



## PRACTICE AREAS

- **Fire Investigation**
- **Explosion Investigation**
- **Arson Investigation**
- **Fraud Investigation**
- **Electrical Product Fire Investigation**
- **Vehicle Fires**
- **Industrial Fires**
- **Fire & Emergency Training Accident Assessment**
- **Fire & Emergency Response Assessment**

## COURT QUALIFICATION HISTORY

- Qualified by Superior Court as an expert in Fire Investigation

## COURSES, TRAINING & AWARDS

- Certified Fire & Explosion Investigator (CFEI)
- Certified Fire Investigator Instructor (CFII)
- Certified Fire Investigator (CFI)
- Certified Vehicle Fire Investigator (CVFI)
- NFPA Fire Investigation Courses 1001, 1002, 1021, 1033, 472, & 1521
- Certified Level 1 & 2 Firefighter, Nova Scotia Firefighters School
- Certified Level 1 Fire Officer, Nova Scotia Firefighters School
- Certified Level 1 Fire Instructor, Nova Scotia Firefighters School
- Certified Hazardous Materials Technician, Team-1 Environmental Services
- Certified Hazardous Materials Incident Commander, Transportation Technology Center
- The National Advanced Fire, Arson & Explosion Investigation Training Program, NAFI, Eastern Kentucky University, 2017
- Residential Gas Systems, Bomb Arson Tracking System, & Vehicle Fire Investigation courses, IAAI, 2017
- National Wildfire Coordinating Group FI-210, Brookhaven National Laboratory, New York, 2016
- International Symposium on Fire Investigation, Science and Technology, Scottsdale, 2016
- Alarm Science Boot Camp, John Jay College of Criminal Justice, New York, 2015
- Investigating Residential Dryer Fires, Fire Findings Laboratories, Benton Harbour, 2015
- Residential Electricity for Fire Investigators, Fire Findings Laboratories, Benton Harbour, 2015
- The National Advanced Fire, Arson & Explosion Investigation Training Program, NAFI, Winnipeg, 2015
- The National Advanced Fire, Arson & Explosion Investigation Training Program, NAFI, Sarasota, 2014



- The Scientific Method for Fire and Explosion Investigation, IAFI, 2014
- The National Advanced Fire Investigation Training Program, NAFI, Lexington, 2013
- Advanced Fire Investigation, Fire-Ex Forensics, St. John's, 2013
- Computer Fire Modeling, Sarasota, 2013
- The National Seminar on Fire Analysis Litigation, Sarasota, 2013
- NFPA Conference and Expo, Las Vegas, 2012
- Arc Mapping Basics, International Association of Arson Investigators, 2012
- International Symposium on Fire Investigation, Science and Technology, Baltimore, 2010
- Post Flashover Fires, International Association of Arson Investigators, 2010
- Forensic Fire Scene Investigation Seminar, Halifax, 2009
- Vehicle Fire, Arson & Explosion Investigation Science & Technology Seminar, NAFI, Lexington, 2009
- Investigating Fatal Fires, International Association of Arson Investigators, Halifax, 2009
- Documenting the Event, International Association of Arson Investigators, 2009
- Understanding Fire Through Candle Experiments, International Association of Arson Investigators, 2008
- Advanced Collision/Crime Scene Diagramming/3D Animation course, FX3 software, Dartmouth, 2008
- International Association of Arson Investigators Annual Training Conference, Victoria, 2007
- The Principles of Electrical Fires, Central Texas Fire Investigators Association, Austin, 2006
- Investigating Motor Vehicle Fires, International Association of Arson Investigators, Halifax, 2006
- Canadian Association of Fire Investigators National Training Conference, Halifax, 2006
- International Symposium on Fire Investigation Science and Technology, Cincinnati, 2006
- Wood Energy Technical Training Recertification, 2006
- Atlantic Canada Death Investigators Seminar, Halifax, 2006
- Canadian National Advanced Fire, Arson and Explosion Training Program, Toronto, 2005
- Marijuana Grow Operations Symposium, Nova Scotia Department of Justice, 2005
- Vehicle Fire & Theft course, Office of the Fire Marshal (Nova Scotia) & Insurance Bureau of Canada, 2004
- Development & Quantification of Hypothesis course, International Association of Arson Investigators, 2004
- Assessment & Control of Dust Explosion Hazards course, International Association of Arson Investigators, Toronto, 2004
- Interpersonal Communications Skills course, St. Mary's University, 2003
- Designing & Implementing an Effective Occupational Health & Safety Program course, Dalhousie University, Halifax, 2002
- Fire & Explosion Investigation Techniques course, Office of the Fire Marshal (Nova Scotia), Halifax, 2002
- Indoor Air Quality: Dust/Fume Collection & Control course, Dalhousie University, Halifax, 2002
- Part 9 National Building Code HVAC & Fire Protection course, Nova Scotia Building Officials Association, 2001



## PROFESSIONAL SOCIETIES & ASSOCIATIONS

National Association of Fire Investigators (NAFI)

Fellow of the International Association of Fire Investigators (IAFI)

International Association of Arson Investigators (IAAI)

Institution of Fire Engineers (IFE)

National Fire Protection Association (NFPA)

NFPA Fire Science and Technology Educators Section

NFPA 921 Fire & Explosion Investigation Technical Committee

NFPA 921 Marine Fire Investigations Task Group Chair

NFPA 921 Wildland Fire Investigations Committee & Investigator Training Committee

Society of Fire Protection Engineers (SFPE)

International Society of Explosive Engineers (ISEE)

American Society for Testing and Materials (ASTM)

E30 Forensic Sciences Technical Committee

International Association for Fire Safety Science (IAFSS)

National Institute of Standards and Technologies (NIST)

Fire Scene & Explosives Sub-committee of Crime Scene/Death Investigation Scientific Area Committee

General Insurance Association of Cape Breton (GIACB)

Advisory Board Member of The Arson Research Project, San Jose

Unmanned Systems Canada

Society of Automotive Engineers

## EMPLOYMENT HISTORY

### **Fire Dynamics Analysts**, Halifax

President, Jan 2017 to present

Lead investigator and instructor for fire and explosion investigation and certification courses

### **Advantage Forensics Inc.**, Toronto

Consultant, Feb 2016 to present

Senior investigator on Fire Investigation team

### **Metro-Rural Fire Forensics**, Halifax

President, Jan 2008 to Jan 2017

Conducted over 500 fire and explosion investigation cases; Lead instructor for fire and explosion investigation certification courses and firefighter courses

Trained 1500 first responders in Crime Scene Management techniques

### **Contrast Engineering Ltd.**, Halifax

Senior Fire Investigator Consultant, July 2008 to Jan 2017



Fire investigations, explosion investigations, and arson investigations

**Halifax Regional Fire & Emergency Service**, Halifax, 1989 to 2009

Past District Chief of Operations

Past Divisional Chief of Safety

Fire & Explosion Investigator and Firefighter, conducted over 1500 fire investigations

Training of firefighters and officers in evidence preservation and fire investigation

**St. Mary's University**, Halifax

Fire Science & Fire Dynamics Course Instructor, 2010 to 2012

Developed curriculum, taught lectures and labs, supervised M.Sc. research students

## LECTURES

- Presenter, "Working with 921 and 1033 During Your Investigation", International Association of Arson Investigators, Washington State chapter, 2018
- Presenter, "Advanced Vehicle Fire Investigation", International Association of Arson Investigators, Washington State chapter, 2018
- Instructor, "Fire Dynamics", NAFI Advanced Fire Investigation Program, Eastern Kentucky University, 2017
- Presenter, "Vehicle Fire Investigation", International Association of Arson Investigators, Kentucky chapter, 2017
- Instructor, "Alarm Science Boot Camp", John Jay College of Criminal Justice, New York, 2015
- Instructor, "Investigating Residential Dryer Fires", Fire Findings Laboratories, Benton Harbour, 2015
- Instructor, "Residential Electricity for Fire investigators", Fire Findings Laboratories, Benton Harbour, 2015
- Instructor, "National Vehicle Fire Investigation Training", Lexington, 2013
- Instructor, "National Advanced Fire, Arson & Explosion Investigation Training", 2005, 2013 to 2015
- Instructor, "NFPA 921 & 1033 2014 Editions: Important Revisions", International Association of Arson Investigators, 2014
- Instructor, "The Scientific Method for Fire & Explosion Investigation", International Association of Fire Investigations, 2014
- Instructor, "Advanced Fire Investigation", Fire-ex Forensics, St. John's, 2013
- Instructor, "Computer Fire Modeling", Sarasota, 2013
- Instructor, "The National Seminar on Fire Analysis Litigation", Sarasota, 2013
- Presenter, NFPA Conference and Expo, Certified Fire Protection Specialist, Las Vegas, 2012
- Instructor, "Arc Mapping Basics", International Association of Arson investigators, 2012
- Instructor, "International Symposium on Fire investigation Science and Technology", Baltimore, 2010
- Instructor, "Post Flashover Fires", International Association of Arson Investigators, 2010
- Instructor, "Forensic Fire Scene Investigation Seminar", Halifax, 2009
- Instructor, "Vehicle Fire Arson & Explosion Investigation Science & Technology", NAFI, Lexington, 2009
- Instructor, "Investigating Fatal Fires", International Association of Arson Investigators, Halifax, 2009
- Instructor, "Documenting the Event", International Association of Arson Investigators, 2009
- Presenter, "Understanding Fire through Candle Experiments", International Association of Arson Investigators, 2008



- Instructor, “Advanced Collision/Crime Scene Diagramming/ 3D Animation” 4-day course, Dartmouth, 2008
- Instructor, “International Association of Arson Investigators Annual Training Conference”, Victoria, 2007
- Instructor, “The Principles of Electrical Fires”, Central Texas Fire Investigators Association, Austin, 2006
- Instructor, “Investigating Motor Vehicle Fires”, International Association of Arson Investigators, Halifax, 2006
- Instructor, “Canadian Association of Fire Investigators National Training Conference”, Halifax, 2006
- Instructor, “International Symposium on Fire Investigation Science and Technology”, Cincinnati, 2006 & 2008
- Instructor, “Wood Energy Technical Training Recertification”, 2006
- Instructor, “Atlantic Canada Death Investigators Seminar”, Halifax, 2006
- Instructor, “Report Writing for Fire Investigators”, Manitoba Emergency Service College, 2005
- Presenter, “Impact of Arson Symposium”, Ontario Fire College, 2005
- Presenter, “Marijuana Grow Operations Symposium”, Nova Scotia Department of Justice, 2005
- Instructor, “Electrical Inspection Training Program”, Nova Scotia Office of the Fire Marshal, 2005
- Presenter, “Nova Scotia Automobile Fire & Theft Symposium”, 2004
- Instructor, “NFPA 96 Grease Laden Vapour Hoods”, Fire Inspectors Association of Nova Scotia, 2004
- Instructor, “Fire Safety Act Administration”, Fire Inspectors Association of Nova Scotia, 2004
- Presenter, “Fire Origin and Cause Determination”, Nova Scotia Firefighters School, 2014-2015
- Presenter, “Fundamentals of Fire Investigation”, Nova Scotia Fire Firefighters School, 2008 to 2015.
- Presenter, “Protecting Evidence for Fire Cause Determination”, Nova Scotia Firefighters School, 2008 to 2015
- Presenter, “Origin: A Fire Investigators Most Important Hypothesis”, Fire Department Information Conference, Wolfville, 2007
- Trainer, “Crime Scene Management”, taught to over 1500 first responders to date, 2003 to 2015
- Trainer, “Fire Investigation for Police” 5-day course, RCMP and Halifax Regional Police, Halifax, 2009
- Presenter, “Beyond the Bookshelf”, Fire Service Association of Nova Scotia, 2011
- Presenter, “The Professional Practice of Fire investigation”, Fatal Fire Investigations, Halifax, 2011
- Presenter, “Suppressing the Burn”, General Insurance Association of Cape Breton, Sydney, 2015
- Presenter, “Fire Investigation Challenges”, Intact Insurance, Clarinville, 2015
- Presenter, “Fire Investigation”, Insurance Institute of New Brunswick, Moncton, 2014
- Instructor, “Fire Investigation Certification” course, Nova Scotia Firefighters School, Waverley, 2011, 2015
- Presenter, “Fire Investigation – Documenting the Scene”, New Brunswick Community College, Miramichi, 2013
- Presenter, “Fire Investigations in Canada”, Fire Department Information Conference, Wolfville, 2014
- Presenter, “Fire Investigation Methodology”, National Association of Fire Investigators Conference, 2014-2015
- Presenter, “Overview of NFPA 921 & 1033”, National Association of Fire investigators Conference, 2015
- Presenter, “Investigation of Electrical Fires”, National Association of Fire Investigators Conference, 2015



## JOURNAL PAPERS & PUBLICATIONS

- Technical Peer Reviewer, *Fire Technology* magazine
- Contributor to Zwirn J., *The Alarm Science Manual*. 1<sup>st</sup> Ed., Zwirn Corporation, Tenafly, NJ, 2014
- Contributor to Gorbett G., Pharr J., *Fire Dynamics*. 1<sup>st</sup> Ed., Brady/Prentice Hall, Upper Saddle River, NJ, 2010
- Contributor to DeHaan, J., *Kirk's Fire Investigation*. 7<sup>th</sup> Ed., Brady/Prentice Hall, Upper Saddle River, NJ, 2010
- Contributor to International Fire Service Training Association's *IFSTA Fire Investigator*. 2<sup>nd</sup> Ed., Oklahoma State University, Stillwater, OK, 2008
- Contributor to International Fire Service Training Association's *IFSTA Fire and Emergency Services Instructor*. 8<sup>th</sup> Ed., Oklahoma State University, Stillwater, OK, 2012
- Contributor to International Fire Service Training Association's *IFSTA Introduction to Fire Origin and Cause*, 4<sup>th</sup> Ed., Oklahoma State University, Stillwater, OK, 2013
- Chapdelaine W., Gorbett G., "Scientific Method-Use, Application, and Gap Analysis for Origin Determination", International Symposium on Fire Investigations, 2014