

Curriculum Vitae

Douglas R. Stahl, PE, CFEI/CVFI
Principal Engineer
Doug.Stahl@Stahl-Engineering.com

REGISTRATIONS

- **Professional Engineer - *State of Florida***, 1998 # 0052778
- **Professional Engineer - *State of Indiana***, 2003 # PE10302133

- **Certified Fire and Explosion Investigator - *National Association of Fire Investigators***, 2000 # 7188-2673
- **Certified Vehicle Fire Investigator - *National Association of Fire Investigators***, 2003 # 7188-2673v
- **Commercial Driver's License - Class A - *State of Indiana*** – with endorsements for Tank Vehicles, Passenger Transportation, School Bus, and Double or Triple Trailers, 2007- present

EMPLOYMENT/ EXPERIENCE

- ***Stahl Engineering & Failure Analysis, LLC*** - Fort Wayne, IN
2009 - present, Principal Engineer

- ***Navistar / International Truck and Engine Corporation*** - Fort Wayne, IN
1999 - 2009, Staff / Senior Engineer - Product Integrity Group/Truck Reliability Center
2004 - 2005, Reliability & Quality Program Manager - 3200 Integrated Mobility Bus

- ***Stahl Engineering & Failure Analysis, Inc.***
1999 - 2001, Fort Wayne, IN
1998 - 1999, Fort Lauderdale, FL

- ***Benedict Engineering Company*** - Tallahassee, FL
1995 - 1998, Senior Engineer/Team Leader
1993 - 1995, Forensic and Design Project Engineer

- ***Rolls Royce, Inc.*** - Atlanta, GA
1992, Test Engineer - Materials and Mechanical Technology

- ***Georgia Institute of Technology*** - Atlanta, GA
1985 - 1992, Research and Teaching Assistant - Materials Engineering
1983 - 1993, Materials & Mechanical Behavior Research - Mechanical Properties Research Lab
1983 - 1985, Manager - Fracture & Fatigue Research Laboratory

- ***Independent Engineering Consultant*** - Atlanta, GA
1983 - 1991, Failure Analysis, Material Analysis, Materials Testing, and Mechanical Design

- ***The Timken Company, Inc.*** - Canton, OH
1978 - 1983, Eight Quarters - Engineering Cooperative Professional Practice - Metallurgy Lab, Steel Sales, Bearing Manufacturing, Steel Properties Lab, Steel Melt Shop & Tube Fabrication

EDUCATION

- ***Georgia Institute of Technology*** - Atlanta, GA
1985 - Master of Science in Metallurgy with minor in Mechanical Engineering
Thesis research supported by NASA - Space Shuttle Main Engine Development Program
- ***University of Cincinnati*** - Cincinnati, OH
1983 - Bachelor of Science in Materials Science & Metallurgical Engineering, Cum Laude,
Senior Project research supported by General Electric - Jet Engine Division and NASA - Space Shuttle Main Engine Development Program
- ***Georgia Institute of Technology*** -Atlanta, GA
1986 – 1993 - Successfully completed all PhD course requirements and additional post-graduate research in Materials Science & Engineering with minor in Mechanical Engineering

PATENTS

- *Lift dolly for use in conjunction with stand-mounted power tools and the like* -
U.S. Patent 7,112,028 - 9/26/06
- *Lift dolly for use in conjunction with stand-mounted power tools and the like* -
U.S. Patent 6,837,665 - 1/4/05
- *Lift dolly for use in conjunction with stand-mounted power tools and the like, including mounting mechanism* - U.S. Patent 6,659,706 - 12/9/03
- *Lift dolly for use in conjunction with stand-mounted power tools and the like, including mounting mechanism* - U.S. Patent 6,533,524 - 3/18/03
- *Safety guard stop for power saws* - U.S. Patent 6,119,569 - 9/19/00
- *Lift dolly for use in conjunction with stand-mounted power tools and the like, including mounting mechanism* - U.S. Patent 6,079,931 - 6/27/00
- *Lift dolly for use in conjunction with stand-mounted power tools and the like* -
U.S. Patent 5,957,649 - 9/28/99
- *Miter saw blade guards* - U.S. Patent 5,950,514 - 9/14/99
- *Radial arm saw blade guard* - U.S. Patent 5,918,522 - 7/6/99

PROFESSIONAL AFFILIATIONS/AWARDS

- *ALPHA SIGMA MU* - Metallurgical Engineering Honorary Society
- *ASM* - American Society for Materials - ASM Cincinnati Chapter - 1978 Stenger Award
- *ASME* - American Society of Mechanical Engineers
- *ASSE* - American Society of Safety Engineers - Tallahassee Section President, 1995 - 1997
- *FWEC* - Fort Wayne Engineer's Club
- *ISPE* - Indiana Society of Professional Engineers
- *NAFI* - National Association of Fire Investigators
- *NFPA* - National Fire Protection Association - member of NFPA 1192/1194 Technical Committees on Recreational Vehicles and Recreational Vehicle Parks and Campgrounds, 2013 - present
- *NSPE* - National Society of Professional Engineers
- *SAE* - Society of Automotive Engineers -*Motor Vehicle Fire Investigation Task Force*, Task Group of the National Fire Protection Association (NFPA) 921 Technical Committee, 2005 - present
- *TMS* - The Minerals, Metals, and Materials Society

PRESENTATIONS

- *Case Study with a Fire Origin and Fire Cause Remotely Located from the Root Cause of the Failure in a Commercial Vehicle*, - D.R. Stahl, and K.D. Parrott, Proceedings 11th International Symposium on Fire Investigation Science and Technology (ISFI), 2018, Itasca, IL
- *Vehicle and Equipment Failure Analysis - Fire and Forensics*, Fort Wayne Independent Insurance Adjusters Association, 2012, Fort Wayne, IN
- *Applicability and Limitations of Arc Mapping in Vehicle and Equipment Fire Investigation*, International Symposium on Fire Investigation Science & Technology (ISFI), 2012, University of Maryland, College Park, MD
- *Truck & Bus Fires; Origin & Cause in Diesel, Alternate Fuel, and Hybrid Vehicles*, 13th Annual Indiana Fire Investigation Conference - Indiana Chapter of the International Association of Arson Investigators (IAAI), 2012, Indianapolis, IN
- *Uses of Technology in Accident Reconstruction*, Tallahassee Claims Association, 1997, Tallahassee, FL
- *Uniaxial and Torsional Low Cycle Fatigue of Waspaloy at 24 and 649C*, ASM / TMS - AIME Winter Conference, 1988, Cincinnati, OH
- *Uniaxial and Torsional Low Cycle Fatigue of ODS MA754 at Ambient and Elevated Temperatures*, ASM / TMS - AIME Annual Conference, 1987, Phoenix, AZ

- *The Effect of Temperature, Microstructure, and Stress State on the Low Cycle Fatigue Behavior of Nickel Base Alloys*, ASTM Symposium on Low Cycle Fatigue - Directions for the Future, 1985, Lake George, NY

PUBLICATIONS

- *Case Study with a Fire Origin and Fire Cause Remotely Located from the Root Cause of the Failure in a Commercial Vehicle*, - D.R. Stahl, and K.D. Parrott, Proceedings 11th International Symposium on Fire Investigation Science and Technology (ISFI), 2018
- *A Case Study on the Use of Reverse FMEA (rFMEA) and the Scientific Method in a Fire Cause Determination*, - K. D. Parrott and D.R. Stahl, Fourth International Conference on Fires in Vehicles (FIVE), 2016, Baltimore, MD. SP Fire Research, SP REPORT, 2016:75 ISBN 978-91-88349-64-4 ISSN 0284-5172 2016, Baltimore, MD
- *Electrical Arcs and Sparks: A Literature Review of Definitions and Their Implications in the Analysis of 12 Volt Direct Current Electrical System Fires*, - K. D. Parrott and D. R. Stahl, International Symposium on Fire Investigation Science & Technology (ISFI), 2014
- *Case Studies of Parking Brake Fires in Commercial Vehicles* - K. D. Parrott and D.R. Stahl, SAE Technical Paper 2013-01-0207, 2013, doi:10.4271/2013-01-0207
- *Parking Brake Fires in Commercial Vehicles* - K. D. Parrott and D. R. Stahl, Second International Conference on Fires in Vehicles (FIVE), 2012, Chicago, IL
- *Applicability and Limitations of Arc Mapping in Vehicle and Equipment Fire Investigation* - K. D. Parrott and D. R. Stahl, pp. 617-623 in IFSI 2012 - Proc. 5th International Symposium on Fire Investigation Science & Technology (ISFI), 2012, University of Maryland, College Park, MD
- *Applying Advanced FMEA Methods to Vehicle Fire Cause Determinations* - K. D. Parrott, P. J. Mattes and D. R. Stahl, ASME. ASME International Mechanical Engineering Congress and Exposition, Volume 9: Transportation Systems; Safety Engineering, Risk Analysis and Reliability Methods; Applied Stochastic Optimization, Uncertainty and Probability: 621-631. doi:10.1115/IMECE2011-65159, 2011
- *Effect of Temperature, Microstructure, and Stress State on the Low Cycle Fatigue Behavior of Waspaloy* - D. R. Stahl, M. Mirdamadi, S.Y. Zamrik and S. D. Antolovich, American Society of Testing and Materials, Special Technical Publication 942, 1988
- *Effects of Nonproportional Cyclic Loading Histories on Type 304 Stainless Steel* - D. R. Stahl, D. L. McDowell, R. Kelly Payne, and S. D. Antolovich, Proceedings of the French Metallurgical Society, 1985
- *Biaxial Path Dependence of Deformation Substructure of Type 304 Stainless Steel* - D. L. McDowell, D. R. Stahl, S. R. Stock, and S. D. Antolovich, Metallurgical Transactions, Volume 19A, Number 5, PP 1277, May 1988. doi.org/10.1007/BF02662589

CONFERENCES, SEMINARS & SELECTIVE COURSE WORK

- *TMC Annual Meeting & Transportation Technology Exhibition*- Technology & Maintenance Council's Annual Meeting, Georgia World Congress Center, 2018, Atlanta, GA

- *The International Construction & Utility Equipment Exposition (ICUEE)- Kentucky Exposition Center, 2017, Louisville, KY*
- *TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2017, Nashville, TN*
- *Automotive Bearing Technology - SunCam, Online Continuing Education Courses, 2016*
- *Forensic Analysis Involving Fugitive Natural Gas and Propane - SunCam, Online Continuing Education Courses, 2016*
- *Introduction to Gear Technology - SunCam, Online Continuing Education Courses, 2016*
- *Future Highways – Automated Vehicles - SunCam, Online Continuing Education Courses, 2016*
- *Electrical Engineering Fundamentals for Non-Electrical Engineers - SunCam, Online Continuing Education Courses, 2016*
- *TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2016, Nashville, TN*
- *Ethics for U.S. Engineers - SunCam, Online Continuing Education Course, 2015*
- *Florida Engineering Laws & Rules - SunCam, Online Continuing Education Course, 2015*
- *TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2015, Nashville, TN*
- *Fire Investigator Scene Safety - International Association of Fire Investigators, 2014, Sarasota, FL*
- *Laws & Rules for Professional Engineers of Indiana - PDH Engineer, Online Continuing Education Course, 2014*
- *Ethics for Professional Engineers - PDH Engineer, Online Continuing Education Course, 2014*
- *Electrical Components - What They Are How They Work and What They Look Like on Drawings – PDH Engineer, Online Continuing Education Course, 2014*
- *Fuses and Circuit Breakers - PDH Engineer, Online Continuing Education Course, 2014*
- *Variable Frequency Drives - PDH Engineer, Online Continuing Education Course, 2014*
- *Indiana - Statutes, Rules, and Ethics for Professional Engineers - PDH Engineer, Online Continuing Education Course, 2014*
- *TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2014, Nashville, TN*
- *TMC Fall Meeting & National Technician Skills Competition - Technology & Maintenance Council's Fall Meeting, Walt Disney's Swan & Dolphin Resort, 2014, Orlando, FL*

- *Ethics I for Professional Engineers* - Engineer Educators, Online Continuing Education Course, 2013
- *Florida Engineers Laws & Rules [V.11]* - Red Vector, Online Continuing Education Course, 2013
- *Laws & Rules for Professional Engineers of Indiana* - Engineer Educators, Online Continuing Education Course, 2013
- *The International Construction & Utility Equipment Exposition (ICUEE)*- Kentucky Exposition Center, 2013, Louisville, KY
- *TMC Fall Meeting & National Technician Skills Competition* - Technology & Maintenance Council's Fall Meeting, Lawrence Convention Center, 2013, Pittsburgh, PA
- *Product Safety & Compliance and Liability Seminar* – Association of Equipment Manufacturers, 2013, Orlando, FL
- *International Symposium on Fire Investigation Science & Technology (ISFI)*, 2012, University of Maryland
- *13th Annual Indiana Fire Investigation Conference* - Indiana Chapter of the International Association of Arson Investigators, 2012, Indianapolis, IN
- *Florida Laws & Rules for Professional Engineers 2011-2013* - Engineer Educators, Online Continuing Education Course, 2012
- *Ethics for Professional Engineers* - Engineer Educators, Online Continuing Education, 2012
- *Laws & Rules for Professional Engineers of Indiana* - Engineering Educators, Online Continuing Education Course, 2012
- *Diesel Emissions and Control Technologies* - SAE Professional Engineering Education Seminar, 2011, Troy, MI
- *Basics of Fire Protection* - Engineer Educators, Online Continuing Education Course, 2011
- *TMC Fall Meeting and National Technician Skills Competition* - Technology & Maintenance Council's Fall Meeting, Raleigh Convention Center, 2011, Raleigh, NC
- *Online Laws & Rules 2009-2011* - SunCam, Online Continuing Education Course, 2011
- *Roller Bearing Technology* - SunCam, Online Continuing Education Course, 2011
- *National Seminar on Fire Analysis Litigation* - National Association of Fire Investigators/National Fire Protection Association, 2009, Sarasota, FL
- *Florida PE Laws & Rules* - Engineer Educators, Online Continuing Education Course, 2009
- *Federal Motor Carrier Safety Regulations* - J.J. Keller and Associates, 2009, Fort Wayne, IN
- *Fundamentals of Automotive Fuel Delivery Systems* - SAE Professional Engineering Education Seminar, 2008, Detroit, MI

- *Florida Board of Professional Engineers Board Hearings* - Continuing Education Attendance, 2008, Jacksonville, FL
- *Engineering Mechanics of Heavy-Duty Truck Systems* - University of Michigan, UMTRI, 2007, Ann Arbor, MI
- *Florida PE Laws & Rules* - Informed, Inc., Online Continuing Education Course, 2007
- *Vehicle Air Brake Systems & Components* - Bendix Commercial Vehicle Systems, 2006, Huntington, IN
- *Global 8-D Problem Solving, Ford Technical Education Program*, 2005, Fort Wayne, IN
- *Design Failure Mode & Effects Analysis Workshop* - Eastern Michigan University, 2005, Fort Wayne, IN
- *Vehicle Fire, Arson, and Explosion Investigation Training Program* - National Association of Fire Investigators, Eastern Kentucky University, 2003, Richmond, KY
- *Tire and Wheel Safety Issues* - Society of Automotive Engineers, Professional Engineering Education Seminar, 2002, Indianapolis, IN
- *Commercial Vehicle Inspection Familiarization* - Commercial Vehicle Safety Alliance, 2002, Fort Wayne, IN
- *Automotive Glazing Materials* - Society of Automotive Engineers, Professional Engineering Education Seminar, 2000, Troy, MI
- *National Advanced Fire, Arson, and Explosion Investigation Science and Technology Program* - National Association of Fire Investigators 1 National Fire Protection Association, Eastern Kentucky University, 2000, Richmond, KY
- *Braking Performance of Heavy Commercial Vehicles* - Radlinski and Associates, 1999, Fort Wayne, IN
- *Forty-first Stapp Car Crash Conference*-SAE, 1997, Orlando, FL
- *Injuries, Anatomy, Biomechanics & Federal Regulations* - SAE Professional Engineering Education Seminar, 1997, San Diego, CA
- *Bone Mechanics* - University of Florida FEEDS Program, 1997, Tallahassee, FL
- *Pedestrian Crash and Causation* - Florida Department of Transportation, 1995, Tallahassee, FL
- *Traffic Accident Reconstruction* - Northwestern University Traffic Institute, 1995, Evanston, IL
- *Defensive Driving Techniques* - North Florida Safety Council, 1995, Tallahassee, FL