

# AARON R. ZEAMER, IAAI-CFI(V), FIT, CFEI, CVFI STAFF CONSULTANT

#### arzeamer@engsys.com

Mr. Zeamer is an International Association of Arson Investigators (IAAI) Certified Fire Investigator (CFI(v)) with an additional specialized accreditation in vehicle fires. He is also a Certified Vehicle Fire Investigator (CVFI) and a Certified Fire and Explosion Investigator (CFEI) through the National Association of Fire Investigators (NAFI). Mr. Zeamer has qualified as an expert in fire origin and cause analysis, as well as accident reconstruction and vehicle powertrain failure mode analysis. He has been conducting fire origin and cause evaluations, as well as fire and explosion evaluations, since 2004. His services have been rendered by plaintiff firms, defense firms, individuals, and private companies to include insurance companies. His testimony has included fire origin and cause determination, failure mode analysis, and accident reconstruction.

Mr. Zeamer relies upon the facts present during an investigation and will not present his findings in any manner other than truthfully and accurately. He relies upon test data that has been substantiated and peer reviewed throughout the industry to come to his conclusions and will not approach, or conduct, an investigation through the means of "pseudo-science". Mr. Zeamer strongly believes that the accurate and truthful presentation of the facts is paramount.

# **Areas of Specialization**

Fires and Explosions
Origin & Cause
Powertrain Failure Analysis
Industrial and Commercial Machinery Fires
Collision and Non-Collision Related Vehicle Fires
Product Fires
Vehicle Component Failure Mode Analysis
Collision Avoidance and Timing Sequence
Momentum Based Collision Analysis
Forensic Evaluation of Failed Components
AutoCad Diagramming and Modeling

#### **Education**

Texas A&M University, 1998-1999 Lonestar Community College, 2000-2011

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## Certifications

Certified Fire Investigator, IAAI
Vehicle Fire Credential Endorsement, IAAI
Certified FIT, IAAI
Certified Fire and Explosion Investigator, NAFI
Certified Vehicle Fire Investigator, NAFI
Certified Accident Reconstruction Expert, ACTAR # 2690
Advanced Accident Reconstruction, TEEX
Licensed Private Investigator, PI # A05924
Certified First Aid/CPR/AED, American Red Cross
Certified Forklift Operator

# **Professional Affiliations/Honors**

Society of Automotive Engineers (SAE)
Accreditation Commission for Traffic Accident Reconstruction (ACTAR)
National Association of Fire Investigators (NAFI)
National Fire Protection Association (NFPA)
Texas Association of Accident Reconstruction Specialists (TAARS)

# **Court Qualifications**

Expert Witness: Fire Origin & Cause Expert Witness: Accident Reconstruction Expert Witness: Engine Failure Analysis

#### **Positions Held**

# **Engineering Systems Inc., Conroe, Texas**

Staff Consultant, 2022 - Present Senior Technologist, 2016 - 2022

## Auto Fire and Safety Consultants, Conroe, Texas

Senior Fire Investigator and Accident Reconstruction Expert, 2004-2015

### **Continued Education**

IAAI International Training Conference (ITC), Jacksonville, FL, April 10-15, 2022.

IAAI Marine Fire Investigation, Beaufort, SC, March 8-11, 2022.

IAAI Motor Vehicle Fire Investigation, Livingston, TX, February 8-10, 2022.

IAAI Fire Conference, Frisco Texas, May 20-25, 2018.

ARC-CSI Crash Conference, Crash Testing, Las Vegas, NV, September 18-21, 2017.

ARC-CSI Crash Conference, Crash Testing, Las Vegas, NV, May 23-26, 2016.



- ARC-CSI Crash Conference, Crash Testing, Las Vegas, NV, June 2-5, 2014.
- Vehicle Fire, Arson & Explosion Investigation Science & Technology Seminar, (Total Burns Testing), NAFI, Fire and Safety Engineering Technology, Eastern Kentucky University, Sept. 30 Oct. 3, 2013.
- Inner Circle of Investigators, 2011 Annual Conference, Investigative Professional Development Conference, Conroe, TX, Oct. 21-22, 2011.
- National Vehicle Fire, Arson and Explosion Investigation Science & Technology Seminar, Lexington, KY, Sept. 12-16, 2011.
- Collision Reconstruction, Texas Engineering Extension Service, Texas A & M University System (80 hour course), June 6-16, 2011.
- ASME International Mechanical Engineering Congress & Exposition, Lake Buena Vista, FL, Nov. 13-19, 2009.
- ACFE National Conference, Las Vegas, NV, Oct. 14-16, 2009.
- Vehicle Fire, Arson & Explosion Investigation Science & Technology Seminar, (Total Burns Testing), NAFI, Fire and Safety Engineering Technology, Eastern Kentucky University, Sept. 19-24, 2009.
- SAE World Congress, SAE Motor Vehicle Fire Investigation Task Force, Detroit, MI, April 20-22, 2009. NFPA 556 Committee Meeting and Rule-Making, San Antonio, TX, Feb. 5-6, 2009.
- Fire and Materials 2009, 11th International Conference and Exhibition, Interscience Company
- Fire and Materials 2009, 11th International Conference and Exhibition, Interscience Communications Limited, San Francisco, CA, Jan. 26-28, 2009.
- CDR User's Conference, Houston, TX, Jan. 26-28, 2009.
- Trucking Litigation and D.O.T. Regulations, Houston, TX, Nov. 13, 2008.
- Texas Association of Accident Reconstructionists, Rotational Mechanics Developed from Newton's Laws and Point Mass Mechanics, Annual Meeting, Houston, TX, Nov. 13-15, 2008 (24 hours).
- NFPA Technical Committee Board Meeting regarding NFPA 921, Orlando, FL, October 8-10, 2008.
- Inner Circle of Investigators, 2008 Annual Conference, Investigative Professional Development Conference, Jackson Hole, WY, August 15-16, 2008.
- ARC-CSI Crash Conference, Crash Testing, New Vehicle Technologies, Reconstruction Techniques, Momentum and Energy, Airborne Analysis and Rotational Mechanics, Pedestrian Crash Analysis, Reconstruction of PIT crashes, Rollovers, Las Vegas, NV, June 2-4, 2008.
- NFPA World Safety Conference & Exposition, Executive Board Member FSTE, Campus Fire Safety, Air Force Application of Arc Flash Protection, Pitfalls, Perils and Reasoning, Fallacies of Determining Fire Cause in the Absence of Proof, Las Vegas, NV, June 205, 2008.



- SAE World Congress, SAE ABA Fire Safety Committee, SAE Motor Vehicle Fire Investigation Task Force, and AIRP Committee Meeting, Detroit, MI, April 13-17, 2008.
- ARC-CSI CDR User's Conference, Houston, TX Jan. 28-30, 2008 (20 hours).
- SAE Highway Vehicle Event Data Recorder Symposium, NTSB Training Center, Ashburn, VA, Sept. 5-6, 2007.
- National Fire, Arson & Explosion Investigation Training Program, National Association of Fire Investigators (NAFI) and National Fire Protection Association (NFPA), Sarasota, FL, August 6-8, 2007.
- Background Investigations, Digital/Computer Investigations, 2007 TALI Super Conference, Las Colinas, TX, July 26-28, 2007.
- People Safe in Rollovers Foundation, Emergency World Summit, Washington D.C., July 18-20, 2007.
- ARC-CSI Crash Conference, Las Vegas, NV, June 4-7, 2007. (28 hours, 21 ACTAR CEU's).
- Technical Committee on Hazard and Risk of Contents & Furnishings, National Fire Protection Association, May 1-2, 2007.
- Inner Circle of Investigators, 2007 Annual Conference, The Warren Group, Forensic Engineers & Consultants, Fires Explosions and Electricity, Irmo, SC, April 20-21, 2007.
- SAE World Congress, SAE ABA Fire Committee, SAE Motor Vehicle Fire Investigation Task Force, and AIRP Committee Meeting, Detroit, MI, April 16-19, 2007.
- Fire and Materials 2007, Interscience Communications Limited, Fire School San Francisco, CA, Jan. 29-31, 2007.
- Central Texas Fire Investigators Associations Annual Meeting & Conference, Electrical Fires 102

  Training Program, Austin, TX, Dec. 12-13, 2006.
- TAARS F3T2 Conference, Factors, Formula, Forensic, Technology Training, Houston, TX, Sept. 17-21, 2006.
- ISFI International Symposium on Fire Investigation Science and Technology, Fire Technology Involving Vehicles & Structures, Cincinnati, OH, June 26-29, 2006.
- ARC-CSI Crash Conference, Crash Testing Rollover, Motorcycle and Bus, Las Vegas, NV, June 5-8, 2006.
- SAE World Congress, SAE AIRP Committee Meeting, SAE ABA Fire Safety Committee, Hydrogen Vehicle Safety (Parts 1 & 2), Fire Statistics and Analysis (Parts 1 & 2), Material Flammability and Fire Experiments (Parts 1 & 2), Detroit, MI, April 3-7, 2006.
- IAAI, Specialized Training in Vehicle Investigation Death and Injury, March 29-31, 2006. (20 hours).



- TAARS, Commercial Vehicle Permits, Calculating Legal CMV Weights, Overview of Research into Common Factors that Influence Driver Response, CMV ABS and Disk Air Brake Systems, Houston, TX, February 16-18, 2006. (20 hours).
- Live Burn Testing of Five (5) Ford Vehicles Related to Cruise Control Deactivation Switches conducted by Nationwide Insurance, Houston, TX, Dec. 5, 2005.
- Inner Circle of Investigators, 2005 Annual Conference, Investigative Professional Development Conference, Williamsburg, VA, Oct. 14-15, 2005. (10 hours).
- Vehicle Fire, Arson & Explosion Investigation, (Total Burns Testing), Science & Technology Seminar, NAFI, Fire and Safety Engineering Technology, Eastern Kentucky University, Sept. 26-29, 2005.
- NFPA 921 Task Force Committee Meetings Relative Changes to NFPA 921, Minneapolis, MN, Sept. 14-16, 2005.
- NAFI National Seminar in Fire Analysis Litigation, Sarasota, FL, August 11-12, 2005.
- NAFI National Fire, Arson & Explosion Investigation Training Program, Computer Fire Modeling, Sarasota, FL, August 8-10, 2005.
- SAE World Congress, Fire Safety, Accident Reconstruction, Side Impact & Rollovers, Restraints
  Systems, (AIRP Standards Committee & VFI Advisory Group), Detroit, MI, April 12-15, 2005.
- Fire and Materials 2005, Interscience Communications Limited, Fire School, San Francisco, CA, Jan. 31-Feb. 1, 2005.
- Fire Hazard to Occupants of Road Vehicles, Interscience Communications Limited, Fire School, San Francisco, CA., Jan. 31-Feb. 1, 2005.
- Cone Calorimeter Predictions of FMVSS 302 Performance, Interscience Communications Limited Fire School, San Francisco, CA, Jan. 31-Feb. 1, 2005.
- Vehicle Fire, Arson & Explosion Investigation, (Vehicle Burns Testing) Science & Technology Seminar, NAFI, Fire and Safety Engineering Technology, Eastern Kentucky University, Sept. 27-30, 2004.
- Highway Vehicle Event Data Record Symposium: State-of-the Art of Passenger Vehicle Accident Recorder Technology, EDR Device Research and Validation, and EDR End-User and Accident Reconstruction, National Transportation Safety Board, George Washington University, Virginia Campus, June 3-4, 2004.
- HVE Forum, San Francisco, CA, 2004.



## **Presentations**

- "Vehicle Fires; Recalls and Pitfalls", presented by Aaron Zeamer at the IEEE ISPC 2023, Dallas, TX, May 1-2, 2023.
- "Black Box Data Crash Retrieval", presented by Aaron Zeamer at the 2013 National Vehicle Fire, Arson and Explosion Investigation Science and Technology Seminar, 2013.
- "Live Burn Presentations", presented by Aaron Zeamer at the 2013 National Vehicle Fire, Arson and Explosion Investigation Science and Technology Seminar, 2013.
- "Black Box Data Crash Retrieval" and "Sources of Information/Recalls/Service Bulletins", presented by Cam Cope at the 2009 Vehicle Fire Arson & Explosion Investigation Science & Technology Seminar, NAFI and Eastern Kentucky University, Lexington, KY, Sept. 24, 2009.
- "Vehicle Engine Compartment Fires", presented by Cam Cope at the Fire and Materials 2009 at the 11<sup>th</sup> International Conference and Exhibition, Interscience Communication Limited, San Francisco, CA, Jan. 26-28, 2009.
- "Battery Disconnect Devices", presented by Cam Cope at the 2008 ASME International Mechanical Congress and Exposition, Boston, MA, Nov. 4, 2008.
- "The Investigation of Vehicle Fire", presented by Cam Cope at the TALI Super Conference, Las Colinas, TX, July 26-28, 2007.
- "The Investigation of Electrical Fires in Vehicles", presented by Cam Cope at the Fire Explosions and Electricity: Intensive Instruction, Irmo, SC, April 20-21, 2007.
- "Heavy Truck Fires", presented by Cam Cope at the Inner Circle of Investigators 2005 Annual Conference, Williamsburg, VA, Oct. 14-15, 2005.