



Michelle Bradley

P. Eng. CFEI, CVFI

Mechanical Engineer

OFFICE

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CONTACT

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Michelle specializes in all types of vehicle and equipment fire investigations, including failure analysis, as well as product liability, residential and commercial appliances. She has conducted more than 1,900 investigations, including vehicle and equipment losses in all industries including construction, agriculture, transportation, forestry and passenger vehicles. Prior to entering the field of forensic engineering, Michelle performed mechanical engineering tests and evaluations for Ford Canada and was an equipment engineer for Samsung Austin Semiconductor.

EDUCATION

University of Windsor

Mechanical Engineering
Windsor, Ontario, Canada
1997

PROFESSIONAL REGISTRATION/LICENSING

- Professional Engineers Ontario (PEO)

TECHNICAL AFFILIATIONS

- International Association of Arson Investigators (IAAI), Ontario Chapter
 - Board of Directors (2018 – Present)
 - President 2016-2017
 - 1st VP, 2014-2015
- Member – National Association of Fire Investigators (NAFI)

CERTIFICATIONS

- Certified Fire and Explosion Investigator (CFEI)
- Certified Vehicle Fire Investigator (CVFI) since 2002

PROFESSIONAL EXPERIENCE

Mechanical Engineer

OCI Group (Formerly Origin and Cause Incorporated)

Burlington, Ontario

March 2002 – Present

- Vehicle fire investigations, failure analysis and engineering investigations in the mechanical field for the insurance community, legal profession and manufacturers
- Dryer fire investigations
- Other various large and small appliance examinations
- Investigation of sprinkler system malfunctions
- Evaluation of gas valve malfunctions
- Investigation of heat pump failures and refrigeration/air conditioning failures

- Investigation of more than 1,500 vehicle fires, including transport truck fires, transit bus fires, off-road heavy equipment fires, forestry equipment fires and farm equipment fires
- Inspection and evaluation of engine failures
- Investigation of component failures and malfunctions
- Investigation of hoists and bridge crane failures
- Evaluation of machine design
- Investigation of personal injury incidents
- Inspection and evaluation of welded components

Test/Manufacturing Engineer

Ford Essex Engine Plant

Windsor, Ontario

May 2001 – December 2000

- Conducted noise and vibration testing on various Ford engines in the Essex Engine Plant's dynamometer
- Established a generic noise and vibration baseline in order to compare deviant engines. This helped to indicate possible variations with individual engines

Equipment Engineer Samsung

Austin Semiconductor

Austin, Texas

August 1997 – August 1999

- Organized the installation and pre-process qualification of Samsung's diffusion low pressure and atmospheric furnaces
- Participated in various projects to improve the efficiency and quality of the equipment in the Diffusion Engineering Department

FURTHER TRAINING & EDUCATION

- Annual Engineering Insurance Conference, Multiple Speakers, 1 Day (2025)
- EV (Electric Vehicle) Training, Phase I & II, 28 Hours, Weber State University, Online (2025)
- NFPA 921 Fire Investigator's Course, IAAI Ontario, 4 Days (2025)
- FSWO (Fire Service Women Ontario) Symposium, 1 Day (2024)
- NFPA 921 Fire Investigator Course, OCI Group, 4 Days (2023)
- Vehicle Investigations, IAAI Ontario, 2 Days (2023)
- NFPA 921 Training Course, IAAI Ontario, 4 Days (2022)
- Webinar: Update on Electric Vehicle Fires in Canada, CAFI, 1 Hour (2021)
- Arson for Profit, IAAI Ontario, 2 Hours (2021)
- Solving the Unsolvables, CAFI, 2 Days (2019)
- The Behaviour of Interviewing in Today's World, IAAI Ontario, 1 Day (2019)
- NFPA 1033 Professional Qualifications for Fire Investigators Course, Ontario Fire College, 5 Days (2019)
- Spring Seminar, Agriculturally Related Fires, CAFI, 2 Days (2019)
- Certified Fire and Explosion Investigator Course, IAAI, 4 Days (2019)
- Certified Fire and Explosion Investigator Training Program, IAAI (2016)
- ISFI 2012 International Symposium on Fire Investigation Science and Technology, 3 Days (2012)
- Electrical Fire Investigations, IAAI, 1 Day (2012)
- Certified Fire and Explosion Investigation Course, IAAI, 4 Days (2011)
- Vehicle Fire Investigation Course, NAFI (2011)
- Investigation of Gas and Electric Appliance Fires Course, Fire Findings (2011)
- The Evolution of Fire Scene Evidence Seminar, IAAI (2010)
- Adjusting/Investigating a Large Loss Fire Seminar, IAAI (2006)
- Fire Investigations Seminar, Toronto Arson Task Force, 3 Days (2005)
- Fire Investigation/Arson Task Force Seminar, IAAI/OPP, 2 Days (2004)
- Vehicle Fire Investigation Seminar, CAFI, 2 Days (2004)
- Investigation of Gas and Electric Appliance Fires Course, Fire Findings, 4 Days (2004)
- Vehicle Fire Investigation Seminar, CAFI, 2 Days (2004)
- Vehicle Fire Investigation Course, NAFI, 4 Days (2002)
- Fire Investigation/Arson Task Force Seminar, IAAI/OPP, 2 Days (2002)
- Fire and Explosion Investigation Course, CAFI, 4 Days (2002)
- Fire and Explosion Investigation Seminar, IAAI, 2 Days (2002)

PRESENTATIONS

- Vehicle Fire Investigations, NFPA 921 Fire Investigator Course, 3 Hours (2025)
- Undetermined Subrogation, Ottawa, Ontario (2025)
- Undetermined Subrogation, OCI Group National Tour (2025)
- “Rise Of The Machines: Appliance Fires And Flood Claims”, Origin and Cause, Webinar (2015)
- Dryer Fires, Electrical Fire Investigations, IAAI, 1 Day (2012)
- Vehicle Fire Investigations, Certified Fire and Explosion Investigation Course, IAAI, 3 Hours (2011)
- Lectured to many Insurance companies on Vehicle Fire Investigations

PUBLICATIONS

- “What Is The Most Common Appliance Fire? Experts Say ‘Dryers’”, Origin and Cause (2015)
- “Trial & Tribulations of The Clothes Dryer Fire – An Investigative Tool”, Without Prejudice,(2010)
- “Electrical Fire Prevention — Commercial and Industrial Installations , Forensic Insight