CURRICULUM VITAE

Sharlene Wauters, B. Eng., P.Eng. *(she/her)*

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EXPERT SUMMARY

Ms. Sharlene Wauters is Practice Lead of the Collision Reconstruction and Winter Road Maintenance groups at 30 Forensic Engineering. Ms. Wauters has investigated over 1,300 cases since commencing her forensic career in 2006. She is well-versed in all aspects of collision reconstruction and has specialized in winter maintenance investigations. While working on cases in Canada and the United States, Ms. Wauters has reconstructed collisions involving passenger and commercial vehicles, motorcycles, recreational vehicles, cyclists, and pedestrians. In addition, she is adept in assessments of winter road maintenance and general winter maintenance issues. Ms. Wauters is a licensed Professional Engineer in the provinces of Alberta, British Columbia, and Ontario, and holds a Certified Snow Professional (CSP) certification from the Snow and Ice Management Association (SIMA). She has been qualified as an expert witness in the field of mechanical engineering for collision reconstruction in British Columbia Supreme Court (Civil and Criminal), including providing evidence regarding collision dynamics, collision avoidance, pedestrian trip and fall analysis, and human factors.

SPECIALIZED PROFESSIONAL COMPETENCIES

- Collision reconstruction involving automobiles, commercial vehicles, motorcycles, cyclists, pedestrian impacts, and recreational vehicles
- Vehicle dynamics modelling and simulation
- Collision scene examinations
- Collision avoidance assessments
- Airbag Control Module (ACM) data retrieval and analysis
- Restraint system usage and effectiveness assessments
- Visibility assessments
- Mapping of GPS and Automatic Vehicle Locating (AVL) data
- Winter road maintenance assessments for highways, public and private roadways
- Winter maintenance assessments for parking lots, plazas, shopping malls, business parks, apartment complexes, condominium access roads, sidewalks, and private walkways

ACADEMIC BACKGROUND

Bachelor of Aerospace Engineering, with Honours, Toronto Metropolitan University (Formerly known as Ryerson University), Toronto, Ontario, 2006

Bachelor of Science, first year studies with full tuition scholarship, Thomson Rivers University, Kamloops, BC, 2000 – 2001

ADDITIONAL COURSES

Snow & Ice Management Association, SIMA: Certified Snow Professional (CSP) certification; completion of Certified Snow Professional program; including, Business, Human Resources, Marketing, Sub-contractors, Snow & Ice Science, and Snow & Ice Operations and Techniques, 2025

Level 2: Digital Multimedia Evidence Processing, Law Enforcement & Emergency Services Video Association, International, Inc. (LEVA), 2024, Calgary Police Service Headquarters

Level 1: Forensic Video Analysis and the Law, Law Enforcement & Emergency Services Video Association, International, Inc. (LEVA), 2023, Calgary Police Service Headquarters

Fundamentals of Anti-Icing and Liquids, Snow and Ice Management Association (SIMA), 2023

Snow & Ice Management Association, SIMA: Advanced Snow Manager (ASM) designation; completion of the Advanced Snow Management program; including Core Principles, Ice Management, Plowing Operations & Sidewalk Operations, 2023

PC Crash: Super Scenes, 2022

PC Crash: Working with Video, 2022

Snow School – a comprehensive overview of the latest winter maintenance practices, equipment and materials. Ontario Good Roads Association (OGRA), 2018

PC Crash: Expert Skills Workshop, 2012

Optics, Lighting and Visibility for the Forensic Investigator. Instructors: James Sobek and Kevin Johnson, 2009

Human Factors for Traffic Crash Reconstruction. Instructor: Jeffrey W. Muttart, 2008

PC-Crash: Essentials Training, 2008

Crash Data Retrieval (CDR) System – Technician and Data Analyst Certification, 2008

Forensic DNA Techniques for the Investigator, Center for Forensic and Security Technology Studies, BCIT, 2006

PROFESSIONAL EXPERIENCE

30 Forensic Engineering

Practice Lead, Collision Reconstruction and Winter Road Maintenance
2025 – Present, Vancouver, BC

- Lead the Collision Reconstruction and Winter Road Maintenance disciplines, including training, mentoring, and managing associates
- Oversee technical investigations to reconstruct collisions involving passenger and commercial vehicles, cyclists, motorcycles, pedestrians, and recreational vehicles
- Conduct winter maintenance assessments, including evaluating the adequacy of operations, taking into account the prevailing weather, surface conditions, and relevant industry standards

Technical Director, Collision Reconstruction and Winter Road Maintenance
2024 – Present, Vancouver, BC

Senior Associate, Collision Reconstruction
2023 – 2024, Vancouver, BC

Forensic Dynamics Inc.

Forensic Engineer
2010 – 2023, Kamloops, BC

- Investigation and analysis of vehicle collisions, including speed analysis, collision sequencing, time-distance analysis, and opportunity for collision avoidance
- Investigation of winter maintenance issues, including assessment of the prevailing weather, evaluation of surface conditions, the efficacy of anti-icing and de-icing chemicals, and comparison of operations to industry standards
- Airbag Control Module data retrieval and analysis
- Visibility assessments including sight line analysis, re-enactments, and night visibility studies
- Investigation of slip and fall and trip and fall incidents
- Reconstruction of physical evidence including roadway evidence and vehicle damage profiles using photogrammetry software
- Video analysis to determine vehicle speed and positioning, sequence of events, as well as traffic signal phase

Forensic Dynamics Inc.

Forensic Engineer, E.I.T.
2006 – 2010, Kamloops, BC

- Collision reconstruction
- Vehicle examinations
- Site examinations, collision scene assessments, and diagramming
- DNA evidence collection

Celestica Inc.

Operations Engineer, Industrial Internship Program
2004 – 2005, North York, Ontario

- Planned and applied continuous improvements in lean manufacturing environment
- Assisted in implementation of web-interface statistical process control

PROFESSIONAL SOCIETIES AND ASSOCIATIONS

- Association of Professional Engineers and Geoscientists of Alberta (APEGA), Member
- Engineers & Geoscientists British Columbia (EGBC), Member

- Professional Engineers Ontario (PEO), Member
- National Association of Professional Accident Reconstruction Specialists, Inc. (NAPARS), Member

CONFERENCES AND OTHER EXPERIENCE

- North American Snow Conference, American Public Works Association (APWA), Grand Rapids, MI, April 2025
- World Reconstruction Exposition, Orlando, FL, April 2023
- Washington Association of Technical Accident Investigators (WATAI) Fall Conference, 2021
- NAPARS Virtual Annual Joint Conference, including Investigation of Rollover Crashes, GoPro GPS Data Analysis, Perception Response Time (PRT) in Different Crash Types, and Analysis of ECM Data in New Freightliners, 2020
- Vehicle skid testing experiments on asphalt and ice with the RCMP, 2007

PUBLICATIONS AND SPEAKING ENGAGEMENTS

Speaking Engagements

- "Understanding Emerging Technologies and Injury Causation: Winter Maintenance and Transportation," Presenter at 30 Forensic Engineering's Forensic Engineering Forums in Vancouver and Calgary, 2023.
- "Collision Reconstruction Software," Presenter at Crashteams' Annual Conference, Las Vegas, NV, 2010

COURT APPEARANCES

- Qualified as an expert witness in collision reconstruction and human factors, including collision avoidance in BC Supreme Court – Criminal, July 2011
- Qualified as an expert witness in mechanical engineering, accident reconstruction, mechanics of trip and fall and human factors in BC Supreme Court – Civil, August 2021
- Qualified as an expert witness in accident and collision reconstruction, qualified to give opinion evidence concerning collision reconstruction including vehicle acceleration and deceleration forces in BC Supreme Court – Civil, November 2023
- Qualified as an expert witness in accident reconstruction, BC Supreme Court – Civil, June 2024