

Matthew Obach

M.A.Sc., P.Eng., CFEI, CVFI



P.O. Box 50057
Rivergrove, Winnipeg, Manitoba
R2V 1M5

EDUCATION

M.A.Sc., Mechanical Engineering (Fire Safety)
University of Waterloo, 2011

B.Sc., Mechanical Engineering
University of Saskatchewan, 2009

PROFESSIONAL REGISTRATION/LICENSING

Association of Professional Engineers and Geoscientists of Manitoba (APEGM)
Professional Engineer since 2014

Association of Professional Engineers and Geoscientists of Saskatchewan (APEGGS)
Professional Engineer since 2015

Professional Engineers Ontario (PEO)
Professional Engineer since 2014

Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Professional Engineer since 2017

Northwest Territories and Nunavut Association of Professional Engineers and
Geoscientists (NAPEG)
Professional Engineer since 2016

CERTIFICATION

CFEI, Certified Fire and Explosion Investigator (NAFI)

CVFI, Certified Vehicle Fire Investigator (NAFI)

Berla iVe Vehicle System Forensics

TECHNICAL AFFILIATIONS

Member - National Association of Fire Investigators (NAFI)

Member - Canadian Association of Fire Investigators (CAFI)

PROFESSIONAL EXPERIENCE

Have participated in more than 350 investigations to date specializing in
mechanical related losses.

April 2015 to Present

Forensic Engineer **Origin and Cause Incorporated**
Winnipeg, MB

- Investigation of vehicle, truck, and heavy equipment fires, and structural fires with mechanical equipment involved.
- Forensic investigation of failures involving mechanical equipment.
- Digital data acquisition from vehicles using the Berla iVe and Bosch systems.

June 2012 to April 2015

Fire Investigator/Forensic Engineer **EFI Global**
Ottawa, ON / Winnipeg, MB

- Numerous fire investigations of residential, commercial, and vehicle/equipment fires, indoor air quality investigations and testing, and slip and fall investigations. Investigations conducted for various insurance clients.

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2011 to 2012

Applied Commercial and Industrial Sales *The Master Group*
Ottawa, ON

- Aided engineering clients in selection and specification of HVAC components.

2009 to 2011

M.A.Sc. Candidate *University of Waterloo*
Waterloo, ON

- Conducted thesis research on manual suppression techniques in a compartment fire.

2008 to 2009

Research Assistant *University of Saskatchewan*
Saskatoon, ON

- Conducted literature review of wild land fire convection column theory and created a plume in the laboratory using salt-water modelling.

FURTHER TRAINING AND EDUCATION

- Berla iVe Vehicle System Forensics Training Course (2018)
- Fire Findings: Investigation of Gas and Electric Appliance Fires Course (2016)
- SAFC Seminar – Inspecting Commercial Kitchen Systems (2014)
- CAFI Seminar – Overlooked Ignition Sources and Evidence Management (2014)
- Canadian National Advanced Fire, Arson and Explosion Investigation Training Program (2012)
- EFI Global Fire Training and Live Burn, Memphis, TN (2012)
- Advanced Fire Investigation Workshop with Dr. John DeHaan (2012)
- CFEI Trainer, 25 online courses, 2012 to present

PRESENTATIONS

- Cause Determination in Vehicle Fires – Vehicle Fire Investigations (IAAI) - 2017
- Fire Dynamics - Guest Lecture, Oxygen Consumption Calorimetry, University of Waterloo, 2009 and 2010
- Fire Safety Engineering - Teaching Assistant, University of Waterloo, 2011
- Ordinary Differential Equations – Teaching Assistant, University of Waterloo, 2010

OTHER

Publications as First Author

- Obach, Matthew R. (2011) Effects of Initial Fire Attack Suppression Tactics on the Firefighter and Compartment Environment. M.A.Sc. Thesis, University of Waterloo.
- Obach, M.R., E.J. Weckman, and A. Strong (2011) Effects of different suppression tactics on the firefighter and compartment environment, International Association of Fire Safety Science, Maryland.
- Obach, M.R., and E.J. Weckman (2010) Comparing the heat release rate and heat flux of uniformly constructed wood cribs, Combustion Institute – Canadian Section, Ottawa.
- Obach, M.R., D.A. Torvi, D. Sumner, and D.J. Bergstrom (2010) Salt-water modeling of a wildland fire's convection column, Combustion Institute – Canadian Section, Ottawa.

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Other Publications

- Robson, L.D., Torvi, DA, Obach, MR and Weckman, EJ, Effects of variations in incident heat flux when using cone calorimeter test data for prediction of full-scale heat release rates of polyurethane foam, Fire and Materials, Vol 40, 2016 pp 89-113.
- Robson, L.D, M.R. Obach, J. Rigg, J.U. Ezinwa, D.A. Torvi, and E.J. Weckman (2011) Effects of polyurethane foam thickness on heat release rates measured in cone and furniture calorimeter tests, Fire and Materials, Wiley, MA.
- Ezinwa, J.U., L.D. Robson, M.R. Obach, D.A. Torvi, and E.J. Weckman (2011) Evaluating models for predicting full-scale fire behaviour of polyurethane foam using cone calorimeter data, Fire Technology, Springer, NY.
- Robson, L.D, M.R. Obach, J.U. Ezinwa, D.A. Torvi, and E.J. Weckman (2010) Effects of polyurethane foam thickness on flame spread and heat release rates in furniture calorimeter tests, Combustion Institute – Canadian Section, Ottawa.