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## Roger A. Spadt

### CURRICULUM VITAE

#### PROFESSIONAL EXPERIENCE

- 2015 – Present      Fire Investigator – Technical Fire Analysis, LLC, duties include fire and explosion investigations.
- 1993 - Present      Fire Marshal – Lehigh Township Volunteer Fire Co. 1, duties include fire investigation, facility inspections, fire safety and prevention education, and public relations.
- 2001 -Present      Career Firefighter/Paramedic – City of Reading, PA, Department of Fire and Rescue Services, duties include emergency medical services, firefighting, rescue, hazardous materials, and public relations.
- 1990 – Present      Assistant to Pennsylvania State Police Fire Marshal. Appointment Certificate number 11197 dated March 07, 1990.
- 1990 - 2007      Fire Chief – Lehigh Township Volunteer Fire Co. 1, duties included incident command and administrative functions.

#### CERTIFICATIONS

- Evidence Collection Technician – International Association of Arson Investigators – October 15, 2015 – Certificate #309
- Fire Investigator 1, NFPA 1033, 2009 Edition – National Board on Fire Service Professional Qualifications – March 14, 2011 – Certificate # 290155
- Fire Investigator 1, NFPA 1033, 2009 Edition – Pennsylvania State Fire Commissioner – March 14, 2011 – Certificate # 274
- Hazardous Materials Operations Level, NFPA 472, 2008 Edition – National Board on Fire Service Professional Qualifications – February 09, 2011 Certificate # BC-23278
- Hazardous Material Operations Level Personal Protective Equipment, NFPA 472, 2008 Edition – National Board on Fire Service Professional Qualifications – February 09, 2011 – Certificate # BC-23284

- Hazardous Materials Operations Level Product Control, NFPA 472, 2008 Edition – National Board on Fire Service Professional Qualifications; February 09, 2011 – Certificate # BC-23289
- Vehicle and Rescue Technician, NFPA 1006, 2003 Edition – National Board on Fire Service Professional Qualifications – January 13, 2010 – Certification # BC-17676
- Hazardous Materials Awareness Level, NFPA 472, 2008 Edition – National Board on Fire Service Professional Qualifications – March 27, 2009; Certificate # 13485R and BC-13485
- Certified Fire and Explosion Investigator – National Association of Fire Investigators – October 14, 2008 – Registration # 12258-7144
- Certified Vehicle Fire Investigator – National Association of Fire Investigators – October 14, 2008 – Registration # 12258-7144V
- Fire Fighter 1, NFPA 1001, 2002 Edition – National Board on Fire Service Professional Qualifications – July 06, 2005 – Certificate # 255352

## PROFESSIONAL DEVELOPMENT

- September/October 2018 – 2018 Annual Seminar: ATF Research Lab and NRT Overview, Fire Scene Evidence Procedures, PSP Fire Marshal Updates, Electric Receptacle Arc Tracking, Fire Scene Accelerant K9 Overview, Fire Pattern Persistence in Post-Flashover Fires, Natural Gas and Propane: Properties, Principles, and Investigations, Fire Investigation Case Studies , 21 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- May 20-25, 2018 – International Association of Arson Investigators Annual International Training Conference, 32 hours – The Four Corners of Origin Determination: Witness Statements, Fire Patterns, Arc Mapping, and Fire Dynamics, Smart Homes, Electric Cars, and an Internet Connected World, A Decade of CSST: What We Learned, Documenting the Fire Scene: Camera Settings, Gas Explosions and Behavior, Technology, Tools, and Tips for Fire Investigators, Everything a Fire Investigator Needs to Know About Chemistry, Flashover, Using NFPA 921 to Meet the Professional Qualifications of NFPA 1033, Alarm Science for Fire Investigators, An Analysis of Pinched Cords and Overdriven Staples, Reduced Scale Enclosure Burns for Fire Investigations and Hypothesis Testing, Soil Gas Migration in Natural Gas Fires and Explosions
- April 30, 2018 – Hazardous Materials Operations NFPA 472 Refresher Training, 06 hours – Pennsylvania State Fire Academy
- January 27-28, 2018 – Forensic Application of Fire Protection Systems, Investigation of Lighting Fires, Avoiding the Investigative Pitfalls of CSST/HVAC Systems, 14 hours – Pennsylvania Association of Arson Investigators
- September/October 2017 – 2017 Annual Seminar: NFPA 921 2017 Updates, Vehicle Fires, Your Fire Investigation Through the Eyes of a Defense Attorney, Lithium Batteries and the Investigation of Related Fires, Using Technology for Fire Scene Investigations, Metallurgy and Fire Investigations, Safety and Health for Fire Explosions, 18 hours –

Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop "M" Fire Marshal Division

- August 14, 2017 – The Impact of Ventilation in Building Structures on Fire Development, 04 hours – International Association of Arson Investigators CFITrainer.net
- August 11, 2017 – Residential Natural Gas Systems, 03 hours – International Association of Arson Investigators CFITrainer.net
- August 11, 2017 – Thermometry, Heat, and Heat Transfer, 03 hours – International Association of Arson Investigators CFITrainer.net
- April 24, 2017 – Hazardous Materials Operations NFPA 472 Refresher Training, 06 hours – Pennsylvania State Fire Academy
- April 09-14, 2017 – International Association of Arson Investigators Annual International Training Conference, 32 hours – Insurance Fraud: An Offender's Perspective, The Impact of Ventilation on Room Fires, Experimental Results from a Series of Eight Laboratory Controlled Compartment Fires, Effective Social Media Research in Investigations, Metallurgical Analysis for Fire and Explosion Investigation, Non-Destructive Post Fire Survey of Electrical Wiring for Fire Origin Determination, Fatal Fire Investigation, Preparing for the Future, Why Accreditation Matters, Sunlight as an Ignition Source, Scene Safety, Commercial Motor Vehicle and Heavy Equipment Fires, The Use of Damage in Fire Investigation, Fire Protection Systems and Fire Investigation
- March 13-14, 2017 – Forensic Photography, 16 hours – International Association of Arson Investigators
- September/October 2016 – 2016 Annual Seminar: Residential Gas Supply and CSST Review, Fire Safe Cigarettes, Expert Report Writing, Residential Electricity and Arc Mapping Review, The Daubert Standard for Expert Testimony, Surviving a Daubert Challenge – Mock Hearing, and Incidents at Out-Door Festivals, 18 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop "M" Fire Marshal Division
- May 02, 2016 – Hazardous Materials Operations NFPA 472 Refresher Training, 06 hours – Pennsylvania State Fire Academy
- April 24 – 29, 2016 – International Association of Arson Investigators Annual International Training Conference, 32 hours – Panel Discussion, Selecting the Fire Science Expert, Should Public & Private Investigators Work Together, Surviving a 1033 Challenge, Thermodynamics, Soil Gas Migration in Natural Gas Fire & Explosions, New Equipment & Technology, Forensic Laboratories, Plastic Distribution Panels in the U.K., CO Levels in Fire Victims, Comparing the Response of Hydrocarbon Detectors to Lab Analysis of Household Substances, and Cancer Detection Dogs", Lithium Ion Batteries in Fire and Explosion Investigations, Arc Mapping Research and Updates, Dust Explosion Hazards
- October 26, 2015 – Digital Photography and the Fire Investigator, 04 hours – International Association of Arson Investigators CFITrainer.net
- October 01, 2015 – Flammable Gas Awareness Training, 03 hours – UGI Energy Services and N. Seymour Consulting

- September/October 2015 – 2015 Annual Seminar: Fire Related Death Investigation, Fire Suppression Systems for the Fire Investigator, Theories in Forensic Investigation and Litigation, Subrogation and Proper Collection of Evidence, Electric Radiant Heat Failure Analysis, Post Bomb Blast Investigation, and Pennsylvania Right to Know Law, 21 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- August 06, 2015 – Fire Dynamics: Fundamentals, 03 hours – Pennsylvania State Fire Academy
- July 15, 2015 – Physical Evidence at the Fire Scene, 04 hours – International Association of Arson Investigators CFITrainer.net
- July 07, 2015 – Evidence Examination: What Happens at the Lab, 04 hours – International Association of Arson Investigators CFITrainer.net
- July 07, 2015 – DNA, 03 hours – International Association of Arson Investigators CFITrainer.net
- July 07, 2015 – Documenting the Event, 04 hours – International Association of Arson Investigators CFITrainer.net
- July 07, 2015 – NFPA 1033 and Your Career, 02 hours – International Association of Arson Investigators CFITrainer.net
- May 18 – 22, 2015 – International Association of Arson Investigators Annual International Training Conference, 34 hours – Panel Discussion, Post-Flashover Fire Pattern Persistence, Negative Corpus – Confluence of Uncertainty, Elevated Fire Origins Research, Root Cause Analysis - Basic Concepts, Common Mistakes, Social Media for the Anti-Social, Giving Expert Testimony – “Experiences from the Trenches”, Digital Forensic Lighting, Forensic Close-Up Photography, Arson Convictions: Reviewing the Science - The Texas Experience, Plastics: The Types and Roles It Plays In Investigations, Expert Report Writing
- April 16, 2015 – Hazardous Materials Operations NFPA 472 Refresher Training, 06 hours – Pennsylvania State Fire Academy
- October 22-23, 2014 – Electrical Aspects of Fire Investigation, 16 hours – International Association of Arson Investigators
- October 16, 2014 – The Practical Application of the Relationship Between NFPA 1033 and NFPA 921, 02 hours – International Association of Arson Investigators CFITrainer.net
- October 09, 2014 – Arc Mapping Basics, 04 hours – International Association of Arson Investigators CFITrainer.net
- October 08, 2014 – Residential Electrical Systems, 04 hours - International Association of Arson Investigators CFITrainer.net
- October 08, 2014 – Basic Electricity, 04 hours - International Association of Arson Investigators CFITrainer.net
- September/October 2014 – 2014 Annual Seminar: Pellet and gas Burning Appliances, Explosion Dynamics, Modern and Fire Dynamics Ventilation Flow Paths, NFPA 921 2014

Updates, Automatic Fire Suppression System Failure Analysis, Wild Land Fire Investigation, and Fire Detection System Data Retrieval, 21 hours - Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop "M" Fire Marshal Division

- August 29, 2014 – Introduction to Evidence, 04 hours - International Association of Arson Investigators CFITrainer.net
- August 29, 2014 – Vacant and Abandoned Buildings Hazards and Solutions, 04 hours - International Association of Arson Investigators CFITrainer.net
- April 29, 2014 – Hazardous Materials Operations NFPA 472 Refresher Training, 06 hours – Pennsylvania State Fire Academy
- April 14 – 18, 2014 – International Association of Arson Investigators Annual International Training Conference, 36 hours – Opening Ceremony, The Station Night Club Fire Lessons Learned, Legal Issues, and Victim Rights, Building and Fire Codes for Fire Investigators, Pitfalls of Expert Testimony, Fire Death Investigations, How to Predict a Serial Arsonist, Electronic Modules In Vehicles Fire Investigations, Methodology for Identifying Areas of Origin by Using the Building Electrical Systems, NFPA 921 and NFPA 1033, Research Updates in ARC Melting, Fire Protection Systems in Fire Investigations, Impact of Vertical Ventilation on Post Flash Over Fire, Identifying and Examining Youth Fire Setting and Bomb Making
- November 01, 2013 – Expert Report Writing and Your CV, 08 hours - International Association of Arson Investigators
- September 24-26, 2013 – Commercial Kitchen Fire Investigation, 18 hours – Pennsylvania Association of Arson Investigators and PA Association of Code Officials
- September/October 2013 – 2013 Annual Seminar: Pennsylvania State Police Fire Marshal Request Protocol and Allentown Canine Protocol, NFPA 921 and NFPA 1033 Updates, Investigation of Electric Range Fires, Investigation of Electric Clothes Dryer Fires, Investigation of Wood Burning Units and Chimney Fires, Technical Fire Analysis, Professional Qualifications for Fire Investigators, 21 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop "M" Fire Marshal Division
- July 29-30, 2013 – Meeting the Requirements of NFPA 1033, 16 hours – Public Agency Training Council
- July 11, 2013 – Juvenile Fire Setting, Assessment, and Treatment, 08 hours, Burn Prevention Network
  
- May 06 to 10, 2013 - International Association of Arson Investigators Annual International Training Conference, 36 hours – Opening Ceremony, Investigation of Pyrotechnic Fires, Interview Techniques and Practical Kinesic Interview Techniques, Ventilation Flow Paths and Fire Growth, Forensic Accountant's Role in Fire Investigations, Investigation of Fires Involving Lighting Fixtures, Origin Matrix

Methodology for Compartment Fire Damage, Fluorescent Fixture Fundamentals for Fire Investigators, Fundamentals of Fire Protection Systems, Profiling the Arsonist by Subtype, Writing Expert Reports, 3D Animations and Laser Scanned Data for Forensic Analysis and Visualizations, Clothes Dryer Fires

- April 01, 2013 – Hazardous Materials Operations NFPA 472 Refresher Training, 06 hours – Pennsylvania State Fire Academy
- September/October 2012 – 2012 Annual Seminar: Crime Scene Management, HVAC Systems Investigative Techniques, Motivations of Juvenile Fire Setters, Advanced Photography for Fire Investigators, Trace Evidence, Analysis of Fire Investigation Evidence for Ignitable Liquids, and Small Appliance Hazards, 21 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- September 25-27, 2012 – Expert Courtroom Witness Testimony Program, 40 hours – International Association of Arson Investigators
- July 24, 2012 – Juvenile Fire Setter Intervention Program Educator’s Training, 03 hours – Burn Prevention Foundation
- May 03, 2012 – Who Are You Going To Call? 08 hours – International Association of Arson Investigators and Fire Department of New York
- April 23-27, 2012 – International Association of Arson Investigators Annual Training Conference, 36 hours – Future Myths and Developing Trends, The Changing World of the Fire Investigator, Arc Mapping Update, Litigation Strategy, Emerging Investigative Trends, Ethical Considerations of Fire Losses, and Detection of Deception in Interviewing, Elevated Fires, Ventilation Effects on Fire Development, Understanding NFPA 921 and 1033
- January 27, 2012 – Fundamentals of Interviewing, 04 hours – International Association of Arson Investigators CFITrainer.net
- January 27, 2012 – Fire Investigator Scene Safety, 03 hours – International Association of Arson Investigators CFITrainer.net
- January 27, 2012 – Electrical Safety, 03 hours – International Association of Arson Investigators CFITrainer.net
- January 27, 2012 – Motive, Means, and Opportunity: Determining Responsibility in an Arson Case, 04 hours – International Association of Arson Investigators CFITrainer.net
- January 27, 2012 – Electrical for the Fire Investigator, 16 hours – International Association of Arson Investigators CFITrainer.net
- September/October 2011 – 2011 Annual Seminar: Clandestine Labs, Hybrid and Electric Vehicles, Making Critical Decisions, Systematic Investigations, Counter Terrorism, and Lightweight Building Construction, 28 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- June 06, 2011 – Chevrolet Volt Electrical Vehicle Safety Training, 02 hours – Chevrolet and NFPA

- March 07-10, 2011 – Building Construction, 32 hours – Pennsylvania State Fire Academy
- September/October 2010 – 2010 Annual Seminar: “Hero to Zero” Firefighter Arsonists, Legal Responsibilities of the Fire Investigator, Right of Entry, Warrants, and Evidence, Criminal v. Civil Court, Legal Aspects of Fire Investigations Involving Civil Litigation, Prosecution and Defense Attorney Presentations, Mock Trial, and Round Table , 28 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- August/September 2010 – Hazardous Materials Operations NFPA Level 472, 24 hours – Pennsylvania State Fire Academy
- September 06, 2010 – Ethics and the Fire Investigator, 03 hours – International Association of Arson Investigators CFITrainer.net
- September 06, 2010 – Fire and Explosion Investigations: Utilizing NFPA 1033 and 921, 04 hours – International Association of Arson Investigators CFITrainer.net
- September 05, 2010 – The Scientific Method for Fire and Explosion Investigation 2009 Update, 03 hours – International Association of Arson Investigators CFITrainer.net
- September 05, 2010 – Magnetek: A Case Study in the Daubert Challenge, 02 hours – International Association of Arson Investigators CFITrainer.net
- August 18-19, 2010 – L.P. & Natural Gas Explosions, Investigation, Flashover and Unusual Patterns, 16 hours – Public Agency Training Council
- July 12, 2010 – Effective Investigation and Testimony, 08 hours – International Association of Arson Investigators
- April 26, 2010 – Hazardous Material Operations Level NFPA 472 Refresher, 06 hours – Pennsylvania State Fire Academy
- March 26-28, 2010 – Fatal Fire Documentation and Recovery, 24 hours – Pennsylvania Assoc. of Arson Investigators
- March 08-10, 2010 – Fire Pattern Recognition, Identification and Certification, 20 hours – Public Agency Training Council
- March 01-05, 2010 – Practical Kinesic Interview and Interrogation Level 2 & 3, 40 hours – Stan Walters & Associates and Pennsylvania Assoc. of Code Officials
- November 12-13, 2009 – Practical Aspects of Fire/Arson Fatality Fire Scene Investigation, 16 hours – Public Agency Training Council
- September/October 2009 – 2009 Annual Seminar: NFPA 921, Hands On Burn Cell Investigation, Planning the Investigation, Case and Report Preparation, and Case Presentation, 23 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- September 21-23, 2009 – Hands-On Electrical Fire/Arson Investigation, 20 hours Public Agency Training Council

- March 02-04, 2009 – Practical Aspects of Fire/Arson Investigations Based on NFPA 921 & 1033 and Arson Case Management Techniques, 24 hours – Public Agency Training Council
- January 17-18, 2009 – Practical Kinesic Interview and Interrogation Level 1, 12 hours – Stan Walters & Associates and Pennsylvania Assoc. of Code Officials
- September/October 2008 – 2008 Annual Seminar: NFPA 921 Edition, Daubert Hearings, and Complete Review of the 2008 Edition of NFPA 921, 18 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division
- September 18-19, 2008 – Forensic Fire Scene Investigation, 16 hours – Public Agency Training Council
- September 15-17, 2008 – Vehicle Fire Investigation, 24 hours – Public Agency Training Council
- August 18-22, 2008 – Fire & Arson Investigation Electrical 1, 30 hours – Pennsylvania State Fire Academy
- May 05-09, 2008 – Arson Detection and Fire Investigation, 30 hours – Pennsylvania State Fire Academy
- March 22, 2008 – Introduction to Wildland Fire Behavior S-190, 08 hours – Commonwealth of Pennsylvania & DCNR Bureau of Forestry
- October and November 2007 – Hazardous Materials Technician Training, 80 hours – International Assoc. of Fire Fighters
- September/October 2007 – 2007 Annual Seminar: Legal Aspects, NFPA 921, Fire Patterns, Fire Scene Photography, Digital Photography, Interviews and Interrogation, and Fatal Fires and Scene Preservation, 18 hours – Lehigh and Northampton County Fire Investigation Training Association and PA State Police Troop “M” Fire Marshal Division

#### PROFESSIONAL ASSOCIATIONS

- International Association of Arson Investigators 2007 to present
- National Association of Fire Investigators 2007 to present
- Pennsylvania Association of Arson Investigators 2007 to present. Board Member 2017 to present
- Lehigh and Northampton County Fire Investigator Training Association 2007 to present. Vice President 2011 to present. Develop Annual Training Seminar and Prepare and design annual seminar final exam.
- National Fire Protection Association 2017 to present
- International Association of Fire Fighters 2001 to present
- Pennsylvania Professional Fire Fighters Association 2001 to present



## EDUCATION

- Bucks County Community College – varied fire, rescue, and hazardous materials training
- Reading Area Community College – varied fire, rescue, hazardous materials and medical training
- Northampton Community College – varied fire, rescue, and hazardous materials training
- Davenport College, Grand Rapids, Michigan – paramedic, rescue, and varied courses towards an associate degree
- Slatington Senior High School, Slatington, PA – high school education

## TEST BURNS ATTENDED and CONDUCTED

- Home Fire Sprinkler Demonstration: common residential fire origin, ignition, growth, and extinguishment by residential fire sprinklers in two burn test cells. I conducted this through a grant for Lehigh Township Vol. Fire Co. 1 – October 2011
- Reading/Berks Fire Academy: test burns involving various ignitable liquids (linseed oil, gasoline, cooking oils, solvents, etc.) aerosols, cellulose insulation, cigarettes, oxygen, common fabrics, flooring materials, cigarette lighters, grinding operations, electrical appliances, and electrical system components – August 18-19, 2010 – Coordinated by Public Agency Training Council – Instructor Jamie Novak
- Pennsylvania Assoc. of Arson Investigators: test burn involving pig carcasses varied bones and other varied evidence items placed in a fully involved mobile home fire during the Fatal Fire Documentation and Recovery training program – Coordinated by Mercyhurst College, Erie, PA – Instructors Dr. Dennis Dirkmaat and Dr. Steven Symes
- Reading/Berks Fire Academy: test burns involving varied fire patterns on structural components, materials, and furnishings – Coordinated by Public Agency Training Council – March 10, 2010 – Instructors Steve Riggs and Ray Powell
- Lehigh & Northampton County Fire Investigator Training Association 2009 Annual Seminar – 12 burn cell tests conducted with varied incendiary and accidental origins and causes – September 25-26, 2009 – Instructors were varied committee members and me
- Reading/Berks Fire Academy: test burns involving varied household electrical appliances – Coordinated by Public Agency Training Council – September 21-23, 2009 – Instructors Steve Riggs and Ray Powell
- Reading/Berks Fire Academy: test burns involving vehicle fires started with ignitable liquids and materials and varied intentional methods – Coordinated by Public Agency Training Council – September 15-17, 2008 – Instructor Steve Riggs
- Pennsylvania State Fire Academy: test burns involving varied electrical components and appliances during Electrical Fire Investigation training – August 18-22, 2008 – Instructors were varied Pennsylvania State Police Fire Marshals

- Pennsylvania State Fire Academy: 08 burn cell tests conducted during Arson Detection and Fire Investigation training – May 05-09, 2008 – Instructors were varied Pennsylvania State Police Fire Marshals

WEB. NOT HIRED