CURRICULUM VITAE

Hannah Van Staveren, B.A.Sc., M.Eng., P.Eng.

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EXPERT SUMMARY

Ms. Hannah Van Staveren is an Associate with the Human Factors Group at 30 Forensic Engineering. She holds a Bachelor of Applied Science in Mechanical Engineering from Queen's University and a Master of Engineering from the University of Toronto with a focus on forensic engineering and human factors. Hannah began her career in forensics in 2019 and joined 30 Forensic Engineering in 2021, specializing in collision reconstruction and the assessment of driver behaviour. Hannah is a licensed Engineer in the Province of Ontario and a member of the Human Factors and Ergonomics Society (HFES).

SPECIALIZED PROFESSIONAL COMPETENCIES

- Human Factors Assessment of Driver and Pedestrian Behaviour
- Perception and Response Time
- Collision Reconstruction
- Pedestrian and Bicycle Collisions
- Signage, Warnings, and Labels
- Nighttime Visibility
- Staircase Assessment
- Slip, Trip, and Fall Biomechanics
- Computer Simulation and Animation
- Video Analysis

ACADEMIC BACKGROUND

Master of Engineering, Mechanical and Industrial Engineering, University of Toronto, Toronto, Ontario, 2022

Bachelor of Applied Science, Mechanical Engineering – Biomechanical Option, Queen's University, Kingston, Ontario, 2019

Certificate in Business, Smith School of Business, Queen's University, Kingston, Ontario, 2019

ADDITIONAL COURSES

2026 Response User Forum, Driver Research Institute, Online, February 22 – 24, 2026

WCX 2025 World Congress Experience, Society of Automotive Engineers (SAE), Detroit, MI, April 8 – 10, 2025

Photogrammetry 1: PhotoModeler and SynthEyes for Forensic Video Analysis, Law Enforcement & Emergency Services Video Association (LEVA), December 9 – 13, 2024, Online

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

EDR User's Summit, Houston, TX, February 2024

LEVA Level 1: Forensic Video Analysis & the Law, Law Enforcement & Emergency Services Video Association (LEVA), University of New Haven (Orange Campus), Orange, CT, June 2023

World Reconstruction Exposition, WREX, Orlando, FL, April 2023

Human Factors and Ergonomics Society (HFES) 64th Annual Meeting, Online, October 2020

"Traffic Engineering Series: Applying Human Factors Principles to Rural Intersection Safety," CARSP Webinar, June 2020

"Driver Checking Failures Towards Pedestrians & Cyclists: An On-road Study," CARSP Webinar, June 2020

"Vehicle Forensics Essentials," Series Course, Berla Corporation, June 2020

"PC Crash Training Course: 401 Staged Collisions," Online Course, MEA Forensics, April 2020

"Lessons Learned from Using Driving Simulators to Improve Driver Behavior," CARSP Webinar, March 2020

"Truck Drivers' Perceptions of Unsafe Driving Behaviors," University of Victoria Webinar, February 2020

"The Democratization of Video Evidence: Equipping Investigators with Modern Tools and Know-How," iNPUT-ACE Webinar, January 2020

"Distracted Driving: Recent Data & Research," CARSP Webinar, December 2019

Human Factors and Ergonomics Society (HFES) 63rd Annual Meeting, Seattle, WA, October 2019

"Experts at Trial: How to Maximize (or Minimize) their Effectiveness," Will Davidson LLP Seminar, September 2019

Certified SOLIDWORKS Professional (CSWP), 2018

PROFESSIONAL EXPERIENCE

30 Forensic Engineering

Associate, Human Factors
2021 – Present, Toronto, ON

- Conduct technical investigations of motor vehicle collisions
- Conduct technical human factors investigations primarily involving perception response and driver behaviour during collision events

Advantage Forensics Inc.

Forensic Engineering Associate
2019 – 2021, Toronto, ON

- Supported and led approximately 70 forensic engineering investigations for law firms, insurers, and insurance adjusters as part of the Human Factors and Collision Reconstruction Teams
- Conducted vehicle inspections, site examinations, technical analysis, computer simulations, and technical reporting
- Presented webinars on human factors analysis, driver behaviour, photogrammetry techniques, and video analysis

Department of Mechanical Engineering

Undergraduate Teaching Assistant
2018 – 2019, Queen's University, Kingston, ON

- Courses: APSC 200 Engineering Design & Practice II, MECH 228 Kinematics & Dynamics, APSC 162 Engineering Graphics
- Assisted student teams to create solutions to open ended complex problems and provided guidance for technical writing in engineering reports
- Mentored students through visualizing, communicating, and analyzing mechanical systems and objects using VPython, MATLAB, and SolidEdge

WAM Industries

CAD Detailer
2016 – 2018, Toronto, ON

- Produced detailed shop-ready drawings using SolidWorks for custom retail store fixtures
- Reviewed architectural, engineering and product design drawings
- Created bill of materials, followed through with production quality checks, and coordinated installment with on-site general contractors

PROFESSIONAL SOCIETIES AND ASSOCIATIONS

- Law Enforcement and Emergency Services Video Association (LEVA)
- Certified Forensic Video Technician (CVFT)
- Professional Engineers Ontario (PEO), Member
- Human Factors and Ergonomics Society (HFES)
- Society of Automotive Engineers (SAE)

PUBLICATIONS AND ACADEMIC SPEAKING ENGAGEMENTS

- "Human Factors in Forensic Assessments of Motor Vehicle Collisions," Guest Lecture, University of Toronto, Department of Mechanical and Industrial Engineering, Toronto, ON, March 2026
- "Forensic Human Factors in Surface Transportation," Guest Lecture, University of Toronto, Department of Mechanical and Industrial Engineering, Toronto, ON, March 2023, 2025, and 2026
- "Human Factors in Forensic Assessments of Motor Vehicle Accidents," Guest Lecture, University of Waterloo, Department of Kinesiology and Health Sciences, Waterloo, ON, February 2022, 2023, 2024, and 2025
- Van Staveren, H., Young, J. (2021), "Human Factors Analysis of a Waiver – A Case Study," *Proceedings of the Human Factors and Ergonomics Society 65th Annual Meeting*.
- Van Staveren, H., Dabbour, E. (2021), "Evaluating the Effectiveness of Lowering Speed Limits on Urban Roads with and without Implementing Traffic Calming Measures," *Proceedings of the Canadian Society for Civil Engineers 48th Annual Conference*.
- "Forensics of Human Factors & Ergonomics – Case Studies," Guest Lecturer, University of Toronto, Faculty of Applied Science and Engineering, Toronto, ON, March 2021