.
83. "Comparison of Two and Three Dimensional Photogrammetry in Accident Reconstruction." Speaker. National Academy of Forensic Engineers (NAFE). Crystal City, VA. 30 Jan. 2000.
84. "New Technologies in Accident Reconstruction." Presenter. Society of Automotive Engineers (SAE). Colorado Section Meeting. Knott Laboratory, Inc., Centennial, CO. 19 Jan. 2000.
85. "The Use of Computer Animations in Patent Litigation." Speaker. Boulder County Bar Association, IP/Patent Section. Boulder, CO. 10 Nov. 1999.
86. "Computer Animation in Personal Injury Cases." Speaker. Nevada Trial Lawyer's Association. Vancouver, Canada. 7-9 Oct. 1999.
87. "New Technology in Accident Reconstruction." Speaker. Colorado Defense Lawyer's Association. Vail, CO. 13-14 Aug. 1999.
88. "Using Digital Photogrammetry to Determine Vehicle Crush & Equivalent Barrier Speed (EBS)." Co-author of presented paper. Society of Automotive Engineers (SAE). International Congress and Exposition: Accident Reconstruction Session. Cobo Hall, Detroit. MI. 2 Mar. 1999.
89. "Failure Analysis and Condition Assessment." Guest Lecturer. Graduate Engineering class (CE5801). University of Colorado at Denver. Denver, CO. 28 Apr. 1999.
90. "State of the Art Technology in Accident Reconstruction." Speaker. Colorado Claims Association Annual Seminar. Englewood, CO. 2 Oct. 1998.
91. "Trial Advocacy Track-Making Your Case: Evidence with Impact, Proving Causation in Low Impact Collision Cases." Speaker. 1998 Association of Trial Lawyers of America (ATLA). Annual Convention. Washington D.C. 10-14 Jul. 1998.
92. "The Judges Role as Gatekeeper: Responsibilities and Powers." Panel Speaker & Faculty, Harvard Law School. Five State Judicial Conference. Medora, ND. 7-10 Jul. 1998.
93. "Car Crashes and Occupant Injuries: A Team Approach to Crash Investigation." Association for the Advancement for Automotive Medicine (AAAM). Seminar. Tempe, AZ. 16-17 Apr. 1998.



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94. "Condition Assessment and Failure Analysis of Civil/Mechanical Infrastructure." Guest Lecturer. Graduate Engineering class (CE5805). University of Colorado at Denver. Denver, CO. Dec. 1997.
95. "Airbag Design and Performance TOPTEC Topical." Society of Automotive Engineers (SAE). Technical Workshop. Costa Mesa, CA. 14-15 Aug. 1997.
96. "Global Technology Partnering: Accident Reconstruction and Occupant Protection and Injury Assessment in the Automotive Crash Environment." Society of Automotive Engineers (SAE). International Congress and Exposition. Cobo Hall. Detroit, MI. 24-25 Feb. 1997.
97. "40th Stapp Car Crash Conference." Society of Automotive Engineers (SAE). Seminar. Albuquerque, NM. 4-6 Nov. 1996.
98. "Low Speed Collision TOPTEC Topical." Society of Automotive Engineers (SAE). Technical Workshop. Richmond, BC CAN. 19-20 Aug. 1996.
99. "Forensic Analysis and Condition Assessment of Civil and Mechanical Infrastructure." Guest Lecturer. Graduate Engineering class (CE5805). University of Colorado at Denver. Denver, CO. 24 Apr. 1996.
100. "Accident Reconstruction. Occupant Protection and Injury Assessment for Frontal Impact." Society of Automotive Engineers (SAE). Seminar: International Congress and Exposition. Cobo Hall. Detroit, MI. 26-29 Feb. 1996.
101. "Head Injury Prevention and Future Design Trends in the Automotive Industry." Presented paper. National Academy of Forensic Engineers (NAFE). National Society of Professional Engineers 1996 Winter Meeting. Portland, OR. 22-24 Jan. 1996.
102. "39th Stapp Car Crash Conference." Society of Automotive Engineers (SAE). Seminar. San Diego, CA. 8-10 Nov. 1995.
103. Association for the Advancement of Automotive Medicine. 39th Annual Conference. Chicago, IL. 15-18 Oct. 1995.
104. "Medicine for Engineering." Association for the Advancement of Automotive Medicine. Seminar. Chicago, IL. 15 Oct. 1995.
105. American Council of Independent Laboratories (ACIL). Convention. Orlando, FL. 7-10 Oct. 1995.
106. "Low Speed Collision and Injury." Speaker. Denver Claims Association. Denver, CO. 29 Sept. 1995.
107. "Auto Collisions and Head Injury." Presented paper. Continuing Medical Education Committee Trauma Conference. Memorial Hospital, Colorado Springs, CO. 16 Aug. 1995.
108. "Passive Restraints TOPTEC Topical." Society of Automotive Engineers (SAE). Technical Workshop. San Francisco, CA. 4-5 May 1995.
109. "Head Injury and Occupant Kinematics." Presenter. Colorado Claims Managers Association. Denver, CO. 11 Apr. 1995.
110. "Accident Reconstruction: Advances in Occupant Protection, Technologies for the 1990's. Airbag Performance and Experience, Crash Instrumentation. Human Modeling Technology." Society of Automotive Engineers (SAE). Seminar: International Congress and Exposition. Cobo Hall. Detroit, MI. 27 Feb.-3 Mar. 1995.
111. "Seat Belt Investigation in Automobile Accidents." Presented paper. National Academy of Forensic Engineers (NAFE). 1995 Winter Meeting. Houston, TX. 11-18 Jan. 1995.
112. "Head Injury in Automobile Accidents." Presented paper. Society of Automotive Engineers (SAE). Brazil III Mobility Technology Congress and Exposition. Sao Paulo, Brazil. 7-9 Nov. 1994.
113. "Clinical and Biomechanical Aspects of Post-Traumatic Arthropathy in Motor Vehicle Accidents." Speaker. Advances in Orthopedic Biomechanics and Their Clinical Applications Symposium. John Hopkins University School of Medicine. Baltimore, MD. 27-30 Oct. 1994.

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114. "Knee Injury in Automobile Accidents." Speaker. Continuing Medical Education Committee Trauma Conference. Memorial Hospital. Colorado Springs, CO. 19 Oct. 1994.
115. "Accident Reconstruction: Technology. Vehicle Dynamics and Simulation. Restraint Technology. Occupant Protection Technology." Society of Automotive Engineers (SAE) Seminar: International Congress & Exposition. Cobo Hall. Detroit, MI. 28 Feb.-3 Mar. 1994.
116. Society of Automotive Engineers (SAE). Head and Injury Symposium. Denver Marriott City Center. Denver, CO. 9 Dec. 1993.
117. American Council of Independent Laboratories Western Division/act LABS Meeting. Monterey, CA. 23 Apr. 1993.
118. "Vehicle Accident Reconstruction." Society of Automotive Engineers (SAE). International Congress and Exposition. Cobo Hall. Detroit, MI. 1-5 Mar. 1993.
119. "The Forensic Engineer's Relationship to Manufacturers in Product Cases." Presented paper. National Academy of Forensic Engineers Annual Convention (NAFE). Jun. 1992.
120. "36th Stapp Car Crash Conference." Society of Automotive Engineers (SAE). Seminar. Seattle, WA. 2-4 Nov. 1992.
121. "Accident Investigation Workshop." Speaker. Product Safety Seminar for Equipment Manufacturers Institute. Indian Lakes conference Center. Bloomingdale, IL. 17-18 Oct. 1991.
122. "Working With Manufacturers in Product Cases." Presented paper. American Council of Independent Laboratories, Inc. 54th Annual Meeting. New Orleans, LA. 12-17 Oct. 1991.
123. "Boulder Master Advocates Program, NITA, for National Institute for Trial Advocacy." Speaker. Expert witness presentation. Notre Dame Law School. University of Colorado, Boulder. CO. 30 Jun.-5 Jul. 1991.
124. "Advanced Trial Advocacy Expert Witness." Speaker. University of Colorado. Boulder, CO. 15 Apr. 1991.
125. "Vehicle Accident Reconstruction." Society of Automotive Engineers (SAE). International Congress and Exposition. Cobo Hall. Detroit, MI. 18-22 Feb. 1991.
126. "An Overview of Heavy Truck Braking Performance." Presented paper. National Academy of Forensic Engineers (NAFE). 1991 Winter Meeting. New Orleans, LA. 16 Jan. 1991.
127. "Engineering Ethics." National Society of Professional Engineers (NSPE). Conference. Colorado Springs, CO. 5-7 Oct. 1990.
128. "Quality Control by Edward Demming." University of Colorado. Boulder, CO. Jun. 1990.
129. "Brakes-Design and Safety." Society of Automotive Engineers (SAE). Seminar: International Congress and Exposition. Cobo Hall. Detroit, MI. 15 Feb. 1990.
130. "Accident Reconstruction (EDSMAC)." Engineering Dynamic Corporation. Seminar. Northridge, CA. Jan. 1990.
131. "The Effect of Variables on Vehicular Accident Reconstruction." Presented paper. Third International Conference on Structural Failure, Product Liability and Technical Insurance. Vienna, Austria. 10-12 Jul. 1989.
132. "Safety Considerations in Engineering Design." Speaker. University of Denver. Denver, CO. Apr. 1989.
133. "Vehicle Accident Reconstruction." Society of Automotive Engineers (SAE). Seminar: International Congress and Exposition. Cobo Hall. Detroit, MI. Feb. 1989.
134. American Council of Independent Laboratories (ACIL). Annual Convention. Austin, TX. 1988.
135. "Micro Computer Assisted Traffic Accident Reconstruction (EDCRASH)." Traffic Institute. Seminar. Northwestern University. Evanston, IL. 26-30 Sept. 1988.

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136. American Council of Independent Laboratories (ACIL). Annual Convention. Mazatlan, Mexico. 1987.
137. "Vehicle Accident Reconstruction." Speaker. Colorado Claims Adjuster Association. Denver, CO. 1987.
138. "Engineers in Court." Professional Engineers of Colorado (PEC). Seminar. Denver, CO. Sept. 1986.
139. "Flexible Manufacturing Systems." Seminar. University of Colorado. Boulder, CO. 1983.
140. "Vibration, Measurement and Analysis." Bruel & Kjaer Instruments, Inc. Seminar. Denver, CO. 27-28 Sept. 1982.
141. "Honing Technology." Society of Manufacturing Engineers. Seminar. Los Angeles, CA. 8-10 Jun. 1982.
142. "Modeling, Analysis and Oscillatory Optimization of an Engine-Gearbox Assembly of a Heavy Truck." Co-author of presented paper. 10th International Conference. Kragujevac, Yugoslavia. 11-14 May 1981.
143. "Dynamic Behavior of a Beam Subjected to a Traveling Discrete System with Five Degrees of Freedom." Presented paper. 13th International Conference of Machine Dynamics. Jadwisin, Poland. 6-10 Apr. 1981.
144. "Influence of a Polyharmonic Excitator, Conservative Discrete Continuous System Moving on an Elastic Beam on a Function and on the Eigenvalues of the System." Presented paper. VIII International Conference on Machines Theory and Mechanisms. Krakow-Kozubnik, Poland. 18-20 May 1980.
145. "The Analysis of Free Vibrations of a Discrete-Continuous System of the Type (5. (00))." Presented paper. VIII International Conference on Machines Theory and Mechanisms. Krakow-Kozubnik, Poland. 18-20 May 1980.
146. "V Symposium of Vibrations and Vibroacoustics Technique." Presented paper. Krakow, Poland. 23-24 Mar. 1979.

**MEDIA APPEARANCES**

1. "The Hit An Investigative Documentary." NASCAR legend, Tony Stewart Fatal Accident. Amazon Prime. Jan. 2023.
2. Family of man killed in plant conversion settles for \$4.7M. Virginia Lawyers Weekly. 9 Oct. 2018.
3. Knott Laboratory's Report Uses Videogrammetry to Show Unique Perspectives of Boone County Police Involved Shooting. NBC WLWT5 News Channel. 8 Dec. 2016.
4. Knott Laboratory's history, capabilities, and new technology. CNTV Interview by CNTV Consumer Network Television. 18 Oct. 2015.
5. "Minimizing Liability Risk in Engineering Product Design." IHS Engineering 360. By Winn Hardin featuring Richard M. Ziernicki. 23 Jul. 2015.
6. Accident reconstruction involving tanker and multiple vehicles featured on Fox 31 Denver. KDVR. 10 Mar. 2015.
7. "Famous Deaths Reexamined: Princess Diana." Dr. Oz Show. ABC. 10 Apr. 2014.
8. "The Night of Fear." Fourth Millennium. Mitele Channel 4, Spain. 8 Sep. 2013.
9. "Knott Lab's Accident Reconstruction." NatGeo Amazing! National Geographic Channel. 10 Sep. 2010.
10. "Air France Flight 447." Geraldo At Large. Fox News Channel. 14 Jun. 2009.
11. "Princess Diana's Death: Unanswered Questions." Fox News Channel. 4 Aug. 2007.
12. The Big Story Weekend. Fox News Channel. 29 May 2005.
13. The Big Story by Rita Cosby. Fox News Channel. 19 Feb. 2005.
14. "High-tech Knott Lab solves big cases by Diane Freeman." Rocky Mountain News: Special To The News. 29 Nov. 2004.
15. "Knott Laboratory Feature by Business Reporter, Greg Moss." Channel 9 News Morning Show. 10 Nov. 2004.
16. "At Large with Geraldo Rivera." Fox News Channel. Fox. 15 Nov. 2003.
17. "Forensic Animation at Knott Labs by Mark Koebrich." Channel 9 News. 12 Nov. 2003.
18. "Unsolved History: The Death of Diana." Discovery Channel. 20 Aug. 2003.
19. "How Technology and Animation Work Together to Aid in Forensic Analysis." Channel 4 News. CBS. 8 May 2003.
20. "River Barge Crash / Highway Bridge Collapse Muskogee County, OK." Channel 4 News. Denver. 28 May 2002.
21. "T-Rex Construction Crane Collapse Story." Channel 4 News. Denver, CO. 4 Apr. 2002.
22. Airbags: The Next Generation." Channel 4 News. Denver, CO. Spring 2001.
23. "Out of Control: Why Cars Crash." MSNBC. 2000/2001.
24. "Steering Out of Trouble." Channel 4 News. Denver, CO. 5 Dec 2000.
25. "SUV Rollover Accidents." News 20/20. ABC. Fall 2000.
26. "High-Tech Super Sleuths by Erin Kindberg." The Denver Business Journal. 6-12 Aug. 1999.
27. "Science Behind the Headlines." Discovery Channel. 1998/1999.
28. "Princess Diana Accident." Fox31 News. Fox. Denver, CO. Fall 1997.
29. "Princess Diana Accident." Dateline. NBC. Fall 1997.
30. "Princess Diana Accident." Channel 4 News. Denver, CO. Fall 1997.
31. "Princess Diana Accident." Channel 9 News. Denver, CO. Fall 1997.

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32. "Princess Diana Accident." Channel 2 News. Denver, CO. Fall 1997.
33. "Denver Lab Analyzes Di Crash Details by Jaxon Van Derbeken." Rocky Mountain News. 20 Sept. 1997.
34. "Airlife Helicopter Accident Reconstruction." Channel 4 News. Denver, CO. Nov. 1997.
35. "Lyon School Bus Accident Investigation." The Daily Camera. Boulder, CO. 1990.