

## **CURRICULUM VITAE**

**Timothy C. Behrens, P.E., CFI, CFEI, CVFI**  
**Behrens Engineering Investigations, LLC**  
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### **EDUCATION**

University of Arizona  
Tucson, Arizona  
Bachelor of Science Degree in Mechanical Engineering  
Graduated with Honors Distinction – 1983  
Academic Honors – Tau Beta Pi – Engineering Honor Society

Glendale Community College  
Glendale, Arizona  
Engineering major – 1979 to 1981

### **EMPLOYMENT**

Behrens Engineering Investigations, LLC  
Forensic Engineering Consultant  
September 2006 to present

EFI Global, Inc.  
Senior Engineer  
February 1999 to August 2006

Exponent Failure Analysis Associates, Inc.  
Senior Engineer  
June 1987 to February 1999

Garrett Turbine Engine Company  
Development Engineer and Mechanical Component Design Engineer  
June 1983 to June 1987

Climax Molybdenum Company  
Anaconda Minerals Company  
Construction Engineer  
Summer 1981 and 1982

## **CERTIFICATIONS**

Registered Professional Mechanical Engineer, Arizona, #31197  
Registered Professional Engineer, Colorado, #34469  
Registered Professional Engineer, Utah, #372882-2202  
Registered Professional Engineer, New Mexico, #17085  
Registered Professional Engineer, Texas #103038  
Record with National Council of Examiners for Engineering and Surveying (NCEES), #18001  
Certified Fire Investigator (IAAI) # 28-090909  
Certified Fire and Explosion Investigator (NAFI), #6805-2704  
Certified by Accreditation Commission for Traffic Accident Reconstruction (ACTAR), #1020  
Certified Vehicle Fire Investigator (NAFI)  
Certified Operator for English XL Variable Incidence Tribometer (Slip-Tester for floors)

## **PROFESSIONAL EXPERTISE & EXPERIENCE**

Vehicle accident investigation and reconstruction analysis

Vehicle fire cause and origin investigation

Vehicle crashworthiness and crash testing

Vehicle handling/braking/tire analysis and testing

Vehicle fuel system safety analysis and testing

Fire and explosion investigation

Industrial and consumer product failure analysis

Slip/trip and fall accident analysis

Mechanical design analysis

Water damage / plumbing failure engineering investigations

Project management

Expert witness testimony

## **ADDITIONAL SPECIALIZED TRAINING**

Failure Analysis Associates, Inc.  
Vehicle Accident Reconstruction Training Seminar  
1994 – 16 hours

Lee S. Cole and Associates, Inc.  
Investigation of Vehicle Fires  
1994 - 20 hours

Society of Automotive Engineers  
High Speed Rear Impact TOPTEC Symposium  
1997

Engineering and Fire Investigations  
Low Speed Impact Analysis and Crash Testing  
1999 – 20 hours

Lee S. Cole & Associates, Inc.  
Mechanics of Vehicle Theft Seminar  
1999 – 8 hours

Lawyers and Judges Publishing Company, Inc.  
Low-Speed Automobile Accidents –  
From Collision to Trial Seminar  
1999 – 16 hours

National Association of Fire Investigators  
Determining the Cause and Origin of Fires and Explosions  
Training Seminar  
2000 – 32 hours

Arizona Chapter, International Association of Arson Investigators  
Natural Gas Seminar  
2001 – 8 hours

Society of Automotive Engineers  
Accident Reconstruction TOPTEC Seminar: Special Topics  
May 2001

Steven R. Mackaig & Associates, Inc.  
Advanced Vehicle Fire Investigation  
June 2001 – 8 hours

Fire Findings Laboratories, LLC  
Investigation of Gas and Electric Appliance Fires  
October 2002 – 16 hours

The American Concrete Institute  
Troubleshooting Concrete Construction  
November 2002 – 8 hours

American Society of Civil Engineers  
Testifying Skills for Engineers  
March 2003 – 16 hours

Society of Automotive Engineers  
Tire & Wheel Safety Issues  
March 2004 – 8 hours

National Association of Subrogation Professionals  
Practical Spoliation: How it Plays Out in The Real World, Not Just On Paper  
Toilet Assembly Failures  
March 2004 – 2.5 hours

University of California, Riverside  
University Extension  
Tire Failure Analysis in Traffic Accident Investigations  
April 2004 – 12 hours

American Trainco  
Boiler Operation, Maintenance & Safety  
September 2004 – 14 hours

National Association of Fire Investigators  
Vehicle Fire, Arson & Explosion Investigation Science & Technology Seminar  
September 2005 – 32 hours

HalfMoon Seminars  
Legal Issues for Arizona Professional Engineers  
February 2006 – 8 hours

William English, Inc.  
English XL Variable Incidence Tribometer Certification Program (CXLT)  
June 2006 – 8 hours

Fire Findings Laboratories  
Investigating Residential Dryer Fires  
April 2007 Symposium – 16 hours

Society of Plastics Engineers, Inc.  
Plastics Failure Analysis Workshop & Seminar  
August 2007 – 16 hours

International Association of Arson Investigators  
LP Gas Service Requirements and Investigation of LP Gas Fires and Explosions  
May 2008 – 4 hours

International Association of Arson Investigators  
Effective Investigation & Testimony Course  
February 2009 – 8 hours

National Association of Subrogation Professionals  
Western Region Chapter Meeting  
Commercial Kitchen Fire Losses  
February 2009 – 2 hours

American Society of Plumbing Engineers  
Natural Gas and Propane Sizing  
April 2009 Webinar Lecture – 1 hour

Society of Automotive Engineers  
Fundamentals of Motor Vehicle Fire Investigation Seminar  
October 2009 – 24 hours

Arizona Chapter of the International Association of Arson Investigators  
Natural Gas Seminar  
February 2010 – 8 hours

Arizona Chapter of the International Association of Arson Investigators  
Forensic Evidence Collection and Processing  
April 2010 – 8 hours

Arizona Chapter of the International Association of Arson Investigators  
Fire Investigation Training Seminar – Alternative Fuel Vehicles  
July 2010 – 20 hours

Arizona Chapter of the International Association of Arson Investigators  
Scene and Investigator Safety Training Seminar  
October 2010 – 8 hours

## **ORGANIZATIONS**

Member, Society of Automotive Engineers (SAE)  
Member, American Society of Mechanical Engineers (ASME)  
Member, American Society for Testing and Materials (ASTM)  
Member, National Association of Fire Investigators (NAFI)  
Member, International Association of Arson Investigators (IAAI)  
Member, Southwestern Association of Technical Accident Investigators (SATAI)  
Member, American Society of Plumbing Engineers (ASPE)  
Appointed to Enforcement Advisory Committee, AZ State Board of Technical Registration

## **PUBLICATIONS**

“High Speed Rear Impact Crash Test Video and Notebook”  
Society of Automotive Engineers, January 1998 (with S.M. Werner).

“Heavy Truck Crashworthiness Phase III,” Society of Automotive Engineers, Cooperative Research Project, Report No. CRP-013, April 1997 (with R.E. Larson, M.C. Marine and S.M. Werner). (This project resulted in the development of the SAE Recommended Practices J4218, J4219, J2420, J2421, J2422, J2423, J2424, J2425, and J2426).

“Ignition and Combustion of Automotive Carbon Canisters,” Failure Analysis Associates, Inc. Report, October 1991 (with D.A. Limbert, R.C. Lange, and J.L. Wirth).

“Comparative Refueling Losses from Disconnected Evaporative Emission and Onboard Refueling Vapor Recovery Systems,” Failure Analysis Associates, Inc. Report, October 1991 (with R. C. Lange and D.A. Limbert).

“Refueling Vapor Ignition Demonstration,” Failure Analysis Associates, Inc. Report, October 1991 (with N.K. Cooperrider).

“Thirty MPH Side Impact Crash Test 1985 Buick Century with Mobile Oil Company Onboard Refueling Vapor Recovery System,” Failure Analysis Associates, Inc. Report, February 1988 (with N.K. Cooperrider and T. Thomas).