

## Curriculum Vitae

### Chris J. Medwell, P.E.

**Profession:** Mr. Medwell is a professional engineer specializing in the investigation and reconstruction of motor vehicle collisions. He has considerable experience with leading edge technology in the field, including tractor-trailer and automobile EDR “black box” data retrieval systems, robust 3-dimensional collision reconstruction and simulation programs, surveying equipment, and vehicle accelerometers. Mr. Medwell has both a mechanical and a civil engineering background that gives him insight into both the motor vehicle and the roadway design features as factors in collision dynamics and causation. Mr. Medwell also applies his expertise to accidents involving industrial machinery, such as forklift trucks, mobile lift equipment, and construction vehicles.

**Testimony:** Mr. Medwell has been qualified as an expert in more than 50 trials and has testified more than 50 times in depositions.

**Licensure:** Professional Engineer, State of Florida, #70343  
Professional Engineer, State of Alabama, #29499  
Professional Engineer, State of Mississippi, #19668  
Professional Engineer, State of Louisiana, #40232  
Professional Engineer, Province of Ontario (Canada), #90259102

**Certification:** ASE certified automobile technician (brakes, suspension and steering) #ASE-2074-9004

**Education:** *The University of Waterloo, Waterloo, Ontario, Canada*  
1977 to 1982 - Bachelor of Applied Science in Mechanical Engineering

**Experience:** *Bloomberg Consulting - Pensacola, FL*  
2006 to present – Senior Consultant, Accident Reconstruction

*HRYCAY Consulting Engineers Inc., previously Becker Transportation Safety or BTS Consulting Engineers - Windsor, Ontario, Canada*  
1989 to 2006 - Investigative Engineer, Motor Vehicle Accident Group

*Ford Motor Company of Canada - Oakville, Ontario, Canada*  
1987 to 1988 - Dealer Operations Manager, Atlantic Region  
1983 to 1987 - Zone Service Manager, Atlantic Region  
1982 to 1983 – Warranty Claims, Service Engineering, Service Hotline

*Transport Canada - Ottawa, Ontario, Canada*  
1979 - Department of Road Safety

**Professional  
Associations:**

- ◆ Alabama Board of Professional Engineers & Land Surveyors (BELS)
- ◆ American Society of Civil Engineers (ASCE)
- ◆ Florida Board of Professional Engineers (FPBE)
- ◆ Louisiana Professional Engineering & Land Surveying Board (LAPELS)
- ◆ Mississippi Board of Licensure for Professional Engineers & Surveyors (MBLPES)
- ◆ Professional Engineers Ontario (PEO)
- ◆ Society of Automotive Engineers (SAE)

**Professional**

**Development:** Since 1989, Mr. Medwell has analyzed hundreds of SAE technical papers, crash tests, and other leading edge research in the field of engineering and accident reconstruction. In 2007, Mr. Medwell took and passed both the Fundamentals of Engineering (FE) and the Principles and Practice of Engineering (PE) examinations, required for licensure as a Professional Engineer in the USA. For the PE exam, Mr. Medwell chose to take the Civil Engineering Transportation specialty, which covers such topics as Transportation Planning, Traffic Analysis, Traffic Safety, and Roadway and Roadside Design.

- ◆ “Advanced Photogrammetry for Accident Reconstruction”, *Lightpoint Scientific LLC*, Orlando FL (November 2019)
- ◆ “Virtual Crash Simulation Software”, *vCRASH Academy & Forensic Training Group*, Sandy Springs, GA (October 2019)
- ◆ “Drone Mapping: Ground and Aerial Measurements”, *Laser Technology Inc.*, (February 2019)
- ◆ “EDR in Traffic Crash Reconstruction: Update & Advanced Analysis Techniques”, *Ruth Consulting*, (April 2018)
- ◆ “Forklift Training: More than just the OSHA Regulation”, *JJ Keller* (April 2018)
- ◆ “Critical Steps in Accident Prevention & Response”, *JJ Keller* (April 2018)
- ◆ “Regulatory & Warning Signs”, *ASCE*, (December 2017)
- ◆ “Traffic Signing for Horizontal Curves”, *ASCE*, (December 2017)
- ◆ “FARO Reality”, *FARO*, (December 2016)
- ◆ “Pedestrian Collision Reconstruction”, *Toronto Police College*, Toronto, ON (October 2016)
- ◆ “World Reconstruction Exposition 2016”, *NAPARS*, Orlando, FL (May 2016)
- ◆ “Work Zone Temporary Traffic Control”, *ASCE*, (August 2015)
- ◆ “Faro Focus 3D Scene & Laser Scanner”, *FARO Technologies*, Orlando, FL (February 2015)
- ◆ “CDR User’s Summit” and “Train the Trainer”, *Collision Safety Institute*, Houston, TX (January 2014)
- ◆ “Driver Distraction from Electronic Devices”, *SAE*, (April 2013)
- ◆ “Advanced Computer Diagramming”, *Aras 360*, (January 2013)
- ◆ “Heavy Vehicle ECM Data Use in Crash Reconstruction”, *Institute of Police Technology and Management*, Jacksonville, FL (May 2012)

- ◆ “REC-TEC Truck 2011 Advanced Commercial Vehicle Program”, *Michigan State University College of Engineering*, New Orleans, LA (March 2011)
- ◆ “Heavy Vehicle Crash Reconstruction”, *National Association of Professional Accident Reconstruction Specialists*, Ocean City, MD (October 2009)
- ◆ “Crash Data Retrieval (CDR) Data Analyst Certification” (Vehicle “Black Box” Systems), *Collision Safety Institute*, New Orleans, LA (August 2009)
- ◆ “National Seminar on Fire Analysis Litigation”, *National Association of Fire Investigators*, Sarasota, FL (August 2008)
- ◆ “Vehicle Fire Investigations – Protecting and Preserving Your Evidence”, *Florida Advisory Committee on Arson Prevention*, Tallahassee, FL (June 2008)
- ◆ “Highway Vehicle EDR Symposium”, *Society of Automotive Engineers (SAE)*, Ashburn, VA (September 2007)
- ◆ “Cummins INSITE 6 Qualification”, *Cummins Mid-South L.L.C.*, Morgan City, LA. (June 2007)
- ◆ “Human Factors for Traffic Accident Reconstruction”, *Accident Dynamics Research Center*, University of Massachusetts, Amherst, MA. (June 2007)
- ◆ “REC-TEC Accident Reconstruction Software Training”, *IPTM*, Jacksonville, FL. (August 2006)
- ◆ “Caterpillar Engine Control Modules, Data Extraction”, *Thompson Power Systems*, Birmingham, AL. (August 2006)
- ◆ “Crash Data Retrieval (CDR) Data Analyst Certification” (Vehicle “Black Box” Systems), *Collision Safety Institute*, Clinton Township, MI (March 2006)
- ◆ “Accident Reconstruction,” 2005 World Congress and Exhibition, *SAE Detroit*, Michigan (April 2005)
- ◆ “DDEC Reports/Data Extrication,” *Detroit Diesel Training Center*, Redford, Michigan (December 2004)
- ◆ “Safety, Braking, Steering,” *SAE 2004 Commercial Vehicle Engineering Congress and Exhibition*, Chicago, Illinois (October 2004)
- ◆ “Motor Vehicle Theft & Fire Investigation,” *Michigan Arson Prevention Committee*, Portland, Michigan (June 2004)
- ◆ “Motor Vehicle Theft & Fire Investigation”, *Michigan Arson Prevention Committee*, Detroit, Michigan (June 2003)
- ◆ “Accident Reconstruction,” *SAE 2003 International Congress and Exposition*, Detroit, Michigan (March 2003)
- ◆ “Hands on Training HVE- 3D,” *Engineering Dynamics Corporation*, Windsor, Ontario (July 2002)
- ◆ “Crash Data Retrieval (CDR) Operator’s Certification Course,” *Collision Safety Institute*, Toronto, Ontario (June 2002)
- ◆ “Accident Reconstruction,” *SAE 2002 International Congress and Exposition*, Detroit, Michigan (March 2002)
- ◆ “Braking Performance of Heavy Commercial Vehicles,” *Richard Radlinski*, at International Truck Assembly Plant, Chatham, Ontario (June 2001)
- ◆ “Electronic Engine Controls & Accident Reconstruction,” *BTS Consulting Engineers*, Windsor, Ontario (June 2001)

- ◆ "Traffic Control in Survey Zones," *BTS Consulting Engineers*, Windsor, Ontario (February 2001)
- ◆ "Brakes/ABS Braking Systems," *Snap-On Tools Training Center*, Auburn Hills, Michigan, (April 2000)
- ◆ "HVE Forum," *Engineering Dynamics Corporation*, Atlanta, Georgia, (April 1999)
- ◆ "Fire Investigation/Arson Task Force Seminar," *International Association of Arson Investigators (Ontario Chapter)*, London, Ontario, (October 1998)
- ◆ "NFPA 921 Fire & Explosion Investigation," *International Association of Arson Investigators (Ontario Chapter)*, Burlington, Ontario, (September 1997)
- ◆ "Accident Reconstruction," *SAE 1997 International Congress and Exposition*, Detroit, Michigan, (February 1997)
- ◆ "Accident Reconstruction," *SAE 1996 International Congress and Exposition*, Detroit, Michigan, (February 1996)
- ◆ "Crash Tests & Heavy Truck Skid Tests," *Transportation Research Centre*, East Liberty, Ohio (October 1995)
- ◆ "Vehicle Fire/Theft Investigation," *Criminal Justice Training Center, Macomb Community College*, Macomb County, Michigan (July 1995)
- ◆ "Human Factors in Traffic Collisions," *Canadian Association of Technical Accident Investigators and Reconstructionists (CATAIR)*, Mississauga, Ontario (August 1994)
- ◆ "Emergency Collision Avoidance", *Labatt's Test Track*, Mississauga, Ontario (August 1994)
- ◆ "Air Brake Endorsement," *St. Clair College*, Windsor, Ontario (May 1994)
- ◆ "Accident Reconstruction - Technology and Animation IV," *SAE 1994 International Congress and Exposition*, Detroit, Michigan (March 1994)
- ◆ "Vehicle Fire/Theft Investigation," *Criminal Justice Training Center, Macomb Community College*, Macomb County, Michigan (July 1993)
- ◆ "Accident Reconstruction - Technology and Animation III," *SAE 1993 International Congress and Exposition*, Detroit, Michigan (March 1993)
- ◆ "BH<sub>2</sub>VK Crash Testing Project," *Mobility Systems Inc.*, San Bernardino, California (August 1992)
- ◆ "Safety," *SAE 1992 Future Transportation Technology Conference and Exposition*, Costa Mesa, California (August 1992)
- ◆ "40th Annual Seminar," *International Association of Auto Theft Investigators, Inc.*, Toronto, Ontario (August 1992)
- ◆ "Automotive Electrical Systems Servicing," *Oakland Community College*, Auburn Hills, Michigan (Winter Term 1992)
- ◆ "Accident Reconstruction - Technology and Animation II," *SAE 1992 International Congress and Exposition*, Detroit, Michigan (February 1992)
- ◆ "Fire Investigation Seminar," *International Association of Arson Investigators, Inc. (Ontario Chapter)*, Windsor, Ontario (June 1991)
- ◆ "Front Suspension and Steering Service," *Oakland Community College*, Auburn Hills, Michigan (Winter Term 1991)
- ◆ "Technical Fundamentals for the Fire Investigator," *University of Wisconsin*, Madison, Wisconsin (April 1991)

- ◆ “Accident Reconstruction: Technology and Animation,” *SAE 1991 International Congress and Exposition*, Detroit, Michigan (February 1991)
- ◆ “Brake System Service,” *Oakland Community College*, Auburn Hills, Michigan (Fall Term 1990)
- ◆ “Accident Reconstruction” and “Vehicle Crashworthiness and Occupant Protection in Frontal Collisions,” *SAE 1990 International Congress and Exposition*, Detroit, Michigan (February 1990)
- ◆ While employed with Ford, Mr. Medwell regularly attended short courses and seminars for training in servicing and diagnostic procedures for various gasoline and diesel engines, drive train, steering, suspension and braking systems, electronic engine control systems, anti-lock brake systems, and electronic fuel injection. Mr. Medwell also undertook training in Basic Service Management and Dealership Accounting Practices.

### **Presentations:**

- ◆ “What you need to know about Event Data Recorders (EDR) or Black Boxes”, *Mobile Criminal Defense Attorneys Association*, Mobile, AL (April 2016)
- ◆ “FMCSA Hours of Service Regulations”, *National Commercial Truck Subrogation Strategies Summit*, Uncasville, CT (December 2013)
- ◆ “Subrogating Claims Using Event Data Recorders (Black Boxes)”, *National Automobile Subrogation Strategies Summit*, Uncasville, CT (September 2013)
- ◆ “Brake Maintenance, Overloading and Securement of Heavy Trucks”, *National Commercial Truck Subrogation Strategies Summit*, Uncasville, CT (December 2012)
- ◆ “Commercial Vehicle Accident Reconstruction”, *Developments in Truck Accident Litigation*, Mississippi College School of Law, Jackson, MS (January 2012)
- ◆ “Accident Reconstruction I and II”, “Truck Black Box Investigations”, *FALI Professional Development Conference*, Daytona Beach, FL (May 2007)
- ◆ “Heavy Truck Accident Reconstruction”, *Old Republic Insurance Conference*, Ontario, Canada (October 2000)
- ◆ “Motor Vehicle Accident Reconstruction” *PACRA*, Windsor, Canada (March 1994)
- ◆ “Motor Vehicle Accident Investigations and Reconstruction”, *Allstate Insurance Adjusters Conference*, Canton, MI (April 1993)

### **Publications:**

- ◆ “*Unlocking the Black Box*”, American Bar Association, Committee News (Fall 2012)
- ◆ “*Motorcycle Slide to Stop Testing*”, SAE Paper #970963, 1997 SAE International Conference

### **Synopsis:**

Mr. Medwell has extensive knowledge and over 30 years of experience in motor vehicle collision investigations and reconstruction. He has been involved in the documentation, analysis, and reconstruction of more than 1500 serious motor vehicle collisions, including more than 500 involving heavy vehicles (tractor-trailers, trucks, buses) and more than 100 involving motorcycles. Mr. Medwell

has also investigated and reconstructed numerous incidents involving pedestrians, bicycles, forklifts, loading docks, and construction equipment. His experience has included time/speed/distance analysis, mechanical and electrical system failures, nighttime and daytime visibility studies, seat belt use, headlamp filament analysis, and traffic signal sequencing. He has considerable experience with leading edge technology in the field, including tractor-trailer and automobile event data recorder (EDR) “black box” data retrieval systems, robust 3-dimensional collision reconstruction and simulation programs, surveying equipment, GPS data, and vehicle accelerometers.

Mr. Medwell has testified in court or at deposition as an expert or consultant in Alabama, Florida, Georgia, Illinois, Indiana, Michigan, Mississippi, Nebraska, New York, Oklahoma, Texas, Ontario, and Grand Cayman. He has been qualified as an expert in both state and federal courts. He has given expert opinion testimony regarding EDR data and its applicability to accident reconstruction, collision and approach speeds of vehicles, reaction times and collision avoidance possibilities, vehicle crush and delta-v, pedestrian impact evidence, time-speed-distance relationships, headlamp and seatbelt usage, etc. He has testified regarding Work Zone Traffic Control and Traffic Impact Analysis.