

Hayden Fetter

PE, MSc, CFEI, CVFI
Senior Staff Consultant



Hayden Fetter is a Forensic Mechanical Engineer and Fire Investigator for Engineering Systems Inc. (ESi), where he assists the Automotive and Fire & Explosion groups.

Mr. Fetter has over seven years of technical experience and training in forensic investigations. He has performed origin and cause analysis for residential, vehicle, marine, and product fire investigations. He has also performed data collection and analysis for automotive crash reconstruction, as well as failure analysis of automotive equipment, industrial and residential machinery, and plumbing.

Mr. Fetter received a BS in Mechanical Engineering from University of Colorado Boulder and received his MSc in Forensic Investigation from Cranfield University in the UK. At Cranfield University, he received technical training in a variety of forensic disciplines and activities, including fire investigation, firearms and ballistics, materials engineering, analytical techniques, and expert witness testimony.

Mr. Fetter is the only mechanical engineering consultant in the United States to have completed a Master of Science in Forensic Investigation.

Education

MSc, Forensic Investigation. Cranfield University. 2022

BS, Mechanical Engineering, Engineering Management Certificate. University of Colorado Boulder. 2021

Licenses & Certifications

- State of Colorado P.E., License #: 0068456
- Certified Fire & Explosion Investigator, License #: 27501-15678v
- Certified Vehicle Fire Investigator, License #: 27501-15678v
- Bosch Crash Data Retrieval Technician
- Bosch Crash Data Retrieval Analyst
- FARO Laser Scanner Operator

Contact Information

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ESi Denver

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Areas of Specialization

- Fire & Explosion Investigation
- Automobile & Heavy Truck Accident Investigation
- Event Data Recorders
- Vehicle Fires
- Vehicle Engineering
- Residential Fires & Explosions
- Piping, Boilers & Pressure Vessels
- Mechanical Engineering

Positions Held

Engineering Systems Inc., Denver, Colorado

- Senior Staff Consultant, 2026- Present
- Staff Consultant, 2022 – 2026

Jensen Hughes, Englewood, Colorado

- Associate Forensic Mechanical Engineer, 2021–2022
- Mechanical Engineering Intern/Technician-Forensics, 2019–2021

Continuing Education

- **Fire Dynamics in the Wildland** – International Association of Arson Investigators (IAAI), 2026
- **Fireplace Systems** - IAAI, 2026
- **The Deposition Part 2: Questioning Tactics and Effective Responses** - IAAI, 2026
- **The Deposition Part 1: Format, Content, and Preparation** – IAAI, 2026
- **Passenger Restraint Safety Systems** - Institute of Police Technology and Management, 2025
- **Advance Driver Assistance Systems for the Crash Reconstructionist** – Northwestern University, 2025
- **Traffic Crash Reconstruction for Engineers** – Northwestern University, 2024
- **Crash Data Retrieval (CDR) Tool Data Analyst** – Collision Safety Institute, 2024
- **Commercial Kitchen Fires 1: Fundamentals** – IAAI, 2024
- **Class 1, 4, & 5 Forklift Operator** – CertifyMe.Net, 2024
- **Certified Vehicle Fire Investigator (CVFI) Training Program** – National Association of Fire Investigators (NAFI), 2023
- **WREX 2023** – World Reconstruction Exposition, 2023
- **Event Data Recorder Update and Analysis** – Ruth Consulting, 2023
- **Bosch CDR Technician** – Collision Safety Institute, 2023
- **Science of Fire and Explosion Hazards from Lithium-Ion Batteries** – UL Fire Safety Research Institute, 2023
- **Aerial Lift/Scissor Lift Certification** – Colorado Safety Supply, 2023
- **Arc Mapping Basics** – IAAI, 2023
- **Basic Electricity** – IAAI, 2023
- **Fire Investigation for Fire Officers** – IAAI, 2023
- **Fire Protection Systems** – IAAI, 2023

- **How First Responders Impact the Fire Investigation** – IAAI, 2023
- **Principles of Fire Investigation Multi-Program** – IAAI
- **Investigating Natural Gas Systems** – IAAI, 2023
- **SPEARS FlameGuard CPVC Fire Sprinkler Products Installer Training** – SPEARS Technical Services Department, 2023
- **Airbrake Training** – Bendix Online Break School, 2022
- **FARO Laser Scanner Operator** – FARO Technologies, 2022
- **Courtroom Skills** – Cranfield University, 2022
- **Fires, Explosions and Their Investigation** – Cranfield University, 2022
- **Forensic Investigation of Explosives and Explosive Devices** – Cranfield University, 2022
- **Firearms Investigations** – Cranfield University, 2022
- **Forensic Ballistics Investigations** – Cranfield University, 2022
- **Introduction to Firearms Investigations and Forensic Ballistics** – Cranfield University, 2022
- **Materials Engineering and Processing** – Cranfield University, 2022
- **Radiographic Investigations in Forensic Science** – Cranfield University, 2022
- **Analytical Techniques** – Cranfield University, 2022
- **Reasoning for Forensic Science** – Cranfield University, 2022
- **Lithium-Ion Battery Fires** – IAAI, 2022
- **Alternative Fuel Vehicle** – IAAI, 2022
- **Electric & Hybrid Vehicle Design Basics** – IAAI, 2022
- **Electric & Hybrid Vehicle Fires** – IAAI, 2022
- **Investigation and Evidence Collection** – Cranfield University, 2021
- **Introductory Studies (Forensic Investigation)** – Cranfield University, 2021
- **Accreditation, Certification, and Certificates** – IAAI, 2020
- **Charting Your Career Path in Fire Investigation** – IAAI, 2020
- **Critical Evaluation and Testing of Commonly Reported Accidental Causes** – IAAI, 2020
- **DNA** – IAAI, 2020
- **Documenting the Event** – IAAI, 2020
- **Effective Investigation and Testimony** – IAAI, 2020
- **Ethics and the Fire Investigator** – IAAI, 2020
- **Explosion Dynamics** – IAAI, 2020

- **Fire Chemistry** – IAAI, 2020
- **Fire Flow Analysis** – IAAI, 2020
- **Evidence Examination: What Happens at the Lab?** – IAAI, 2020
- **Fundamentals of Interviewing** – IAAI, 2020
- **Fire Investigator Scene Safety** – IAAI, 2020
- **Insurance and the Fire Investigation** – IAAI, 2020
- **Introduction to Appliances** – IAAI, 2020
- **Introduction to Evidence** – IAAI, 2020
- **Investigating Motor Vehicle Fires** – IAAI, 2020
- **Motor Vehicles: The Engine and the Ignition, Electrical, and Fuel Systems** – IAAI, 2020
- **Motor Vehicles: Transmission, Exhaust, Brake, and Accessory Systems** – IAAI, 2020
- **NFPA 1033 and Your Career** – IAAI, 2020
- **Physical Evidence at the Fire Scene** – IAAI, 2020
- **Residential Electrical Systems** – IAAI, 2020
- **Residential Natural Gas Systems** – IAAI, 2020
- **The Practical Application of the Relationship Between NFPA 1033 and NFPA 921** – IAAI, 2020
- **Understanding Undetermined** – IAAI, 2020
- **Writing the Initial Origin and Cause Report** – IAAI, 2020
- **The Scientific Method for Fire and Explosion Investigation** – IAAI, 2020

Professional Affiliations

- **National Association of Fire Investigators (NAFI)**
- **International Association of Arson Investigators (IAAI)**
- **National Association of Professional Accident Reconstruction Specialists (NAPARS)**
- **Society of Automotive Engineers (SAE)**

Presentations

“CLE Course: Motor Vehicle Accidents: Accident Reconstruction and Injury Biomechanics,” **H. Fetter & Z. Colvin**, Denver, CO, 2026

“E-Mobility: Fire Investigations from Small (e-Scooters) to Large (EVs),” **H. Fetter & H. Mercado**, Combined Claims Conference, Orange County, CA, 2024.