

# Timothy S. Leggett, P. Eng., P.E.

## CURRICULUM VITAE

### RELEVANT EXPERIENCE:

- Experience in all aspects of accident reconstruction - winter road maintenance issues (see Addendum Curriculum Vitae), low-speed rear-end analysis including occupant kinematic response, speed determination, time-distance analysis, impact location, motor vehicle/pedestrian interactions, articulated vehicle assessments, bicycle reconstruction, and failure analysis of products, structures and processes
- Occupant position determination, seat belt usage analysis, mechanical component failure causing motor vehicle accident, slip and fall analysis
- Qualified as an expert witness over 275 times in Provincial, Coroner, Justice, Supreme and Superior Courts of British Columbia, Yukon Territory, Arizona, Oregon and Washington
- Approximately 3,700 accidents investigated and reconstructed

### ACADEMIC QUALIFICATIONS:

- 1979 - 1981 Vanier College - Diploma of Pure and Applied Science
- 1981 - 1985 McGill University - Bachelor of Engineering, Mechanical
- 1988 University of North Florida - Special Problems in Accident Reconstruction
- 1990 University of Miami - Computer Assisted Accident Reconstruction
- 1996 - IPTM Pedestrian/bicycle accident investigation
- 1999 Society of Automotive Engineers - Accident Reconstruction, "State of the Art" Toptec
- 2000 Society of Automotive Engineers - "Heavy Vehicle Rollover" Toptec
- 2000 Transportation Research Board - Symposium on Snow Removal & Ice Control Technology
- 2000 University of Iowa - "Winter Road Maintenance" civil engineering graduate studies
- 2005 Advanced PC-Crash Course - Vancouver, BC
- 2008 CDR Technician and Data Analyst Certification
- numerous other lectures, presentations and short courses attended

### PROFESSIONAL WORK EXPERIENCE:

- 1990 - Present Accident Reconstruction Engineer, Forensic Dynamics Inc. (principal)
- 1988 - 1990 Accident Reconstructionist, Forensic Dynamics Inc.
- 1985 - 1988 Accident Reconstructionist, Stanley Associates Engineering Ltd.

## PROFESSIONAL ASSOCIATIONS:

- Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) - Professional Engineer (P. Eng.), Registration #17136
- State of Arizona Board of Technical Registration - Professional Engineer (P. E.), Registration #36409
- Society of Automotive Engineers (SAE) - Member

## RESEARCH AND PUBLICATIONS

### Publications

- "Journal of Traffic Accident Technology"
- "An Investigation into the Safety Aspects Related to Bunk Securement of B.C. Logging Trucks" - Funded by BC Ministry of Transportation and Highways
- "The Effect of Magnesium Chloride as an Anti-Icing Agent on Tire/Road Friction Co- Efficient", T.S. Leggett (Forensic Dynamics Inc.) and Cpl. E. Brewer (RCMP), March, 1999
- "Temperature and Humidity Effects on the Co-efficient of Friction Value After Application of Liquid Anti-Icing Chemicals", T.S. Leggett, September, 1999
- "Liquid anti-icing chemicals on Asphalt: Friction Trends", T.S. Leggett and G.D. Sdoutz (Forensic Dynamics Inc.), May, 2000
- "Friction Trends of Anti-Icing Chemicals on Tined Concrete", T.S. Leggett and G.D. Sdoutz (Forensic Dynamics Inc.), March, 2001
- "Laboratory Melting Performance Comparison: Rock Salt With and Without Pre-Wetting", C.A. Luker, B.C. Rokosh and T.S. Leggett (Forensic Dynamics Inc.) - Presented to the Transportation Research Board Sixth International Symposium on Snow Removal and Ice Control Technology, Spokane, WA, June 7, 2004

### Inventions

- "Friction Sensor" - an in-road stationary friction testing device, with;
- "Flashing Digital Sign" indicating slippery road surface
- "The Cinch" Self-Tensioning Tie Down Safety System (patented)