



## **BRIAN A. DARR, P.E. IAAI-FIT(V)**

Mechanical Engineer

Mr. Darr is a graduate of The Ohio State University with a Bachelor of Science Degree in Mechanical Engineering. He has education, training, and experience in design, development, testing, and evaluation of mechanical systems. He has extensive experience in the manufacturing and testing of tires.

Mr. Darr's specific tire experience includes development, manufacturing, quality investigation, race tire preparation and testing of tires at numerous testing facilities. He worked in a tire manufacturing facility as a plant technical engineer where he investigated quality related issues and in a R&D center where he design, developed, tested and analyzed tires. He has visited numerous tire production plants from Goodyear, Bridgestone, Michelin and Continental tire. He has inherent knowledge of the PAX runflat tire system and C3M manufacturing process. He also was responsible for verifying that all standards and regulations were met related to the tire product and the tire pressure monitoring sensors. Mr. Darr has been qualified as a tire expert in State and Federal court. He has completed forensic tire failure analysis on many types of tires (passenger, light truck, radial medium truck, retreads, etc) in which he referenced 100's of publicly available tire related documents. He reviews forensic tire reports from outlying offices along with providing marketing support and giving seminars nationwide.

Additional forensic experience includes vehicle accident reconstruction for passenger and commercial vehicles, motorcycles, vehicle component failure analysis and insurance fraud/consistency evaluations. Crash data retrieval (CDR) of passenger and commercial vehicle engine control module (ECM). Mr. Darr evaluated traffic signal timing relating to intersection collisions. Mr. Darr provided services in product and material failure analysis, cause analysis of plumbing failures, mechanical equipment and machinery failures, vehicle and residential fire investigation, fire suppression system investigation, lightning strike investigation, nondestructive examination and testing, product design and assessment of conformance to government, corporate, industry, safety and international standards.

## **EDUCATION AND PROFESSIONAL ASSOCIATIONS**

### **Education:**

Bachelor of Science– Mechanical Engineering, The Ohio State University, 1996.

### **License:**

Registered Professional Engineer – OH 68140, FL 70257, LA 36957, AL 32576, MS 25570, AR 16538, TX 121127, GA 040399, KY 31716, TN 120795.

### **Member:**

American Society of Mechanical Engineers (ASME)  
Society of Automotive Engineers (SAE)  
International Association of Arson Investigators (IAAI)

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**Specialized Training:**

- Remote Pilot Airmen Certification, 2019
- Certified Fire Investigation Technician for Motor Vehicle -IAAI FIT(V), 2019
- HVAC Training with EPA universal certification -AATA, 2018
- HVEDR Training– 2017
- Certified Fire Investigation Technician -IAAI FIT, 2016
- Fundamentals of Fire investigation -IAAI, 2015
- Advanced Crash Reconstruction Utilizing Human Factors-NWU, 2014
- HVE Reconstruction (EDCRASH) – Engineering Dynamics Corp, 2012
- ECM Crash Data Retrieval Specialist Training– 2011
- CSI Crash Data Retrieval Specialist Training-Level II – 2011
- CSI Crash Data Retrieval Data Technician and Analyst courses – CSI, 2010
- Crash Reconstruction at Traffic Signal Intersections – Forensic Traffic Specialist, 2010
- Northwestern Online Accident Investigation 1 & 2 – NWU, 2010
- Pedestrian and Bicycle Accident Investigation –IPTM, 2010

**Publications and Patent applications:**

- Spring/Summer 2016 NASP Subrogator Magazine- How to get the most traction on your tire failure case.
- November 2015 Claims Magazine and Winter 2016 NASP Subrogator Magazine - Water heater connection failures: An Engineering Assessment of Cause.
- 2002 Patent submission for nylon cap ply in load range E light truck tires.
- 1996 Patent submission for wood chipper mechanism.

**Presentations:**

- 2017/09 IASIU Presentation
- 2016/04 Accident reconstruction presentation to Allstate
- 2015/11 Tire presentation to NASP Conference
- 2015/07 Tire presentation to Allstate
- 2015/06 Tire presentation to Louisiana Claims Association Conference
- 2015/02 Tire presentation to SW Louisiana Claims Association
- 2013/03 Accident consistency presentation to State Farm

**EMPLOYMENT HISTORY**

03/14 – Present	U.S. Forensic, LLC.
2009 - 2011 & 2011 - 2014	Rimkus Consulting Group, Inc.
01/11 - 10/11	Darr Consulting, LLC.
01/11 - 10/11	Carlson Engineering, Inc.
2003 - 2009	Honda R&D Americas, Inc.
1997 - 2003	Cooper Tire & Rubber Co.
1996 - 1997	Lockheed Martin Federal Systems
1995 - 1996	Delphi Chassis Systems, GM

**DETAILED PROFESSIONAL EXPERIENCE:**

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**U.S. Forensic, LLC.**

**03/2014 - Present**

Provides engineering consulting services for legal, insurance and corporate clients. Responsibilities include vehicle accident reconstruction and analysis (cars, trucks, commercial vehicles, motorcycles, bicycles, pedestrians and multiple-vehicle collisions), vehicle system evaluation and forensic failure analysis (brakes, tires, seat belts, airbags, head and tail lamps, security systems, suspension, steering and transmissions), perception and reaction times, intersection line of sight and traffic signal analysis, insurance fraud/consistency evaluation and low speed collision evaluation for biomechanical analysis. Review forensic tire reports from outlying offices. Provide marketing support and give seminars nationwide.

Experienced in mechanical system and component failures, nondestructive testing and evaluation and product design. Provide engineering expertise in plumbing failures and water related losses involving water filters, water heaters, piping and fittings, HVAC systems, lightning evaluation, toilets and fire suppression systems.

**Rimkus Consulting Group, Inc.**

**2009 - 2011 & 2011 - 2014**

SENIOR CONSULTANT

Provides engineering consulting services for legal, insurance and corporate clients. Responsibilities include vehicle accident reconstruction and analysis (cars, trucks, commercial vehicles, motorcycles, bicycles, pedestrians and multiple-vehicle collisions), vehicle system evaluation and forensic failure analysis (brakes, tires, seat belts, airbags, head and tail lamps, security systems, suspension, steering and transmissions), perception and reaction times, intersection line of sight and traffic signal analysis, insurance fraud/consistency evaluation and low speed collision evaluation for biomechanical analysis. Review forensic tire reports from outlying offices. Provide marketing support and give seminars nationwide.

Experienced in mechanical system and component failures, nondestructive testing and evaluation and product design. Provide engineering expertise in plumbing failures and water related losses involving water filters, water heaters, piping and fittings, HVAC systems, toilets and fire suppression systems.

**Darr Consulting, LLC. &  
Carlson Engineering, Inc.**  
*Forensic Engineering Firm*

**01/11 - 10/11**

PRINCIPLE CONSULTANT

Provided engineering consulting services for legal, insurance and corporate clients. Responsibilities included: tire failure analysis, tire design and manufacturing analysis and vehicle accident reconstruction and analysis. Testimony given in State and Federal courts. Participated in creating testing protocol, testing, analysis of results and written draft SAE paper (2012-01-0795) titled: An analysis and evaluation of the damage and durability performance of steel belted radial ply passenger tires that have experienced severe impacts.

**Honda R&D Americas, Inc.**  
*Automotive OEM R&D Center*

**2003 - 2009**

SENIOR TIRE PROJECT LEADER, CHASSIS DESIGN

Responsible for overseeing and coordinating ALL tire development activities for North American developed Honda vehicles (car, truck, minivan, SUV). This includes: create & issue tire development instructions, being technical liaison to the tire suppliers while coordinating all related activities, evaluate tires with test engineer & suggest improvements to suppliers to meet development targets, interpret F&M data & acquire pacejka coefficients for Carsim models, manage multiple development teams, create and maintain development schedule. Use Catia V4/V5 for tire suspension layout verification & to issue all tire related drawings for mass production. Conduct quality visits to tire supplier production plants. Additional responsibilities include: future tire planning as presented at N.A. tire conference, tire pressure monitoring sensor (TPMS) and verification that all standards and regulations related to tire and TPMS are satisfied. Inherent responsibilities include: daily communication with all functional groups & suppliers using strong interpersonal skills, maintain cost and quality, solve problems, make decisions and numerous presentations to high level executives.

**Cooper Tire & Rubber Company**  
*Manufacturer of rubber tires, hoses and door seals*

**1997 - 2003**

SUV/LT TIRE DEVELOPMENT ENGINEER, TECH CENTER (1997- 2000 & 2001 – 2003)

Responsible for all phases of the new Sport Truck line (18" & larger sizes), initial concept to production & project management. Develop & facilitate test programs to benchmark/improve/reduce costs of current product lines and initiate new ideas in products from concept to production. This includes: Finite Element Analysis (FEA) tire analysis and simulation, design, prototype, test and production certify new products. Inherent responsibilities include: presentations, conduct dynamic handling testing and statistical analysis of test results via Minitab and test correlation. Participate in forensic tire reconstruction analysis to aid accident investigations. Participate in race tire preparation for annual SCCA runoffs and SAE formula car events.

PLANT TECHNICAL ENGINEER, COOPER TIRE FINDLAY PLANT (2000-2001)

Accountable for production quality of 16" RLT tires and introduction of new products to production. Lead daily downgrade meeting for continuous improvement among production departments to resolve current issues relating to quality. Interact daily with union plant personal. Incorporate Six-sigma ( $6\sigma$ ) methods, such as FMEA, to identify root cause of tire downgrades. Act on findings to reduce plant variation, increase product quality and reduce plant scrap.

**Lockheed Martin Federal Systems**  
*Government Contractor*

**1996 - 1997**

SCIENTIST, ADVANCED DEVELOPMENT UNIT

Scientist in Advanced Development Unit. Responsibilities include: develop/design mechanical systems using IDEAS Masterseries/2-D Catia from concept to prototype, documentation using GD&T and QS9000, interact with various departments to solve problems and provide solutions for the customer. Secret clearance held.

**Delphi Chassis Systems, GM**

**1995 - 1996**

*Tier 1 Automotive OEM spindle bearing supplier with integrated ABS wheel speed sensor*

PRODUCT ENGINEERING INTERN

Intern in the Product Engineering division. Responsibilities include testing and maintaining prototype progress reports, troubleshooting of lab equipment, integral ABS spindle reject data acquisition and analysis, interaction among labor force and give biweekly presentations of results found.