

Curriculum Vitae, Dr. STUART D. SMITH, B.Eng., Ph.D., P.Eng.
POSITION President and Forensic Engineer, C.R. Tyner and Associates Ltd.

EDUCATION

B.Eng. (Engineering Physics), McGill University, Montreal

Ph.D. (Oceanography and Physics), University of British Columbia, Vancouver

TRAINING

November 1996 – March 1997: Accident reconstruction training

Approximately 200 hours of training and study in all aspects of motor vehicle accident reconstruction with C.R. Tyner and Associates Ltd. Discussions of theory and practice including specific case examples. Techniques for speed analysis from skid (braking) and yaw (steering) tire marks. Driver perception and reaction mechanisms and time. Effects of highway geometry and road surfaces. Low-speed impact analysis. Field work, including vehicle examinations, site measuring techniques, recognition of accident evidence, measurement of tire skid and yaw marks, seat belt examination, light bulb examination, photographic techniques for scenes and vehicle damage, and interviewing witnesses and police officers. *ote: Mr. Tyner has taught Forensic Engineering and Accident Reconstruction at Technical University of Nova Scotia, now Department of Engineering, Dalhousie University.*

April – December 1997: Engineer-in-Training

Full-time supervised accident reconstruction work with C.R. Tyner and Associates Ltd. Completed 17 accident reconstruction reports during this period. All files were fully discussed with C.R. Tyner. Reports were reviewed by and co-authored with C.R. Tyner.

Formal training and conference attendance

- IAARS (International Association of Accident Reconstruction Specialists) Annual Seminar, Boston, MA, July 13 – 17, 1998 (*intensive 1 week course for accident reconstruction specialists*).
- 11th Canadian Multidisciplinary Road Safety Conference, Halifax, N.S., May 9 – 12, 1999.
- Impact Conference, Saint John NB, September 16 – 17, 1999.
- Dale Carnegie Course, Halifax, N.S., 1999.
- PC-Crash course, MacInnes Engineering, at Univ. of British Columbia, July 2003.
- Crash Data Retrieval System Operator's Certification Course, Collision Safety Institute, San Diego, CA, presented at Algonquin College, Ottawa, Ont., August 18 – 20, 2004.
- Injuries, Anatomy, Biomechanics and Federal Regulation Seminar, Society of Automotive Engineers, Troy, MI, USA, July 30 - August 1, 2008.
- CATAIR National Conference, Dartmouth, NS, September 14 – 18, 2009.
- Event Data Recorder Use in Traffic Crash Reconstruction, Inst. of Police Technology and Management, Univ. of North Florida; course held in Fredericton, NB, Sept. 12-16, 2011.
- CATAIR National Conference, Moncton, NB, September 9 - 12, 2012.
- Advanced Collision Reconstruction with CDR Applications, Accident Analysis & Reconstruction Inc., Washington DC; held in Dartmouth NS, Sept 21-25, 2015.
- Event Data Recorder Use in Traffic Crash Reconstruction, taught by Richard Ruth, Ruth Consulting and Inst. of Police Technology and Management, Univ. of North Florida; course held in Fredericton, NB, April 30-May 4 2018.

SPECIALTIES AND SKILLS

Forensic Engineering (Accident Reconstruction): Motor vehicle accidents (Automobiles, Trucks, Vans, Motorcycles; Multi-vehicle accidents; Low-speed accidents; Vehicle-pedestrian accidents). Computer simulation and video animation. Crash data retrieval from electronic data recorders. Slip-and-fall accidents.

EXPERIENCE

November 2011 – present: Owner and Forensic Engineer, C.R. Tyner & Associates Ltd.

January 1998 – October 2011: Associate Engineer, C.R. Tyner & Associates Ltd.
Full-time accident reconstruction throughout Atlantic Canada.

April – December, 1997: Full-time Engineer-in-Training, C.R. Tyner & Associates Ltd.

November 1996 – March 1997: Apprentice Engineer, C.R. Tyner and Associates Ltd.

1966 – 1997: Research Scientist, Bedford Institute of Oceanography, Dartmouth, N.S.

1962 – 1966: Scientific Officer, Bedford Institute of Oceanography, Dartmouth, N.S.

(Educational Leave, 1963-1966, graduate studies at University of British Columbia)

PROFESSIONAL ASSOCIATIONS

P.Eng. Life Member, Association of Professional Engineers of Nova Scotia, # 6942.

P.Eng. Member, Association of Professional Engineers & Geoscientists of Newfoundland and Labrador, #03936.

P.Eng. Member, Association of Professional Engineers & Geoscientists of New Brunswick, #L4158

Member, Canadian Association of Technical Accident Investigators and Reconstructionists (CATAIR), #913; Secretary, Atlantic Region.

PUBLICATIONS

- S. Smith, K. Zwicker and M. Lanteigne: CATAIR Braking Tests, June 19 2015: Not Slippery when Wet. Published on CATAIR website.
- Smith, S.D.: CATAIR Speed-from-Crush Exercise, Moncton, NB, Oct 3 2016. Published on CATAIR website, March 2018.

Over 600 Accident Reconstruction Reports, from 1997 to present.

Over 150 scientific papers, technical reports, book chapters, etc. in air-sea interaction, air-sea-ice interaction, marine micrometeorology, solar radiation and physical oceanography, from 1965 to 1997. Leadership of numerous local and international oceanographic research projects.

LECTURES

- “Low Speed Accidents”, by C.R. Tyner and S.D. Smith. Invited seminar organized by Wawanesa Insurance Co., Dartmouth, N.S., June 3, 1998.
- “Low Speed Impact Crashes: Engineering Analysis”, by C.R. Tyner and S.D. Smith, Lexpert Conference on Causation and Damages in Personal Injury Claims, Halifax, N.S., October 15, 1998.
- “The Role of Experts in Litigation”, invited lecture, Civil Trial Practice course, Dalhousie University Law School, Halifax, N.S., February 15, 2000.
- “Investigating Low Speed Accidents”, invited seminar, Insurance Bureau of Canada, Halifax, N.S., May 22, 2002.
- “Motor Vehicle Accident Reconstruction”, invited seminar, Maritime Chapter, Risk and Insurance Management Society. Halifax, N.S., September 25, 2003.
- “The Physics of Accident Reconstruction”, guest lecture, Dalhousie University physics class, November 9, 2006.

- Crash Data Recovery from Electronic Data Recorders, Bingham Law, Moncton, June 15 2010.
- FordSwerve: Trajectories from late-model Ford CDR reports. CATAIR Atlantic meeting, Dec. 6 2015.
- Crush Measurements at Impact Auto Auctions, Moncton NB October 3 2016. CATAIR Atlantic meeting, June 16 2017.

QUALIFIED AS EXPERT WITNESS in Forensic Engineering, Accident Reconstruction:

- by Hon. Justice M. Jill Hamilton, Arsenault v. Durling and Adiem, Supreme Court of Nova Scotia, Halifax, September 2, 1998.
- by Hon. Justice J. Edward Scanlan, Fraser v. Hunter estate, Supreme Court of Nova Scotia, Amherst, December 9, 1998.
- by Hon. Justice Thomas W. Riordon, Caissie v. Jardine, Court of Queen's Bench, Moncton, N.B., November 22, 1999.
- by Hon. Justice James P. Adams, Slade v. Canada Post, Supreme Court of Newfoundland, St. John's, March 8, 2000.
- by Chief Justice Joseph P. Kennedy, Erickson v. Metro Transit, Supreme Court of Nova Scotia, Halifax, May 4, 2000.
- by Hon. Justice Alfred Landry, Dobson v. Dobson and Carter, Court of Queen's Bench, Moncton, N.B., June 12, 2000.
- by Hon. Justice Roger Savoie, Michaud v. Dubé, Court of Queen's Bench, Moncton, N.B., January 22, 2003.
- by Hon. Justice Peter Glennie, Firlotte v. Johnston and South Shore Contracting, Court of Queen's Bench, Saint John, N.B., January 29, 2003.
- by Chief Justice Derek Greene, Supreme Court of Newfoundland, St. John's, Diamond v. Butler, February 25, 2003.
- by Hon. Justice David Russell, Supreme Court of Newfoundland, St. John's, Seward v. Peddle, March 5, 2004.
- By Hon. Justice Garrett Handrigan, Supreme Court of Newfoundland & Labrador, Clarenville, Pond v. Lethbridge, February 17, 2005.
- By Hon. Justice David B. Orsborn, Supreme Court of Newfoundland & Labrador, Corner Brook, Hartson v. Hunter, March 15, 2006.
- By Hon. Justice David B. Orsborn, Supreme Court of Newfoundland & Labrador, St. John's, Baker v. Russell, May 1, 2006.
- By Hon. Justice Halfpenny MacQuarie, Nova Scotia Provincial Court, Port Hood, R. v. Chiasson, July 13, 2006.
- By Hon. Justice A. Seaborn, Supreme Court of Newfoundland & Labrador, St. John's, Canning v. Rose, September 19, 2006.
- By Hon. Justice Raymond Guerette, Superior Court of New Brunswick, Campbellton, Firth v. Bossé, December 6, 2006.
- By Hon. David S. Johnson, Nova Scotia Provincial Court, Dartmouth, R. v. Tanner, December 11, 2006 and August 14, 2007.
- By Associate Chief Justice Deborah K. Smith, Supreme Court of Nova Scotia, Halifax, May Ocean v. Sullivan and Economical Insurance, October 15, 2010.
- By Hon Justice John D. Murphy, Supreme Court of Nova Scotia, Halifax, Johansson v. General Motors of Canada, May 4, 2011.
- By Hon. Justice Daniel Boone, Supreme Court of Newfoundland and Labrador, Clarenville, Furlong v. Sexton Trucking Ltd. and Payne, February 13, 2019.

QUALIFIED AS AN EXPERT WITNESS in Forensic Engineering, shoe and floor friction:

- By Hon. Justice Arthur LeBlanc, Supreme Court of Nova Scotia, Sydney, Miller v. RBC, May 7, 2007.
- By Hon. Justice , Pierre L. Muise, Supreme Court of Nova Scotia, Halifax, Roscoe v. HRM, April 27, 2011.