



**Virginia Chapter of International Association of Arson Investigators (VA-IAAI)**

Presents

**Spring 2025 Fire and Arson Investigation School**

**March 24 – 28, 2025**

**Best Western - Waynesboro Inn & Suites Conference Center**

Hosted By

Virginia Chapter, International Association of Arson Investigators  
Virginia State Police and Virginia Dept. of Fire Programs

36 **TESTED** Recertification Hours by Virginia Dept. of Fire Programs  
32 Career Development / Elective Hours AND 4 Legal Hours by DCJS

**\*\* REMINDER – THIS IS A 36 HOUR FIRE INVESTIGATION and LEGAL TRAINING \*\***

<b>Monday – March 24</b>	<b>0700 - 0800</b>	<b>Registration</b>
	<b>0800 - 1700</b>	<b>Fire Investigation and Electricity - Scott Dau</b>
	<b>1200 - 1300</b>	<b>Lunch (On your own)</b>
<b>Tuesday – March 25</b>	<b>0800 - 1200</b>	<b>Open Neutrals and Arc Mapping - Scott Dau (All Day)</b>
	<b>1200 – 1300</b>	<b>Lunch (On your own)</b>
	<b>1300 – 1700</b>	<b>Live Arc Demo and Artifact Inspection</b>
<b>Wednesday – Mar 26</b>	<b>0800 – 1200</b>	<b>Lithium-Ion Batteries &amp; High Resistance Connections Scott Dau</b>
	<b>1200 – 1300</b>	<b>Lunch (On your own)</b>
	<b>1300 – 1700</b>	<b>Complex Fire Scene Investigations - Jason Mardirosian</b>
<b>Thursday – March 27</b>	<b>0800 – 1200</b>	<b>Explosion Scene Investigations - Jason Mardirosian – (All Day)</b>
	<b>1200 – 1300</b>	<b>Lunch (On your own)</b>
	<b>1300 – 1700</b>	<b>Investigations Involving Fatalities and Line of Duty Deaths</b>
<b>Friday – March 28</b>	<b>0800 - 1200</b>	<b>Legal Considerations in Fire Investigations – Elliott Casey</b>
	<b>1200 - 1230</b>	<b>Test and Certificates</b>

**Seminar fees: VA-IAAI Members: \$450.00 – Non-Members: \$525.00**  
**(Daily fee: VA-IAAI Members: \$140.00 – Non-Members: \$170.00 – Must specify day attending)**

**Best Western Waynesboro Inn & Suites Conference Center**  
109 Apple Tree Lane - Waynesboro, Virginia 22980  
Desk: (540) 942-1100

Room Rates: \$107.00 per night, plus tax. Reservations for Seminar room rate **must** be received by hotel  
**NO later than March 7, 2025** to ensure rate. CHECK-IN TIME: 3:00 PM

Registrants Name		Organization	
Organizational Head (DCJS CREDIT ONLY)		Organizational Address (DCJS CREDIT ONLY)	
Mailing Address / P. O. Box			
City	State	Postal Code	
Daytime Telephone #	Home Telephone #	Date of Birth	Social Security #

Please forward Registration Form and Payment (or confirmation number) to: VA Chapter – IAAI - P. O. Box 1367, Madison, VA 22727  
IAAI Tax Identification Number: 54-2110979  
Credit Card payments can be made at [www.vaiaai.com/shop](http://www.vaiaai.com/shop)  
Seminar contact: Dave Allen - (540) 407-0512 - Email: [daveallen89@gmail.com](mailto:daveallen89@gmail.com)

**Virginia Chapter of International Association of Arson Investigators**  
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**Waynesboro, Virginia**

**Training Classes and Instructor Bio/CV**  
**Scott Dau**

- **Fire Investigation and Electricity – 8 Hours**
  - **“Which came first? The electrical event or the fire?”** The path to potentially answering this question requires a basic understanding of electricity as a roadmap. This presentation will cover what “electricity” is and define basic terms and key concepts to electrically generated heat. The basic components of a residential electrical system will be presented, and their role in contributing to ignition, or being a guide to causes elsewhere in the scene.
- **Arc Mapping and Open Neutral - 8 Hours**
  - **The importance of the arc survey, and arc mapping – or the lack of arc discovery can be a great source of information to determine your area of origin.** We will go over the basics of the concepts of arc mapping, differentiation of arc damage vs. thermal melting, and take a look at the creation of both types of damage by actually causing them on energized and de-energized conductors. This demonstration is always an eye-opener and is never the same twice! Relevant case studies will be presented to show how arc mapping can help solidify your ignition scenario hypothesis.
  - **Open Neutral -** In this presentation, we will explain the concept of an “open” or “floating” neutral – what it is, where it can be found, and how it can present. We will take a hands-on look and create a “live” open neutral, which will allow students to actually see the voltages vary as loads change on the circuits.
- **Lithium-Ion Batteries – 2 Hours**
  - **They are in the news every day – fires attributed to Lithium-ion batteries.** This presentation will immerse students in the basic operational concepts and terminology of lithium-ion batteries, and their failure methods. What to look for on your fire scenes that may indicate their presence – and what to do with that information. Disassembly of an actual lithium-ion battery will allow students a first-hand look at the components involved.
- **High Resistance Connections – 2 Hours**
  - **Resistance is futile. And bad, if it creates heat somewhere that wasn’t designed for that heat.** This presentation will review and incorporate the basic concepts of resistive heat, and what it looks like AFTER it’s the potential cause of a fire, with a relevant case study.

## Instructor's Bio

Scott is a 34-year career Firefighter/EMT with the Seattle Fire Department. He has been active in fire investigation since 2007, and is a Vice President for the Washington State chapter of the IAAI. On the private investigation side, he conducts investigations for two firms representing several major insurance carriers.

He helped to develop and instruct the "Electrical Aspects of Fire Investigation" class at the National Fire Academy and for new ATF CFI candidates, the NFA's "Fire Investigation for First Responders" course, and has presented at state/local conferences around the nation.

Additionally, he has 30 years of hands-on electrical experience in residential and commercial applications.

## Instructor's CV

### **Career & Related Experience**

*September 1997 – Present*

Firefighter; Seattle Fire Department; Seattle, WA

*April 2016 – Present*

Fire Investigator; Pyro Fire & Marine Services; Poulsbo, WA

*December 2020 – Present*

Fire Investigator; Fire Research & Technology; Sodus Point, NY

*June 2016 - Present*

Contract Instructor, Bureau of Alcohol, Tobacco and Firearms & Explosives

*March 2013 – June 2024*

Instructor – Fire Investigation Essentials, Electrical Aspects of Fire Investigation, Fire Investigation for First Responders, National Fire Academy; Emmitsburg, MD

*December 2018-February 2019*

Subject Matter Expert for revision of *Electrical Aspects of Fire Investigation* and *Fire Investigation for First Responders* courses for National Fire Academy

*August 2016-January 2017*

Subject Matter Expert for revision of "Electrical Aspects of Fire Investigation" course for National Fire Academy

*June 1991-July 1994*

Firefighter; Fairfax County Fire & Rescue Department; Fairfax, VA

### **Organizations & Affiliations**

International Association of Arson Investigators (IAAI); National & Washington State Chapters (2008-Present)

1st Vice President - Washington State Chapter - 2021-Present

2nd Vice President - Washington State Chapter - 2014-2021

Burn Cell Coordinator for WA State IAAI Chapter Training Conference, 2012-Present

National Association of Fire Investigators (2016-Present)

Washington State Regional Fire Investigation Council (2009-Present)

Executive Board Member (2017-2020)

International Association of Firefighters (1991-Present)

### **Certifications**

Certified Fire Investigator (IAAI-CFI); International Association of Arson Investigators  
Certified Fire & Explosion Investigator (NAFI-CFEI); National Association of Fire Investigators  
Washington State/IFSAC Certified Fire Investigator (CFI)  
NFPA/ProBoard Firefighter I, II, III; Fairfax County Fire & Rescue Department Fire Academy  
Washington State/IFSAC Firefighter I, II; Seattle Fire Department Fire Academy  
Washington State/IFSAC Hazardous Materials – Awareness & Operations  
Washington State/IFSAC Fire Officer 1 & 2  
Washington State/IFSAC Instructor 1 & 2  
Washington State EMT-B  
Washington State Licensed Private Investigator  
FEMA Communications Team Leader (COM-T); Department of Homeland Security  
FEMA Communications Team Leader (COM-L); Department of Homeland Security

### **Specialized Education & Training**

Multiple CFITrainer.com modules; 2007-2025  
IAAI International Training Convention, Victoria B.C.; 2007  
Forensic Fire Scene Investigation / Baltimore, MD; 2008  
Fire Investigation for Company Officers / National Fire Academy; 2008  
Fire/Arson Origin & Cause Investigations / National Fire Academy; 2009  
Criminal Interview & Interrogation / Lakewood Police Department; 2009  
Forensic Evidence Collection / National Fire Academy; 2010 & 2013  
Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2010  
Incident Response to Terrorist Bombings / New Mexico Tech; 2010  
Interview & Interrogation Techniques / National Fire Academy; 2011  
Vehicle Fire Investigations  
Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2012  
Practical Applications of Fire Dynamics & Modeling / National Fire Academy; 2012  
Communications Technician (COMT-T) / Department of Homeland Security; 2012  
Electrical Aspects of Fire Investigation / National Fire Academy; 2013  
Public/Private Fire Investigation & Interviewing Techniques  
Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2013  
Fire Pattern Analysis, Region 4 Training Council, Seattle, WA; 2013  
Fire Inspection Principles / National Fire Academy; 2013  
IAAI Annual Training Convention, Las Vegas, NV; 2014  
Advanced Electrical Fire Investigation  
Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2014  
Fire Prevention Institute, Chelan, WA; 2014  
Digital Forensic Photography  
Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2015  
IAAI Electrical Aspects of Fire Investigation, Seattle, WA; 2015  
Fire Prevention Institute, Chelan, WA; 2015  
Electrical Systems & Appliance Failure  
Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2016  
Fire Prevention Institute, Chelan, WA; 2016  
Latent Fingerprint Processing, Washington State Regional Fire Investigation Council; 2017  
IAAI Annual Training Convention, Las Vegas, NV; 2017

ATF - Post Blast Investigation

Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2017

Scientific Protocols for Fire Investigation

Fire Prevention Institute, Chelan, WA; 2017

Advanced Vehicle Fire Investigations

Pacific Northwest Fire Investigators Training Conference, Leavenworth, WA; 2018

Fire Dynamics / Scene Documentation

Pacific Northwest Fire Investigators Training Symposium, Leavenworth, WA; 2019

Investigation of Gas & Electric Appliance Fires

Fire Findings, Benton Harbor, MI; 2019

Explosion Investigations / Interview & Interrogation / Fatal Fire Investigations / Complex Fire Investigations

Fire Prevention Institute, Chelan, WA; 2021

IAAI Annual Training Convention, Jacksonville, FL; 2022

Electrical Aspects & Appliance Failure

Pacific Northwest Fire Investigators Training Symposium, Leavenworth, WA; 2022

HazMat and Fire Investigation / Metadata In Investigations / Evidence Collection / OSINT Investigations /

Data Analysis In Criminal Investigations / Identification of Burned Vehicles

Fire Prevention Institute, Chelan, WA; 2022

Large Vehicle Fire & Chimney Fire Investigations

Idaho IAAI Annual Training Conference, Boise, ID; 2022

Wildland Fire Investigation

Pacific Northwest Fire Investigators Training Symposium, Leavenworth, WA; 2023

Fire As A Weapon / National Fire Academy; 2023

IAAI Annual Training Convention, Las Vegas, NV; 2024

ATF Advanced Fire Investigation Topics

Pacific Northwest Fire Investigators Training Symposium, Leavenworth, WA; 2024

Photovoltaic Systems – IAAI, Reading, PA; 2024

## **Work Experience**

**Seattle Fire Department:** Conduct operations level fire investigations per department guidelines, assist department fire investigation unit with larger fire investigations as requested.

**Pyro Fire & Marine Services / Fire Research & Technology:** Conduct fire investigations in accordance with guidelines of NFPA 921. Collect evidence as needed, conduct scene photography, interview witnesses, property research & request relevant reports. Coordinate with insurance company representatives and prepare written reports as necessary. Attend joint scene and lab exams as needed, with documentation and reporting of results.

## **Instructional Experience**

National Fire Academy; 2013-2024 – Electrical Aspects of Fire Investigations - Emmitsburg, MD

National Fire Academy; 2022-2024 – Fire Investigation: Essentials - Emmitsburg, MD

National Fire Academy; 2017-2024 – Fire Investigation: First Responders - Nationwide

Pacific Northwest Fire Investigators; 2016-Present – Basic Fire Investigation - Leavenworth, WA

Oakland County Association of Fire Investigators; May 2018 – Electrical Aspects of Investigations - Detroit, MI

Mason County Fire Department; 2018 – Electrical Aspects of Basic Fire Investigation - Belfair, WA

Alaska State Fire Investigators; April 2019 – Electricity for Fire Investigators & Basic Arc Mapping - Ketchikan, AK

Missoula Fire Department; June 2021 – Electricity for Fire Investigators & Basic Arc Mapping - Missoula, MT

Washington State Association of Fire Marshals; October 2022 – Basic Electricity for Investigators – Chelan, WA

Idaho IAAI Training Conference; November 2022 - Introduction to Lithium-Ion Batteries for Fire Investigators - Boise, Idaho

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**Training Classes and Instructor Bio/CV  
Jason Mardirosian**

- **Complex Fire Scene Investigations – 4 Hours**
  - **Approach to complex/large fire scenes**
  - **Resources needed for complex fire scenes**
  - **Documentation of complex fire scenes**
  - **Hazards and/or Problems that can be encountered while working complex/large fire scenes**
- **Explosion Scene Investigations – 4 Hours**
  - **Approaching an explosion scene – SAFETY Considerations**
  - **Support personnel for explosion scenes**
  - **Unique resources that may be needed for these scenes**
  - **Documentation of explosion scenes**
- **Investigations Involving Fatalities and Line of Duty Deaths (LODD)**
  - **Approach to fatal and LODD scenes.**
  - **Resources and documentation for these scenes**
  - **Special considerations for LODD scenes**
  - **Care for on-scene personnel after the event**

**Instructor's Bio**

Jason Mardirosian is a 28-year veteran and lieutenant with the Chicago fire department, and spent 17 years in their Fire & Arson Investigations unit. Jason has over 20 years experience in the private sector doing numerous consultations and is currently an investigator for Fire and Explosion Consultants, LLC.

Jason has an extensive background in investigations and is an international contractor specializing in instruction of arson, fire, and explosion scene investigations. He combines both dynamic classroom presentations and hands on exercises to help the students understand the complexities of such investigations.

Jason has taught independently, as well as, in a team setting for various agencies and groups including several IAAI chapters, the 40 hour fundamental class hosted by the IAAI, several ATF task forces, and is a contract instructor for the Justice Department (ICITAP) and he has taught internationally in Algiers, Jamaica, the Virgin Islands and Dubai.

Jason Mardirosian recently retired after 16 years with the Summit, Illinois Police Department, is a Past-President of the Illinois Chapter of the IAAI, and was the 2006 investigator of the year recipient from the IAAI.



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**Training Class and Instructor Bio/CV**

**Elliott Casey  
Staff Attorney – Commonwealth’s Attorneys’ Services Council**

Elliott Casey is a Staff Attorney for the Virginia Commonwealth’s Attorneys’ Services Council. Elliott has 16 years experience as a prosecutor, having served as an Assistant Commonwealth’s Attorney for the County of Albemarle, the City of Alexandria, and the County of Arlington in Virginia, and several more years of experience in law enforcement and as an attorney.

A graduate of the University of Virginia School of Law, Elliott also served as a Special Assistant United States Attorney for the Western District of Virginia.

Elliott specializes in digital evidence, Fourth Amendment issues, and complex financial crime. Elliott also instructs law enforcement agencies throughout the Virginia and D.C. area and investigators around the United States. Elliott instructs for the National Immigrant Women’s Advocacy Project, the Financial Crimes Enforcement Network, the Association of Certified Anti-Money Laundering Specialists, and many other groups.

Elliott was honored with the Virginia IASIU Outstanding Public Service Award in 2022 as well as Virginia Lawyer’s Weekly 2022 “Leaders in the Law” award.