

Richard J. Kooren

CFII, CCFI-C



1336 Sandhill Drive
Ancaster, Ontario
L9G 4V5

EDUCATION

Degree in Bachelor of Applied Science in chemical engineering (1978), University of Waterloo, Waterloo, Ontario

PROFESSIONAL REGISTRATION/LICENSING

- Association of Professional Engineers and Geoscientists of BC, Professional Engineer, 2016-2023
- Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists, Professional Engineer, 2016-2023
- Association of Professional Engineers of Nova Scotia, Professional Engineer, 2014-2023
- Association of Professional Engineers and Geoscientists of New Brunswick, Professional Engineer, 2014-2023
- Association of Professional Engineers and Geoscientists of Saskatchewan, Professional Engineer, 2010-2023
- Association of Professional Engineers, Geologists and Geoscientists of Alberta, Professional Engineer, 2010-2023
- Association of the Professional Engineers of the Province of Manitoba, Professional Engineer, 1994-2023
- Designated Consulting Engineer by Professional Engineers of Ontario Since 1988
- Professional Engineers of Ontario, Professional Engineer, 1980-2023

CERTIFICATION

National Association of Fire Investigators
Certified Fire Investigation Instructor (CFII)
Canadian Certified Fire Investigator, Level C

TECHNICAL AFFILIATIONS

Member, Ontario Chapter Past President - International Association of Arson Investigators
Member - Canadian Association of Fire Investigators
Member - National Association of Fire Investigators

PROFESSIONAL EXPERIENCE

Involved in the investigation of over 3,500 fire losses to date.

July 1991 to January 2021

Vice President and Investigative Engineer, ***Origin and Cause Incorporated***

January 2021 to April 2023

Investigative Engineer, ***Origin and Cause Incorporated***

April 2023 to Present

Consultant, ***Origin and Cause Incorporated***
Ancaster, Ontario

- Investigation of fires and explosions in buildings and vehicles
- Analysis of fire scenes with respect to temperatures attained and combustibility of materials exposed to a fire
- Installation of wood burning appliances
- Investigation of chemical spills
- Fire suppression system failures and fire spread analysis

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- Liability issues pertaining to Fire Departments

January 1993 to December 2010 (Retired)

Part-time (Volunteer) Firefighter holding the rank of Lieutenant, **Hamilton Fire Department**, Ancaster, Ontario

1985 to June 1991

Senior Associate and Investigative Engineer, **Forensic Engineering Incorporated**, Burlington, Ontario

- Investigation of fire and explosions in buildings and vehicles.
- Research of fire causes and effects.

1982 to 1984

Special Projects Engineer, **Office of the Fire Marshal**, Minister of the Solicitor General (Government of Ontario)
Toronto, Ontario

- Fire and vapour explosion investigation and research.
- Inspections of buildings for Fire Code violations.

1980 to 1982

Process Engineer and Quality Control Manager, **Prestolite Battery Company of Canada**, Maple, Ontario

- Supervised Q.C. program for manufacturing facility.
- Set up and developed operating parameters for processing equipment.
- Research and qualifying company to supply original equipment to major automotive manufacturer.

1978 to 1980

Research Engineer, **Lever Detergents Limited**
Toronto, Ontario

- Development of new and existing products for the manufacturer of liquid detergents and hard surface cleaners.
- Manufacturing trouble-shooting and product quality.

1974 to 1978

Co-op Student, **Stelco**
Hamilton, Ontario

- Employed by industries during work terms while attending the Co-Operative Engineering Program at the University of Waterloo.
- Air and water quality control analysis.
- Plant water consumption surveys.
- Co-op Student, **Proctor & Gamble**, Hamilton, Ontario
- Various engineering projects including processing and pollution surveys.

FURTHER TRAINING AND EDUCATION

- 29th Annual Training Conference, International Association of Marine Investigators, February 2019, Charleston, South Carolina.
- 69th Annual International Training Conference, International Association of Arson Investigators, May 2018, Dallas, Texas.
- 67th Annual International Training Conference, International Association of Arson Investigators, April 2016, Orlando, Florida.
- 27th Annual Training Seminar, International Association Marine Investigators, March 2017, Savannah, Georgia.
- International Association of Marine Investigators Mobile, Alabama, March 2015

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- International Association of Marine Investigators, Oklahoma City, Oklahoma, February 2014
- International Association of Marine Investigators, Charleston, South Carolina, February 2013
- International Association of Marine Investigators, San Diego, California, February 2012
- International Association of Marine Investigators, Galveston, Texas, January 2010
- International Association of Marine Investigators, Portland, Oregon, March 2009
- International Association of Marine Investigators, Baton Rouge, Louisiana, February 2008
- Fire Investigation Professional Development Seminar – Saskatchewan Association of Fire Chiefs, Saskatoon, November 2007
- International Association of Marine Investigators, Panama City Beach, Florida, February 2007
- Fire Investigation Professional Development Seminar – Saskatchewan Association of Fire Chiefs, Regina November 2006
- International Association of Marine Investigators, Virginia Beach, Virginia, February 2006
- Investigation of Boat Fires, IAAI/ IAMI, Wells Beach, Maine, June 2005
- Investigation of Boat Fires, CAFI, Orillia, Ontario, October 2001
- 52nd Annual seminar – International Association of Arson Investigators Atlantic City, New Jersey, May 2001
- Investigation of Gas and Electric Appliance Fires, Benton Harbour, Michigan, May 2000
- 48 Annual Seminar – International Association of Arson Investigators Toronto, Ontario, May 1997
- Canadian Coalition against Fraud Seminar – Program Facilitator, Banff, Alberta, June 1996
- UBC Fire Science and Fire Investigation Workshop, Vancouver, British Columbia, May 1996
- 47th Annual Seminar – International Association of Arson Investigators St. Louis, Missouri, April 1996
- NAFI/NFPA Fire, Arson & Explosion Investigation Training Program - CFII (Certified Fire Investigation Instructor) Certification, Chicago, Illinois, August 1995
- 45th Annual Seminar – International Association of Arson Investigators Biloxi, Mississippi, May 1994
- 39th Annual Seminar – International Association of Arson Investigators Niagara Falls, New York, May 1988
- Electrical Fire Investigation – University of Wisconsin, Madison, Wisconsin, April 1987
- Level III – Canadian Fire Investigation School, Toronto, Ontario, November 1983
- Level II – Canadian Fire Investigation School, Arnprior, Ontario, September 1982

PRESENTATIONS

- Boat Fires, IAAI Ontario Chapter, Kingston, Ontario, June 2016
- Boat Fires, IAAI Ontario Chapter, Barrie, Ontario, June 2013
- Causes of Fires & Explosions on Marine Vessels, IAMI, Charleston, South Carolina, February 2013
- Working with Private Sector OMFPOA Symposium, Brantford, Ontario April 2014

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- Lectured on boat fires and freshwater electrocutions, OFM Staff Conference, Ontario Fire College, Gravenhurst, Ontario, June 2012
- Boat Fire, IAAI Ontario Chapter Arson Seminar, St. Catharines, Ontario, June 2011
- New Building Materials & Their Effect on Fire Spread, OIAA Niagara Chapter, Jordan, Ontario, October 2010
- Lectured on boat fires and freshwater electrocutions, IAMI Regional Seminar, Niagara Falls, Ontario, June 2009
- Lectured on Marine fires, IAAI Ontario Chapter Arson Seminar, Kingston, Ontario, May 2009
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2009
- Lectured on Fire investigation and overhauling fire scenes, Oxford County Mutual Aid Fire Departments, Oxford County, Ontario, May 2008
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2008
- Spontaneous heating and chemical reactions, IAAI BC Chapter Arson Investigators Conference, Vernon, British Columbia, April 2008
- Lectured on Marine fires, IAAI Ontario Chapter Arson Seminar, Kingston, Ontario, June 2007
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2007
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2006
- Origin and cause investigations, Burlington Fire Department, Fire officer training, Burlington, Ontario, October 2005
- International Association of Marine Investigators, Marine Fires & Explosion Investigations, Vancouver, British Columbia, November 2004
- International Association of Marine Surveyors, Marine Fires & Explosion Investigations, Society of Accredited Marine Surveyors, Toronto, Ontario, October 2004
- Marine fires and explosion investigations, International Association of Marine Investigators, Toronto, Ontario, February 2004
- Fire dynamics and behavior, new recruit training, Hamilton Fire Department, Hamilton, Ontario, March 2003
- Origin and cause of boat fires, Metropolitan Toronto Police, Toronto, Ontario, March 2002
- Lectured on fire investigation and overhauling fire scenes, Selkirk Fire Station, Haldimand EMS, Selkirk, Ontario, June 2001
- Lectured on fire investigation and overhauling fire scenes, Northumberland County Mutual Aid Fire Departments, Northumberland County, Ontario, January 2001
- Lectured on fire investigation and overhauling fire scenes, Haldimand-Norfolk Mutual Aid Fire Departments, Haldimand-Norfolk County, Ontario, September 2000
- Origin and cause of fires, fire science, lectured to Bruce County Insurance Brokers Association, Walkerton, Ontario, March 2000
- Properties of flammable liquids, International Police Diver Symposium, Hamilton, Ontario, September 1999
- Fire scene investigation and properties of flammable liquids, IAAI Ontario Chapter Arson Seminar, Simcoe, Ontario, June 1999
- Alternate uses of GC/MS/MS, Presentation at CSFS Conference, Wolfville, Nova Scotia, 1998

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- Lectured on Fire investigation and overhauling fire scenes, Peterborough County Mutual Aid Fire Departments, Peterborough, Ontario, September 1996
- Lectured on Fire Department Liability, Association of Fire Department Training Officers, March 1995
- Lectured on fire investigation and overhauling fire scenes, Bruce County Mutual Aid Fire Departments, Bruce County, Ontario, March 1995
- Forensic Engineering, Toronto 1995, Presentation at CSFS Conference, Toronto, Ontario, 1995
- Lectured on fire investigation and overhauling fire scenes, Wellington County Mutual Aid Fire Departments, Wellington Country, Ontario, October 1995
- Lectured on Fire investigation and overhauling fire scenes, Grey County Mutual Aid Fire Departments, Grey County, Ontario, November 1994
- Cellulose Insulation Fires and Vehicle Fire Fatality, Presentation at CSFS Conference, Vancouver, British Columbia, 1994
- Lectured on Fire investigation and overhauling fire scenes, Huron County Mutual Aid Fire Departments, Huron County, Ontario, September 1994
- Flashover Fires, Presentation at CSFS Conference, Winnipeg, Manitoba, 1993
- Origin and Cause of Fires, lectured to Insurance Claims Personnel, Cambridge, Ontario, June 1992
- Origin and Cause of Fires, lectured to Hamilton Wentworth Regional Fire School, Hamilton Ontario, May 1992
- Organized and Chaired Fire Investigation Program, Technical University of Nova Scotia (TUNS), Toronto, Ontario, 1991
- Computer fire programs, presentation at CSFS Conference, Toronto, Ontario, 1998
- Fire scene investigation, IAAI Ontario Chapter Arson Seminar, London, Ontario, October 1998

PUBLICATIONS

- The Subtle Signature of Spontaneous Combustion, O&C Newsletter, August 2015
- 3 Strategic Advantages of Involving a Forensic Expert in Your Case, O&C Newsletter, November 2014
- "Pyrolysis: Ignition by Stealth", Without Prejudice, March 2010.
- "Hazards of Propane", OCI newsletter, October 2008.
- "Carbon Monoxide Poisoning in Open Spaces", OCI newsletter, May 2007.
- "Flashover: An Arson Defense Tool?", Fire-Arson Investigator, California Conf. Of Arson Investigators, April 1997.
- "Forensic Engineering", Canadian Independent Adjuster, 1997.
- "Forensic Engineering", Canadian Society of Forensic Science Journal, March 1997.
- "Flashover: An Arson Defense Tool?", The Team Approach, IAAI Quarterly, Summer 1996.
- "Fires Involving Chimneys and Woodburning Appliances", Parts I & II BC Adjusters' Quarterly, January 1995.
- "Fires Involving Chimneys and Woodburning Appliances", Parts I & II BC Adjusters' Quarterly, October 1994.
- "Flashover: An Arson Defense Tool?", BC Adjusters' Quarterly, April 1994.
- "Flashover: An Arson Defense Tool?", Canadian Society of Forensic Science Journal, March 1994.

COURT EXPERIENCE

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- Testified in High Court of Fiji.
- Expert witness in all levels of Ontario Court: Supreme, District and Provincial.
- Testified at numerous Provincial offenses cases, including ones involving welding accidents.
- Testified Queen's Bench, Provinces of Manitoba, Alberta and Saskatchewan.
- Testified Judicial Court, Province of New Brunswick.
- Testified Queens Bench, Province of New Brunswick.
- Testifying in Civil Court for Plaintiff and Defendant.
- Testifying in Criminal Court for Crown and Defendant.
- Testifying in Preliminary Hearings for Criminal matters.
- Testifying in Coroner's Inquests.