



## John Leffler

PE

### Senior Managing Engineer

#### Department

Engineering Services

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#### Locations

Philadelphia, PA

## Biography

John Leffler is an experienced testifying expert and peer-reviewed author with over 1,100 forensic cases of experience, including 550+ product cases and 450+ cases involving premises liability and pedestrian falls. An ex-IndyCar mechanic, fabricator, & machinist, John ran a product design engineering firm for eight years after working for five years designing machines, consumer products, and commercial products for several manufacturers. A 1993 graduate of Georgia Tech, John also taught product design materials and manufacturing processes at GT's College of Design for fifteen years. For over 20 years, John has been heavily involved in standards development within ASTM International and several other ANSI-accredited organizations. The primary author of ASTM E2713 (forensic engineering) and both ASTM F2948 and F3539 (pedestrian walkway safety), John is a internationally recognized leader in standards development across multiple organizations and is the Chair of ASTM subcommittees on bathing surface safety and on walkway friction. In 2021 John initiated and led a groundbreaking and Federally funded research project in support of replacing the obsolete ASTM standard for bathing surface friction. John has also manufactured research-proven walkway friction test "tribometers" since 2010, and the devices are used by insurance companies, theme parks, research labs, and forensic professionals around the world. John also specializes in vehicle wheel and hub separations and product/machine design, manufacturing and mechanical failures.

## Credentials

- PE | Professional Engineer
- OSHA Occupational Safety & Health Standards for General Industry (30 hour)
- OSHA Occupational Safety & Health Standards for Construction (30 hour)
- FAA Certified Drone Pilot
- ASE Certified Automobile Technician
- Board Certified Diplomate in Forensic Engineering through NAFE
- IPAF Licensed Operator, mobile boom and mobile scissor lifts

## Representative Consulting Assignments

- Orange farm | St. Johns County FL | Worker fatality – Worker was mowing a grove with a farm tractor and was run over by the tractor & mower. The lack of a seatbelt was blamed. Analyzed the tractor controls and patterns of grass cutting, opining that the worker was boarding the tractor in the incident.
- Paper mill | Milner GA | Trip/fall – A subcontractor fell into process wastewater. A 2" hose placed by another subcontractor was blamed. Analyzed the roles of the subcontractors and paper mill in the incident.
- Movie set | Madison GA | Boom lift contacted powerlines. Analyzed the standards and liability contributions of the lift rental agency, renter & operator.
- Highway crash | Canton GA | Wheel separation – A wheel from a new trailer came off and struck a vehicle. Analyzed the liability of the trailer wheel,

axle, and fastener manufacturers. Designed a stud tension testing apparatus for use in biaxial wheel tests.

- Rental condo | Gatlinburg TN | Slip/fall – A guest slipped on a terrycloth bathmat when exiting a bathtub. Analyzed the myriad deficiencies in the opposing expert's friction testing of an exemplar bathmat and his cited "standards" of care.
- Highway crash | Atlanta GA | Hub separation – A wheel hub/brake drum from a new trailer came off and struck a motorcycle. Analyzed causative deficiencies in the trailer manufacturer's component stocking & assembly practices.
- Hospital | Covington GA | Slip/fall – A nurse slipped while wearing medical shoe covers over her shoes. The hall carpet had sheet plastic covering to protect from construction dust. Conducted testing using a whole-shoe tribometer to compare the friction of shoe covers to uncovered shoes, on plastic-covered carpet.
- Rural Texas | Runover of toddler - A manual-transmission vehicle was started in gear, due to failure of springs in the clutch interlock switch. Analyzed the liability contributions of the spring manufacturer, switch manufacturer, clutch system supplier & vehicle manufacturer.
- Additional Case Types: | Design/manufacturing/usage of windows, furniture, playground/fitness equipment, tools, ladders, doors, lifts, and vehicle components.

## Professional Experience

- 2023 - Current | Senior Managing Engineer | YA Engineering Services
- 2022 - 2023 | Forensic Mechanical Engineer | Reality Forensics LLC
- 2003 - 2022 | Forensic Mechanical Engineer | Forcon International
- 1998 - 2006 | Lead Engineer & Owner | Precistems Incorporated
- 1998 - 1998 | Contractor | Panasonic MMCD
- 1997 - 1998 | Contractor | Motorola Energy Systems Group
- 1996 - 1997 | Mechanical Engineer | Firearms Training Systems
- 1996 - 1996 | Mechanical Engineer | Decibel Products
- 1994 - 1996 | Project Engineer | Herman Miller Incorporated
- 1993 - 1994 | Mechanical Engineer | Firearms Training Systems

## Area of Practice

- ADA Compliance Assessment
- Failure Analysis
- Litigation Support
- Plumbing Systems
- Premises Liability
- Products Liability
- Equipment / Product Failure Investigations
- Drone Pilot
- Slip and Fall Evaluations

## Publications and Presentations

- Leffler J, Edwards M, Pritchett D. New Milestones in Slip & Fall Science & Standards. For The Defense, Chicago IL, Defense Research Institute, 66(1). September 2024.
- Lockhart TE, Leffler JP et al. Factors influencing slip/fall risk while entering and exiting bathing surfaces (Task 3)., US Consumer Products Safety Commission, Project 61320621Q0068. June 2023

- Leffler JP, Bath Surface Contract Report on Tribometer Values of Reference Surfaces (Task 2)., US Consumer Products Safety Commission, Project 61320621Q0068. June 2023
- Leffler JP, Bath Surface Contract Report on Tribology (Task I), US Consumer Products Safety Commission, Project 61320621Q0068. June 2023
- Leffler JP, Blanchette MG, Effects of Bathing Surface Drainage Contouring on Tribometer Friction Testing, Journal of Testing and Evaluation, 50(3). February 2022.
- Leffler JP, Forensic Engineering Analysis of Design and Manufacturing Practices for an Automotive Spring, J. National Academy of Forensic Engineers, 34(1). June 2017.
- Leffler JP, Effects of Evidence Spoliation on Forensic Engineering Analysis of Alleged Brake Servicing Defects, J. National Academy of Forensic Engineers, 33(2). December 2016.
- Leffler JP, Blanchette MG, Forensic Considerations Regarding Traction and Tribometry of Bathing Surfaces, J. National Academy of Forensic Engineers, 33(1). June 2016.
- Leffler JP, Barré KM, Reneau AP, Chicago IL, The Changing World of Slip-and-Fall Defense. For The Defense, Defense Research Institute, 55(2). February 2013.
- Leffler JP, Forensic Engineering Investigation of Vehicle Hub Separations, J. National Academy of Forensic Engineers, 28(1). June 2011.
- Leffler JP, Schlender EH, Forensic Engineering Analysis of Reliance on Standards in a Multi-Defendant Cross Claim Case, J. National Academy of Forensic Engineers, 27(2). December 2010.
- Leffler JP, Forensic Engineering Investigation of an Alleged Plastic Chair Failure, J. National Academy of Forensic Engineers, 27(2). December 2010.
- Leffler JP, Forensic Engineering Investigation of Vehicle Wheel Separations, J. National Academy of Forensic Engineers, 26(1). June 2009.
- Leffler JP, Forensic Engineering Use of Walkway Traction Testing, J. National Academy of Forensic Engineers, 26(1). June 2009.
- Extrinsic Analysis of Same Level Fall Incidents
- Product Failures and Subrogation
- Effective Use of Surrogates in Investigating Bodily Injury Claims
- Subrogating the Slip and Fall Claim
- Pedestrian Slips - Proactive & Reactive Things to Consider
- Pedestrian Safety - Specific Exposures
- Use and Misuse of Codes, Standards, and Regulations
- Friction or Fiction: The Changing World of Slip-and-Fall Analysis
- Prevent Slips, Trips and Falls With ANSI/ASSP A1264 Walking/Working Surface Standards
- Hot Wheels: Tips and Strategies for Successfully Subrogating Vehicle Product Liability Claims
- Product Failures: Potential Layers of Liability
- Walkway Auditor Training Course: ASTM F2948
- A New Suite of Tribometer Standards
- The 'Conditioning Clip' for Slider 55 preparation
- The 'Shim Method' for testing 3D-profiled bathing surfaces
- Pendulum friction testing of patterned 3D-profiled bathing surfaces
- British Pendulum Slider 55 lifespan considerations versus EN 16165 preparation requirements
- Premises Liability: Tips for Slips & Trips
- Proving That Your Subrogation Target Breached an Accepted Standard of Care
- Useful Tech for Premises Liability Claims & Litigation

## Education

- Georgia Institute of Technology - Bachelor of Engineering - Mechanical Engineering - Atlanta - Georgia

## Training Courses

- Design for Manufacture and Assembly, Designing Plastic Parts for Assembly - University of Wisconsin
- Plastic Injection Molded Part Design & Molding Processes Workshops - GE Plastics
- Advanced Plastic Gear Design - Universal Technical Systems
- The Bolted Joint - American Society of Mechanical Engineers
- Photogrammetry and Analysis of Digital Media - SAE
- Understanding Slip & Fall Events: A Biomechanical Perspective - University of Southern California
- Multifactorial Analysis of Slip and Fall Events: Implications for Forensic and Safety Professionals - ASTM
- Advanced Safety Management - Georgia Tech
- Injuries, Anatomy, Biomechanics & Federal Regulation - SAE
- Occupant and Vehicle Kinematics in Rollovers - SAE
- Commercial Vehicle Braking Systems - SAE
- Certificates in Recon-3D and Cloud Compare usage - Ai2-3D Forensics

## Affiliations

- American Society of Mechanical Engineers (ASME)
- American Society of Safety Professionals (ASSP)
- • Member, ANSI A1264 Accredited Standards Committee on Slip and Trip Prevention
- • Vice-Chair, Subcommittee A1264.2 Missteps on Walking-Working Surfaces
- ASTM International
- • Officer, Technical Committee F13 - Pedestrian/Walkway Safety & Footwear
- • Chair, Subcommittee F13.10 - Traction
- • Chair, Subcommittee F15.03 - Safety Standards for Bathtubs & Shower Structures
- • Former Chair, Technical Committee E58 - Forensic Engineering
- National Academy of Forensic Engineers (NAFE)
- • Fellow and Past President, Board of Directors
- • Former Technical Editor-in-Chief (2014-2019) - Journal of the NAFE

## Licenses

- PE40000848 - District of Columbia - PE
- 27766 - Delaware - PE
- 64099 - Florida - PE
- PE024560 - Georgia - PE
- PE17584 - Hawaii - PE
- 44910 - Louisiana - PE
- 59621 - Maryland - PE
- 24GE05941500 - New Jersey - PE
- 107016 - New York - PE
- 074801 - Pennsylvania - PE
- 26271 - South Carolina - PE

- 120823 - Tennessee - PE
- 134138 - Texas - PE
- 0402046335 - Virginia - PE