



Kurt Ising

MASc PEng

Senior Engineer

contact

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📍 Vancouver

expertise

Human Factors

Collision Reconstruction

areas of specialization

Accident reconstruction

Human factors

Driver visibility

Nighttime accidents

Pedestrian collisions

Perception-response time

As a Senior Engineer in MEA Forensic's Human Factors group, Kurt Ising investigates motor vehicle accidents and driver performance issues. Kurt leads the firm's research into how drivers, riders and pedestrians detect, perceive and respond to hazards. "Every event that we investigate at MEA involves a human response or lack thereof," he says. "A human factors analysis digs into those aspects of the case."

Kurt has a Bachelor's degree in Mechanical Engineering and a Master's degree in Aerospace Science and Engineering. His Master's thesis focused on the analysis of flapping-wing flight and introduced him to the scientific modeling of natural behavior. Kurt's interest in human factors started with research into how far away drivers can see pedestrians at night. He developed a method for measuring light levels at an accident location and objectively assessing driver visual performance. Since then, he has published peer-reviewed research on nighttime visibility, perception-response time and the effects of driver distraction. Kurt is registered as a professional engineer and has testified as an expert witness in court.

Before focusing on human factors, Kurt worked in the Collision Reconstruction group for 15 years, so he can investigate an accident from top to bottom. For example, the "black box" crash data that MEA routinely downloads from modern cars includes information about the dynamics of the vehicle, and also how the driver steered and used the brake and gas pedals. Kurt's human factors expertise allows him to interpret both aspects of the data accurately and provide a description of what the car and driver did.

education

Master of Applied Science, Aerospace Science and Engineering, University of Toronto, 1994.

Bachelor of Applied Science, Mechanical Engineering (With Distinction), University of Manitoba, 1991.

professional status

Registered Professional Engineer, Association of Professional Engineers and Geoscientists of British Columbia, since January 1999.

Registered Professional Engineer, Association of Professional Engineers, Geologists and Geophysicists of Alberta, since November 2003.

professional associations

Society of Light and Lighting (SLL), since 2017.

Illuminating Engineering Society of North America (IES), since 2008.

Canadian National Committee on the International Commission on Illumination (CIE), since 2003.

Human Factors and Ergonomics Society (HFES), member since 2003, reviewer since 2008.

Society of Automotive Engineers (SAE), member since 1999, reviewer since 2003.

professional experience

MEA Forensic Engineers & Scientists

Principal, Senior Engineer, 1995 to Present

Professional Engineer responsible for technical investigations of motor vehicle accidents. Involved in over 2000 investigations to date including severity assessment, collision sequence, occupant kinematics, seat belt use and effectiveness, vehicle speed analysis, pedestrian impacts, human factors and nighttime visibility. Also experienced in failure analysis and research and responsible for supervision of engineers-in-training. Qualified as an expert in the field of accident reconstruction and/or human factors in the Supreme Court of British Columbia, the Provincial Court of British Columbia, the Court of Queen's Bench of Alberta, the Supreme Court of Yukon, the Superior Court of Los Angeles County, and the Circuit Court of the State of Oregon.

Motor Coach Industries, Ltd., Winnipeg, MB

Bill of Material Verifier, February to June 1995

Employed with Motor Coach Industries, a Winnipeg based bus manufacturer. This was a term position involving verification of the design components on the shop floor.

University of Toronto, Toronto, ON

Graduate Researcher, 1992 TO 1994

Undertook graduate work, which consisted of an analytical study of flapping wing flight. Contract employment during this time included wind tunnel calibration tests on pitot tubes for various environmental testing firms and construction work on a prototype spherical airship.

Bristol Aerospace Limited, Winnipeg, MB

Summer Student Design Engineer, May to August 1990

Employed in a summer term position with Bristol Aerospace of Winnipeg, Manitoba. Work included production of a feasibility study

on the use of computer simulation of air flow over aircraft wing loads.

publications

EMG provides an earlier glimpse into the effects of cognitive distraction on brake motor response

Threshold visibility levels required for nighttime pedestrian detection in a modified Adrian/CIE visibility model

Driver-related delay in emergency braking response to a laterally-incurring hazard

The distribution of visibility levels at target detection in a modified Adrian/CIE visibility model

Digital camera calibration for luminance estimation in nighttime visibility studies

Threshold visibility levels for the Adrian Visibility Model under nighttime driving conditions

Low-speed impact testing of pickup truck bumpers

lectures & presentations

January 2022 – Human Factors in Workplace Vehicular Accident Workshop, Ontario Ministry of Labour, Virtual.

November 2013 – Vision and Distraction in Driving. Association of Driver Rehabilitation Specialists – Northwest Chapter, Vancouver, BC.

June 2013 – Risks and Consequences of Distraction and Fatigue for Vehicle Operators. Risk Management Seminar, American Public Transportation Association, Cincinnati, OH.

2005 to 2012 – Human Factors & Traffic Safety, Royal Canadian Mounted Police Level III Collision Analyst course, Pacific Region Training Center, Chilliwack, BC.

October 2012 – Driver-related delay in emergency braking response to a laterally-incurring hazard. Human Factors and Ergonomics Society 56th Annual Meeting, Boston, MA.

November 2010 – Accident Reconstruction and the Forensic Engineer. Annual Crown Counsel Conference. Whistler, BC.

November 2009 – Threshold Visibility Levels Required for Nighttime Pedestrian Detection in a Modified Adrian/CIE Visibility Model. Illuminating Engineering Society 2009 Annual Conference, Seattle, WA.

October 2009 – The Distribution of Visibility Levels at Target Detection in a Modified Adrian/CIE Visibility Model. Human Factors and Ergonomics Society 53rd Annual Meeting, San Antonio, TX.

November 2008 – Accident Reconstruction. MVA Experts Conference I, Law Courts Center, Vancouver, BC.

April 2007 – Digital camera calibration for luminance estimation in nighttime visibility studies. Accident Reconstruction Session: SAE 2007 World Congress, Detroit, MI.

March 2003 – Threshold visibility levels for the Adrian Visibility Model under nighttime driving conditions. Human Factors in Driver Vision & Lighting Session: SAE 2003 World Congress, Detroit, MI.

October 2002 – Event Data Recorders, Insurance Corporation of British Columbia Special Investigations Unit Training Day, Langley, BC.

March 2001 – Low-speed impact testing of pickup truck bumpers. Accident Reconstruction Session: SAE International Congress and Exposition, Detroit, MI.

2001 to present – Lectures to various law firms and ICBC claim centers on topics such as pedestrian visibility, perception/response time and impact evasion potential, crash data recorders, motorcycle accident reconstruction techniques, and general accident reconstruction methods.

training and professional development

September 2024 – Human Factors and Ergonomics Society 68th Annual Meeting, Phoenix, AZ.

May 25, 2023 – Crash Data Retrieval Technician Update Course, Kent E. Boots & Associates, MEA.

March 2022 – ProMetric Training PMI29 XB Colorimeter, Radiant Vision Systems, Online.

February 2022 – Photogrammetry: Forensic Applications Using Photomodeler, DCM Technical Services, Online.

October 2021 – Washington Association of Technical Accident Investigators Fall Conference, Online.

March 22-25, 2021 – iNPUT-ACE Video Evidence Symposium 2021, Online.

September 2020 – September 2020 – Roadway Lighting Design, IES Webinar.

July 2020 – Roadway Photometrics, IES Webinar.

July 2020 – Show Me the Data: Does LED Lighting Influence Roadway Safety?, IES Webinar.

June 2020 – Discomfort Glare in Outdoor Nighttime Environments, IES Webinar.

May 2019 –ANSI/IES-RP-8-18 Practice for Design and Maintenance of Roadway and Parking Facility Lighting, IES Webinar.

October 2018 – IES BC Summit: Building Smarter Cities with Connected Lighting, Coquitlam, BC.

September 2016 – Human Factors and Ergonomics Society 60th Annual Meeting, Washington, DC.

October 2015 – Human Factors and Ergonomics Society 59th Annual Meeting, Los Angeles, CA.

April 2015 – SAE 2015 World Congress, Detroit, MI.

October 2014 – Human Factors and Ergonomics Society 58th Annual Meeting, Chicago, IL.

November 2013 – Street Lighting Workshop. Illuminating Engineering Society, Burnaby, BC.

October 2013 – Human Factors and Ergonomics Society 57th Annual Meeting, San Diego, CA.

October 2013 – Cognitive Neuroscience for Human Factors Practitioners workshop, San Diego, CA.

June 2013 – Risk Management Seminar. American Public Transit Association, Cincinnati, OH.

April 2013 – Theory: Collision Models, PC-Crash webinar.

January 2013 – Light and Light Source Color Measurement, Konica-Minolta webinar.

October 2012 – Human Factors and Ergonomics Society 56th Annual Meeting, Boston, MA.

June 2012 – New Directions in Roadway Lighting, IES Webinar.

October 2011 – IES Advanced Roadway Lighting Workshop, Burnaby, BC.

September 2011 – Human Factors and Ergonomics Society 55th Annual Meeting, Las Vegas, NV.

September 2010 – Human Factors and Ergonomics Society 54th Annual Meeting, San Francisco, CA.

August 2010 – Expert Scripting with PC-Crash 8.3, MEA, Vancouver, BC.

June 2010 – The Tire as a Vehicle Component and Tire and Wheel Safety, Dr. Joseph D. Walter, Richmond, BC.

November 2009 – Illuminating Engineering Society 2009 Annual Conference, Seattle, WA.

October 2009 – Human Factors and Ergonomics Society 53rd Annual Meeting, San Antonio, TX.

August 2009 – An Investigation of Driver Distraction Near the Tipping Point of Traffic Flow Stability, HFES Webinar.

June 2009 – Systems Approach to Workplace Investigations: Investigating Human Factors, The Canadian Society of Safety Engineering, Burnaby, BC.

August 2008 – First Human Factors Symposium on Naturalistic Driving Methods & Analysis, Virginia Tech Transportation Institute, Blacksburg, VA.

August 2008 – Reducing Driver Distraction: Improving Safety Behind The Wheel. SAE Webcast.

February 2008 – Crash Data Retrieval Technician Course, Richmond, BC

April 2007 – SAE 2007 World Congress, Detroit, MI.

October 2006 – IES ED 100 Introductory Lighting Course

December 2005 – IES Seminar on Advancements in Roadway Lighting, Burnaby, BC

October 2004 – 48th Annual Meeting of the Human Factors and Ergonomics Society, New Orleans, LA.

October 2003 – Human Factors and Explicit Road Safety, Richmond, BC.

June 2003 – 25th Session of the International Commission on Illumination (CIE), San Diego, CA.

March 2003 – SAE 2003 World Congress, Detroit, MI.

August 2002 – CATAIR Accident Reconstruction Seminar, Edmonton, AB.

May 2002 – Crash Data Retrieval System Operator, Collision Safety Institute, Seattle, WA.

March 2001 – SAE International Congress and Exposition, Detroit, MI.

July 2000 – SAE Heavy Vehicle Rollover: Prevention, Analysis, and Reconstruction TOPTEC, Richmond, BC.

December 1999 – SAE Accident Reconstruction: State-of-the-Art TOPTEC, Costa Mesa, CA.

August 1999 – CATAIR Accident Reconstruction Seminar, Edmonton, AB.

October 1996 – PC-Crash Workshop, Vancouver, BC.

August 1996 – SAE Low Speed Collision TOPTEC, Richmond, BC.

October 1995 – Air Brake Seminar, Vancouver, BC.
