



Dylan B.F. Rochon, P.Eng.

B.Sc., CVFI, CFEI
Mechanical Engineer

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Education

QUEEN'S UNIVERSITY, KINGSTON, ON

2016

Faculty of Applied Science
Bachelor of Applied Science, Mechanical Engineering (Biomechanical)

Experience

ROAR ENGINEERING

2015 – PRESENT

Manager – Vehicle and Equipment Fires & Collision Reconstruction

Manage the Vehicle and Equipment Fire and Explosion Division at Roar Engineering, specializing in the analysis of fire-damaged motorized and recreational vehicles, encompassing those with internal combustion, hybrid, or electric propulsion systems, as well as diverse construction, farming, mining, and logging equipment. Expertise lies in discerning fire and explosion origins, whether from arson, electrical anomalies/failures, hot surface ignition, or fugitive leaks in flammable fluids like transmission oil, engine lubricants, fuel, brake fluid, hydraulics, and other volatile substances. Armed with state-of-the-art instrumentation and an extensive comprehension of the intricate dynamics of vehicle fires to facilitate a comprehensive understanding of fire incident circumstances for informed decision-making processes.

Conduct engineering reconstructions of motorized and recreational (RV, boat, motorcycle, ATV, snowmobile, etc.) vehicles and pedestrian-related accidents. Accident reconstructions involve the collection of critical evidence, including impact speeds, perception and reaction times, impact severity determination and evaluation, analysis of pre-impact through the post-impact sequence of events, road design, maintenance and conditions, site lines (obstructions), speed distance/time calculations, computer-assisted reconstruction and simulations, vehicle safety examinations, vehicle lamps, road lighting, seatbelt and tire analysis.

Responsible for conducting engineering analyses of accident reconstructions, evaluating factors such as vehicle speed and motion variability, pre-impact and post-impact vehicle orientation, seatbelt and airbag activation, occupant kinematics, GPS and navigational data, crash recorder data, infotainment data, vehicle diagnostic data, vehicle lamp orientation, mechanical condition, driver's perception and response, collision avoidance maneuvers, road design, sightlines, road maintenance, traffic control, and environmental influences.



Evaluation of buildings and structures within the context of Fire and Building Code regulations, local bylaws, fire and life safety standards, and other relevant governing codes and standards. Extensive experience in conducting comprehensive assessments to identify and document structural, fire and safety hazards that are pertinent to personal injury cases.

Utilize statistical techniques to analyze the collision-injury database to determine the effect of impact speed, safety belt status, seating position, and impact orientation on resulting injury profiles in specific collisions.

Momentum dynamics and statistics-based engineering analysis for mechanical and structural failures. Assess failure mechanisms during slip, trip, and fall investigations to determine whether a claimed injury is possible under the claimed circumstances.

Responsible for inspecting stairs, ramps, walking surfaces, door forces and latching mechanisms for compliance with applicable codes and standards. Conduct slip-testing analysis and building code compliance to assess liability in slip-and-fall and personal injury investigations.

Responsible for state-of-the-art vehicle system data extraction and downloads. Certified to remove and disassemble infotainment, telematics, airbag control module, and electronic control module for data extraction and analysis.

Led or assisted in over 200 mechanical system and/or material failure investigations. Experienced in plumbing failure investigations. Responsible for X-ray operation and X-ray analysis, and stereo-microscope operation.

Responsible for inspecting existing building sprinkler and other fire and life safety systems for code compliance. Determine the mechanism(s) responsible for sprinkler system failures.

Mentor and coach engineers and manage engineers in the organization, focusing on technical training, business operations, and administration.

Additional Courses and Seminars

International Association of Arson Investigations (IAAI), 2023

Making Arson Cases Stronger for Prosecution
Hypothesis Development in Fire Investigation
Challenges to Expert Qualifications, Methodology and Opinions
Investigating Lightning Strike Fires

Certified Vehicle Fire Investigator (CVFI)

National Association of Fire Investigators, 2019

Certified Fire & Explosions Investigator (CFEI)

National Association of Fire Investigators, 2019

CDR Operators Class and Analysis & Applications Classes

CDR-Trainers, 2019

Vehicle Forensics and iVe Certification

Berla, 2018

Computer Reconstruction Course

PC-Crash Essentials Workshop & Expert Workshop

Traffic Crash Reconstruction 1

Northwestern University Center of Public Safety, 2018



Traffic Crash Reconstruction 2

Northwestern University Center of Public Safety, 2018

NFPA 13 – Installation of Sprinkler Systems

NFPA, 2017

NFPA 25 – Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

NFPA, 2017

Accident Analysis and Reconstruction Inc.

Crush Energy Analysis, 2015

Society of Automotive Engineers

Vehicle Accident Reconstruction Methods, 2015

Professional Memberships

Association of Professional Engineers of Ontario (PEO)

Society of Automotive Engineers (SAE)

National Association of Fire Investigators (NAFI)

Certified Vehicle Forensics (Berla iVe)

Canadian Association of Technical Accident Investigators and Reconstruction (CATAIR)

Instructor

Rochon, D.; Morris, A.R. 2018, “**Accident Reconstruction 101**”

Rochon, D.; Morris, A.R. 2018, “**Black-Box and Infotainment Systems**”

Rochon, D.; Morris, A.R. 2018, “**Slips, Trips, and Falls**”

Rochon, D., 2018, “**How Berla’s High-Tech Vehicle Download Toolkit Can Solve Your Case**”

Rochon, D.; Rochon, V.R. 2019, “**Vehicle Fire Fraud and Electronic Data**”

Rochon, D., 2020, “**Vehicle Claims: Theft, Fraud and Fire**”.

Rochon, D. 2023, “**Electric Vehicles: The Future of Fire Investigations**”

