

## Keith Ferraiolo | Senior Fire Investigation, CFEI, CVFI, FIT, ECT

11 Commerce Way, Suite A, Totowa, NJ, 07512

732.629.7930

[Keith.Ferraiolo@efiglobal.com](mailto:Keith.Ferraiolo@efiglobal.com)

### Professional Summary:

Mr. Ferraiolo has been a career firefighter since 2002. In addition to suppression, he has been assigned to the fire prevention bureau conducting fire inspections and investigations.

Mr. Ferraiolo is a member of the Union County Fire Investigation Task Force, where he served for 10 years as a Team Leader, currently serves as a Units Coordinator. He was responsible for integrating the ATF's Bomb and Arson Tracking System and serves as the unit's liaison to the ATF.

Mr. Ferraiolo is also employed by EFI Global as a senior Fire Investigator.

He has participated in or supervised approximately 800 fire investigations in accordance with NFPA 921 and 1033. He also has over 900 hours of classroom training. His investigations have included:

- Joint investigations with local, county, state, and federal partners.
- Multi-million-dollar Losses.
- Residential and commercial structure fires.
- Vehicles fires.
- Heavy machinery fires.
- Fatal fires.
- Suspected Serial Arsonists.
- Line-of-Duty Death.
- Large Scale Investigations.

### Licenses and Certifications:

NJ Certified Incident Management Level 3, NJ Division of Fire Safety, License # 149097

NJ Certified Fire Investigator, NJ Division of Fire Safety, NJ, License # 149097

Fire Prevention Inspector, NJ Division of Fire Safety, NJ, License # 149097

Fire Prevention Official, NJ, Division of Fire Safety, NJ, License # 149097

Certified Fire and Explosion Investigator, NAFI, License # 21054-13201

Certified Vehicle Fire Investigator, NAFI, License #21054-13201v

Fire Investigation Technician, IAAI

Evidence Collection Technician, IAAI

### Project Experience:

Union County Fire Investigation Unit, Elizabeth, NJ, October of 2020  
Fire in retail store involving five fatalities.

EFI Global, East Rutherford, NJ, September of 2021  
Multi-million-dollar loss at the American Dream Mall Complex.

Mr. Ferraiolo has been involved in numerous large losses conducted in conjunction with local, county, state, and federal partners between 2014-2019.

### Professional Experience:

Rahway Fire Department, Firefighter/ Fire Inspector, 2002 – Present  
Union County Fire Investigation Unit, Investigator/ Team Leader/ Coordinator, 2014 – Present  
EFI Global, Fire Investigator / Senior Fire Investigator, 2019 – Present

### Specialized Education:

Arson Awareness for Line Personnel, Kean University, 2009  
Basic Arson Investigators Course, NJ Division of Criminal Justice, April 2015  
Post Pattern Genesis and Persistence, ATF, 2015  
Homemade Explosives Awareness, Energetic Materials Research Center, 2016  
Quality Depositions / O & C, NJ IAAI, October 2016  
Investigator Safety, NJ IAAI, October 2018  
Incident Response to Terrorist Bombings, Energetic Materials Research Center, 2017  
Medical Preparedness Response to Bombing Incidents, Energetic Materials Research Center, 2017  
Hands-On Vehicle Fire/Arson Investigations, Public Agency Training Center, 2017  
Prevention & Response to Suicide Bombing Incidents, Energetic Materials Research Center, 2018  
Understanding Ventilation, NJ IAAI, 2018  
Persistence of Ignitable Liquids, NJ IAAI, March 2018  
Electrical Aspects of Fire Investigations, NJ IAAI, March 2018  
Appliance Fire Investigations, ATF, 2019  
Arsonist Profile, NJ IAAI, March 2019  
Fire Investigator Safety, NJ IAAI, March 2019  
Case Preparation, NJ IAAI, March 2019  
Fire Dynamics, NJ IAAI, November 2019  
NFPA 921, 1033, 1321 Update, NJ IAAI, October 2021  
Data Collection, NJ IAAI, October 2021  
Fireplace and Chimney Fires, NJ IAAI, October 2021  
Modern Day Case Studies, NJ IAAI, March 2022  
Your O&C Report, NJ IAAI, March 2022  
Lithium-Ion Batteries, IAAI March 2022  
Arson for Profit, NJ IAAI, November 2022  
Open-Source Intelligence and Tactical Interviews, NJ IAAI, March 2023  
Hypothesis Development, NJ IAAI, March 2023

Emergency and Enduring Issues, NJ IAAI, March 2023

- International Association of Arson Investigators (IAAI) - CFITrainer.net

Ethics and the Fire Investigator, July 2015  
Documenting the Event, July 2015  
Introduction to Evidence, July 2015  
Basic Electricity, October 2015  
Charleston Sofa Super Store Fire, July 2015  
Arc Mapping, October 2015  
Practical Application of the Relationship Between NFPA 1033 and 921, August 2019  
Residential Electrical Systems, October 2015  
Basic Electricity, October 2015  
Analysis of Station Nightclub Fire, October 2015  
Impact of Ventilation in Building Systems, 2015  
Critical Thinking Solves Cases, October 2015  
Writing Initial O&C, October 2015  
Explosion Dynamics, November 2015  
Understanding Fire/ Candle Experiment, November 2015  
Impact of Ventilation in Building Structures on Fire Development, October 2015  
Fire Investigator Scene Safety, November 2015  
Investigating Motor Vehicle Fires, November 2015  
How First Responders Impact the Fire Investigation, December 2015  
Post Flashover Fires, January 2016  
Effective Investigation and Testimony, January 2016  
DNA, January 2016  
Fundamentals of Interviewing, January 2016  
Investigation Fire and Explosion Incidents Involving Line-of-Duty Death, February 2016  
Process of Elimination, August 2016  
Legal Aspects of Investigating Youth-Set Fires, August 2016  
Introduction to Fire Dynamics and modeling, December 2016  
Insurance and the Fire Investigator, December 2016  
Motive, Means and Opportunity: Determining Responsibility in an Arson Case, December 2016  
Thermometry, Heat, Heat Transfer, January 2017  
Fire Protection Systems, January 2017  
Investigating Natural Gas Systems, February 2017  
Scientific Method Fire and Explosion Investigation, February 2017  
Managing Complex Fire Scenes, February 2017  
Physical Evidence at the Fire Scene, February 2017  
Using Resources to Validate Your Hypothesis, February 2017  
Motor Vehicle Fires: Engine, Ignition, Electrical, Fuel, June 2017  
Motor Vehicle Fires: Trans, Exhaust, Brake, June 2017  
Ethical Duties Beyond the Fire Scene, July 2016  
Fire Dynamics Calculator, October 2017  
Fire Chemistry, January 2018  
Discovery in Criminal Cases, January 2018  
Discovery in Civil Cases, January 2018  
Evidence Examination: What Happens at the Lab, March 2018  
Magne Tek: Case Study in the Daubert Challenge, May 2018  
NFPA 921 & 1033 2014 Edition, November 2018

Natural Gas Systems, November 2018  
Vacant and Abandoned Buildings Hazards and Solutions, March 2019  
Fire Investigation for Fire Officers, April 2019  
Fire Flow Analysis, May 2019  
Preparation for Marine Fire Scene, May 2019  
Search and Seizure, June 2019  
Hazwoper Standard, June 2019  
Understanding Undetermined, June 2015  
Commonly Reported Causes, June 2019  
Deposition Part 1, June 2019  
Principals of Fire Investigation, June 2019  
Understanding the Fire Investigators Job, July 2019  
Deposition Part 2, July 2019  
Potential Value / Electronic Evidence, July 2019  
Insurance Professional, July 2019  
Wildland Fires, July 2019  
Fire Investigation for Fire Officers, November 2019  
Principals of Fire Investigation, November 2019  
Latest Concepts in Fire Investigations, May 2020  
Timelines, May 2020  
Alarm Panels, May 2020  
Damage to Electrical Conductors, May 2020  
Receptacle Fires, May 2020  
Emerging Technologies, December 2020  
Lithium-Ion Battery Fires, May 2021  
Hybrid Vehicle Basics, June 2021  
Electric Hybrid Vehicle Fires, June 2021  
Post Blast Investigations, November 2021  
Photovoltaic Cell Systems, February 2022  
Alternative Fuel Vehicles, January 2023  
Ignitable Canine Team, March 2023  
Fire Effects Part 1, June 2023  
Fire Effects Part 2, June 2023

### **Education:**

*\*Rahway High School, Diploma*

### **Affiliations:**

International Association of Fire Investigators (IAFI)  
International Association of Arson Investigators (IAAI)  
National Association of Fire Investigators (NAFI)  
New Jersey Firemen Mutual Benevolent Association  
New Jersey Firemen's Relief Association Vice President

### **Honors and Awards:**

American Legion Medal of Valor, American Legion, 2008  
Chiefs Award, Avenel EMS, Dec 2015  
EMS Meritorious Service Award, Woodbridge Township NJ, Dec 2016  
Mayors Award, Woodbridge Township, 2017



Group Effort Valor Award, NJ FMBA, 2016  
Special Recognition Valor Award (3), NJFMBA, 2016, 2021  
Unit Citation, Rahway Fire Department, 2014, 2016, 2017  
2023 Fire Investigator of the Year, NJ IAAI, 2023