



## **C. TRIPP WAGNER III, BME, IAAI-CFI, PI** **Director – Mechanical**

### **Contact**

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### **Education**

B.Eng., Mechanical Engineering,  
University of Delaware, 2003

### **Associations**

- Member, Society for Fire Protection Engineers (SFPE)
- Member, International Association of Arson Investigators (IAAI)
- Member, National Fire Protection Association (NFPA)
- Member, National Fire Academy Alumni Association (NFAAA)

### **Awards**

IAAI National Photography  
Winner, 2013

IAAI DE Investigator of the Year,  
2009

Five Points Fire Company  
Recognition for Outstanding  
Investigation and Arrest of a Fire  
Injuring Several Fire Fighters 2008

Delaware Senate Concurrent  
Resolution 29 for the Courageous  
Rescue of a Woman from a  
Burning Home 2000

Delaware House of  
Representatives Tribute for Heroic  
and Courageous Effort 2000

C. TRIPP WAGNER III, BME, IAAI-CFI, PI, is Director of Mechanical with experience in fire and explosion forensic investigations involving structures, vehicles, marine vessels, appliances, electrical systems, gas systems, fire protection systems, explosive and incendiary devices, product instructions, labels, and warnings. He has provided extensive expert witness services and technically substantiated analyses in accordance with NFPA 921 Guide for Fire and Explosion Investigations, including detailed reports, depositions, hearings, grand juries, and criminal trials. Mr. Wagner has served as member on the Technical Committee on Fire Investigations, NFPA 921. Mr. Wagner also has extensive experience with forensic investigations involving non-fire losses from vehicles, water systems, appliances, vehicles, and HVAC systems.

### **PROFESSIONAL HIGHLIGHTS**

**Director – Mechanical, Churchwell Fire Consultants, Inc., Philadelphia region, August 2021 – present**

Responsibilities include forensic fire and explosion investigation and analysis to evaluate origin and cause, fire reconstruction, performance of detection and suppression systems, fire spread analyses, and litigation support. Forensic investigations of vehicles, appliances, and systems involved in non-fire losses. Review and evaluation of internal expert forensic reports.

**Director Fire Forensics – North/South, Senior Mechanical Engineer Jensen Hughes, West Chester, PA, 2016–2021.**

Responsibilities include overseeing and managing fire forensic operations, marketing, and business development of the North and South regions of North America. Forensic fire and explosion investigation and analysis to evaluate origin and cause, fire reconstruction, performance of detection and suppression systems, fire spread analyses, and litigation support. Forensic investigations of vehicles, appliances, and systems involved in non-fire losses. Review and evaluation of internal expert forensic reports.

**Deputy State Fire Marshal III, Delaware State Fire Marshal's Office, New Castle, DE, 2005–2016.**

Origin and Cause Investigator on over 1000 fire and explosion scenes which included a wide range of structures, vehicles, and other machinery/equipment. Examined electrical and mechanical components of items, appliances, and vehicles in the evaluation of cause hypotheses and assessing accidental and criminal incidents. Examined fire protection systems to determine whether they operated correctly during a fire or the reason for failure. Inspected commercial,

medical, academic, and multi-family residential units to determine if fire protection equipment and life safety issues met code. Served as backup

supervisor for The New Castle County Investigative Division. Supervised staff of 14 in absence of current supervisor. Supervised investigators at fire/explosion scenes in absence of current supervisor. Served as statewide Forensic Sciences Laboratory liaison and evidence coordinator.

**Adjunct Professor – FET-230 Fire Related Building Construction, Delaware Technical Community College, New Castle, DE 2012.**

**Fire Inspector, Delaware State Fire Marshal's Office, New Castle, DE, 2004–2005.**

**Professional Firefighter/EMT, Arlington County Fire Department, Arlington, VA, 2002–2005.**

**Part-time Firefighter/EMT, Christiana Fire Department, Christiana, DE, Brandywine Hundred Fire Department, Wilmington, DE, Dover Fire Department, Dover, DE, Aetna Hose, Hook, and Ladder, Newark, DE, 1994–2006.**

## **CERTIFICATIONS/TRAINING**

### **Engineering, Fire/Explosive Investigations (including but not limited to the following)**

American Boat & Yacht Council Surveying Electrical Systems, 2020  
American Boat & Yacht Council De-mystifying Basic Electrical Concepts and Standards, 2020  
Dry Sprinklers for Commercial & Residential Fire Protection, Victaulic University, 2020  
American Boat & Yacht Council Corrosion Project Webinar, 2020  
New Jersey International Association of Arson Investigators AGM, 2020  
New Jersey International Association of Arson Investigators Latest Concepts in Fire Investigation, 2020  
American Boat & Yacht Council Marine Law Symposium, Fire, Explosions and Other Thermal Events 2020  
Thermal Management of Automotive Battery Packs, 2019  
Combustible Dust Safety: Clean-up and Engineering Controls, 2019  
Dust Explosion Codes & Standards: Ensuring Regional Compliance and Global Consistency, 2019  
Modeling Gas Release from Lithium-Ion Batteries during Thermal Runaway Using FDS, 2019  
NJ International Association of Arson Investigators Annual Training Conference, 2019  
International Association of Arson Investigators Motor Vehicles:  
    The Engine and the Ignition, Electrical, and Fuel Systems, 2017  
    Transmission, Exhaust, Brake, and Accessory Systems, 2017  
International Association of Arson Investigators Investigating Natural Gas Systems, 2017  
International Association of Arson Investigators Preparation for Marine Fire Scene, 2017  
International Association of Arson Investigators Residential Electrical Systems, 2016  
International Association of Arson Investigators Digital Photography and the Fire Investigator, 2016  
University of Washington Motor Vehicle Fire Investigations, 2016  
Overview of Firewalls and the Use of Glass-Mat Gypsum Shaft Liner Panels, 2016  
Access Door Considerations and Solutions, 2016  
Supervisory Initiating Devices, 2016  
Introduction to Specialized Fire Detectors, 2016  
Central Station Fire Alarms, 2016  
Notification Appliances, 2016  
Fire Prevention Plans – OSHA, 2016  
Emergency Action Plans – OSHA, 2016  
Overcurrent Protection for Conductors and Equipment, 2016  
Proprietary Station Fire Alarm Systems, 2016  
Introduction to Specialized Fire Detectors, 2016  
Introduction to the NEC, 2016  
General Requirements of the NEC, 2016  
Through Penetration Fire-stopping, 2016  
Dust Hazard Analysis, 2016  
Fans in Air-Handling Systems, 2016  
The Plastic Pipe Solution to Water Infrastructure Failures Seminar, 2015

Sustainable HVAC Design: Using Air Movement in Air-Conditioned Buildings, Seminar, 2015  
Rooftop Pipe and Equipment Support Systems Seminar, 2015  
Fire & Smoke Protection with Life Safety Dampers Seminar, 2015  
Introduction to Residential Ventilation Seminar, 2015  
Firestop Systems for Maintaining Fire Ratings of Walls and Floors Seminar, 2015  
Fabric Ductwork: The Metal Alternative Seminar, 2015  
HVAC Flow and BTU Metering Seminar, 2015  
Advanced Analog Circuit Design Seminar, 2015  
International Association of Arson Investigators Arc Mapping Basics, 2015  
International Association of Arson Investigators Process of Elimination, 2014  
International Association of Arson Investigators Investigating Motor Vehicle Fires, 2012  
Perimeter Fire Containment in Multi-Story Buildings, 2012  
International Association of Arson Investigators Explosion Dynamics, 2012  
Delaware International Association of Arson Investigators, Arc Mapping, 2011  
National Fire Academy Forensic Evidence Collection, 2010  
International Association of Arson Investigators Introduction to Evidence, 2010  
International Association of Arson Investigators Physical Evidence at Fire Scenes, 2010  
Delaware International Association of Arson Investigators Motor Vehicle Fire Investigations, 2010  
Delaware International Association of Arson Investigators Fire Death Investigations, 2010  
Delaware International Association of Arson Investigators Fires involving Corrugated Stainless Steel, 2010  
International Association of Arson Investigators Certified Fire Investigator, 2009  
Delaware International Association of Arson Investigators Basic Electricity for the Fire Investigator, 2009  
Pennsylvania International Association of Arson Investigators Electrical Investigations, 2007  
Department of Justice Post Blast Investigative Techniques, 2006  
National Fire Academy Fire/Arson Investigator, 2005  
National Fire Protection Association Certified 1033 Fire Investigator, 2004  
Virginia Certified 1033 Fire Investigator, 2004

## **COMMITTEES**

Alternate Member, Technical Committee on Fire Investigation (FIA-AAA), NFPA 921 2017-2021

## **NOTABLE PUBLICATIONS AND PRESENTATIONS**

Wagner, C Tripp et al, "Forensic Engineering Overview" Webinar, May 2021  
Wagner, C Tripp, "Cause of Fire vs. Cause of Loss" Webinar, September 2020  
Wagner, C Tripp, Subro Sense Podcast – Forensic Investigation of Subrogation Claims During Covid-19, April 2020  
Wagner, C Tripp et al, "Handling Claims During COVID-19" Webinar, April, May, September 2020  
Wagner, C Tripp, "Arcs, Sparks, and Winter Fires" Cozen O'Connor, February 2020  
Wagner, C Tripp, "Cause of Fire vs. Cause of Loss" Marshall Dennehey Warner Coleman Goggin, October 2019  
Wagner, C Tripp, "Forensic Vehicle Analysis" Delaware Valley Chapter of IASIU, September 2019  
Wagner, C Tripp, "Investigating Residential Dryer Appliance Fires" IAAI Fire & Arson Investigator Journal, October 2018  
Wagner, C Tripp, "Are You a Qualified Fire Investigator?" *Firehouse Magazine Newsletter, Firehouse.com*, 2017  
Wagner, C Tripp, "Introduction to Fire Investigation" Delaware State Police Academy 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016  
Wagner, C Tripp, "Search Warrants as an Investigative Tool" Delaware State Police Academy 2013, 2014, 2015, 2016  
Wagner, C Tripp, "Introduction to Fire Investigation" New Castle County Police Academy 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016  
Wagner, C Tripp, "Introduction to Forensic Fire Investigation" University of Delaware, MEDT 220 Forensic Science, 2012, 2013, 2014, 2015, 2016  
Wagner, C Tripp, "Search Warrants for Fire Investigations" City of Wilmington Fire Marshal's Office, 2014  
Wagner, C Tripp, "Crime Scene Investigator II" Delaware State Police Academy 2013