

RELATED WORK EXPERIENCE

2010 - present	Founded Collision Reconstruction And Scientific Hypothesis, LLC t/a CRASH, LLC A professional services collision reconstruction company was established to provide a collision related analysis, consultation and conclusion based on the facts of the case and the evidence examination. The company set forth objectives to become a leader in the field of collision reconstruction by maintaining the highest levels of integrity and professionalism.
2005 - present	Calvert County Sheriff's Office Coordinator and supervisor of Crash Reconstruction Team - current Criminal Investigations Bureau – Detective Sergeant - current Patrol Bureau Squad 2 – Patrol Supervisor (Sergeant) Patrol Bureau Squad 4 – Patrol Supervisor (Corporal) Patrol Bureau Street Crimes Squad – Supervisor (Corporal) Traffic Safety Division – Supervisor (Corporal) Patrol Bureau Squad 4 – Patrol Supervisor (Corporal) Calvert Investigative Team – Detective Patrol Bureau Squad 4 – Patrol Deputy Member of the Commercial Vehicle Enforcement Division Member of the Bike Patrol Member of the Motor Unit Member of the Conflict Management Team (Negotiator)
2003 – 2005	Metropolitan Police Department, Washington, District of Columbia Seventh Police District – Patrol Officer Seventh Police District – MPD-ATF-DOJ Taskforce <i>"Project Safe Neighborhood"</i> Member of the Civil Disturbance Unit – Chemical Munitions Squad
2002 – 2003	United States Capitol Police House Division – First Shift Capitol Division First Responders Unit – Third Shift Patrol and Mobile Response Division – First Shift Member of the Civil Disturbance Unit



BASIC COLLISION INVESTIGATION TRAINING

2003 Basic Accident Investigation – 16 hours Maurice T. Turner Institute of Police Science Metropolitan Police Department, Washington, D.C.

> Traffic Management and Enforcement – 24 hours Maurice T. Turner Institute of Police Science Metropolitan Police Department, Washington, D.C.

2002 Basic Accident Investigation and Traffic Enforcement – 32 hours Federal Law Enforcement Training Center – Glynco, GA

COLLISION INVESTIGATION AND RECONSTRUCTION TRAINING

May 21, 2012	Photography for Collision Investigator – 40 Hours Baltimore County Police Department Instructor – Patrick Zito
December 6, 2011	CAD Zone – CrashZone 9.2 – 16 Hours Diagramming Software Course Instructor – C.G. Russell
September 26, 2011	Crash Data Retrieval Analyst Course – 40 Hours Collision Safety Institute Instructor – R. Height
September 8, 2011	Crash Data Retrieval Update Course – 24 Hours CDR Trainers Instructor – B. Muir
June 6, 2011	Pedestrian Reconstruction Investigation – 40 Hours Accident Analysis and Reconstruction Instructor – C.G. Russell Ontario Police College – Canada
March 28, 2011	Collision Reconstruction with CDR Application – 40 Hours Accident Analysis and Reconstruction CDR Trainers Instructor – C.G. Russell Instructor – B. Muir

Collision Reconstruction And Scientific Hypothesis, LLC Phone: 301-751-0732

E-mail: <u>vbortch@gmail.com</u>





December 3, 2010	Crash Data Retrieval Technician Course – 8 Hours Accident Analysis and Reconstruction Instructor – C. G. Russell
August 20, 2010	Crush Energy Analysis in Collision Reconstruction – 40 Hours Accident Analysis and Reconstruction Instructor – C. G. Russell
March 19, 2010	Human Factors for Traffic Accident Reconstruction – 40 Hours Accident Dynamics Research Center Instructor – Jeffrey Muttart ,M.A.
February 8, 2010	Excel for Collision Reconstruction – 40 Hours Accident Analysis & Reconstruction, Inc. Instructor – C. Greg Russell
November 16, 2009	Advanced Collision Reconstruction with Excel Applications – 40 hours Accident Analysis & Reconstruction, Inc. Instructor – C. Greg Russell
September 14, 2009	Motorcycle Crash Investigation Course – 40 Hours Eastern Shore Criminal Justice Academy, Maryland Instructor – Gary Lewis
July 13, 2009	Human Factors in Traffic Crash Reconstruction – 40 Hours Institute of Police Technology and Management (IPTM) Instructor – Patrick Robins, Ph. D.
June 15, 2009	Collision Reconstruction Instructor Development – 40 Hours Accident Analysis & Reconstruction, Inc. Instructor – C. Greg Russell Instructor – C. Lenny Simpson
February 9, 2009	Crush Energy Analysis – 40 hours Accident Analysis & Reconstruction, Inc. Instructor – C. Greg Russell Instructor – C. Lenny Simpson
September 19, 2008	Crash Reconstruction "Level III" – 80 hours Howard County Police Department



September 1, 2006	Advanced Crash Investigation "Level II" – 80 hours Baltimore County Police Department
May 19, 2006	At-Scene Crash Investigation "Level I" – 80 hours Baltimore County Police Department
	STIGATION CONFERENCES AND SEMINARS
May 2, 2016	World Reconstruction Exposition 2016 (WREX 2016) Reconstruction Conference – 40 hours Orlando, Florida
September 16, 2015	Illinois Association of Technical Accident Investigators 29 th Annual Conference – 32 hours Peoria, Illinois
July 27, 2015	SCARS Annual Conference – 40 hours South Carolina Accident Reconstruction Society (SCARS) Charleston – Mt. Pleasant, South Carolina
October 6, 2014	WATAI Fall Reconstruction Conference – 40 hours Seattle, Washington
September 23, 2014	Collision Reconstruction Seminar – 24 Hours Pennsylvania State Police State College, Pennsylvania
August 19, 2014	CATAIR Annual Meeting and Conference – 24 hours Ontario Police College Aylmer, Ontario, Canada
July 21, 2014	SCARS Annual Conference – 40 hours South Carolina Accident Reconstruction Society (SCARS) Charleston – Mt. Pleasant, South Carolina
September 24, 2013	Collision Reconstruction Seminar – 24 Hours Pennsylvania State Police State College, Pennsylvania



July 22, 2013	SCARS Annual Conference – 40 hours South Carolina Accident Reconstruction Society (SCARS) Charleston – Mt. Pleasant, South Carolina
March 27, 2013	Crash Reconstruction Training Conference – 24 Hours Maryland Crash Reconstruction Committee Linthicum, Maryland
September 25, 2012	Collision Reconstruction Seminar – 24 Hours Pennsylvania State Police State College, Pennsylvania
July 23, 2012	SCARS Annual Conference – 40 hours South Carolina Accident Reconstruction Society (SCARS) Charleston – Mt. Pleasant, South Carolina
September 28, 2010	Collision Reconstruction Seminar – 24 hours Pennsylvania State Police State College, Pennsylvania
March 10, 2010	Crash Reconstruction Training Conference – 24 Hours Maryland Crash Reconstruction Committee Linthicum, Maryland
March 18, 2009	Crash Reconstruction Training Conference – 24 Hours Maryland Crash Reconstruction Committee Linthicum, Maryland



COLLISION INVESTIGATION INSTRUCTOR AND SPEAKING EXPERIENCE

March 9 – 11, 2016

Basic Collision Investigation (Entry Level Police Training) Southern Maryland Criminal Justice Academy Instructor

Conducted a three day training class. Instructed entry level police students in areas such as: Witness Reliability, Laws of Motion, Kinetic Energy, Basic Speed Formula, Photography, Vehicle Evidence Examination, and Roadway Evidence Examination. Conducted a dynamic skid test and a practical exercise to demonstrate the theory and reinforce the practices that were taught in class.

January 11 - 15, 2016	Excel for Collision Reconstruction
	Ontario Provincial Police
	Orillia, Ontatio, Canada
	Co-instructor

Taught a class of 27 police officers in the use of Microsoft Excel Software. Provided individual instructions to students, assisted with classroom preparation, assisted students during class projects.

November 16 - 20, 2015	Excel for Collision Reconstruction
	Ontario Provincial Police
	Orillia, Ontatio, Canada
	Co-instructor

Taught a class of 25 police officers in the use of Microsoft Excel Software. Provided individual instructions to students, assisted with classroom preparation, assisted students during class projects.



August 31 – September 4, 2015

Special Problems in Collision Reconstruction Maryland Crash Reconstruction Committee Anne Arundel County Police Department SOD – Millersvolle, MD Co-Instructor

Taught a 40 hour reconstruction course to 30 police officers. The topics included Newtonian Physics, Momentum, Braking Efficiency, Slip Angle Analysis, Vehicle Dynamics, Time Distance Analysis, Critical Speed Analysis and other collision reconstruction related material.

August 19 - 21, 2015	Basic Collision Investigation
	(Entry Level Police Training)
	Southern Maryland Criminal Justice Academy
	Instructor

Conducted a three day training class. Instructed entry level police students in areas such as: Witness Reliability, Laws of Motion, Kinetic Energy, Basic Speed Formula, Photography, Vehicle Evidence Examination, and Roadway Evidence Examination. Conducted a dynamic skid test and a practical exercise to demonstrate the theory and reinforce the practices that were taught in class.

February 9 – 13, 2015	Collision Reconstruction Update Spokane County Sheriff's Office
	Spokane, Washington
	Instructor

Taught a 40 hour reconstruction course. The topics included Momentum, Braking Efficiency, Slip Angle Analysis, Vehicle Dynamics, Time Distance Analysis, Critical Speed Analysis and other collision reconstruction related material.

September 15 – 19, 2014	Special Problems in Collision Reconstruction
	Maryland Crash Reconstruction Committee
	Anne Arundel County Police Department SOD – Millersvolle, MD
	Co-Instructor

Taught a 40 hour reconstruction course to 30 police officers. The topics included Newtonian Physics, Momentum, Braking Efficiency, Slip Angle Analysis, Vehicle Dynamics, Time Distance Analysis, Critical Speed Analysis and other collision reconstruction related material.



September 8-11, 2014 Crash Data Retrieval Annalist Course Mississippi Law Enforcement Training Center Mississippi Bureau of Investigations (MBI) Jackson, MS Co-Instructor

Taught a 32 hour course to an audience of law enforcement officers. Topics included analysis of data of Bosch CDR supported vehicles, Delta V, PDOF, Working with the data obtained from download.

July 24, 2014	Coefficient of Friction Measurement Device Overview Title: "Is the Drag Sled Dead?" – 2 hour presentation
	Conference Presenter/Speaker
	SCARS Annual Conference
	South Carolina Accident Reconstruction Society (SCARS)
	Charleston – Mt. Pleasant, South Carolina

Two hour presentation which highlighted the strengths and weaknesses of the devices for measuring coefficient of friction of the roadway utilized by collision investigation professionals today. Presentation was to an audience of 45 attendees, which included both, law enforcement officers and professional engineers.

June 2-6, 2014	Pedestrian Collision Investigation
	Ottawa Police Department – Ontario, Canada
	Co-instructor

Assisted with an advanced level course taught to 30 police officers. Topics included: Roadway Evidence, Vehicle Evidence, Pedestrian Equations, Photography, Off-tracking vehicles. Instructed blocks of lecture portion of the class, assisted with classroom preparation, provided individual instructions to students, assisted students during class projects. Set up and assisted with dynamic testing, pedestrian collisions.



February 24 – 28, 2014 Excel for Collision Reconstruction WATAI, Seattle, Washington Co-instructor

Provided individual instructions to students, assisted with classroom preparation, assisted students during class projects.

October 1 -3, 2013 Basic Collision Investigation (Entry Level Police Training) Southern Maryland Criminal Justice Academy Lead Instructor

Conducted a three day training class. Instructed entry level police students in areas such as: Witness Reliability, Laws of Motion, Kinetic Energy, Basic Speed Formula, Photography, Vehicle Evidence Examination, and Roadway Evidence Examination. Conducted a dynamic skid test and a practical exercise to demonstrate the theory and reinforce the practices that were taught in class.

July 25, 2013 Critical Speed and Slip Angle Analysis – 2 hour presentation Conference Presenter/Speaker SCARS Annual Conference South Carolina Accident Reconstruction Society (SCARS) Charleston – Mt. Pleasant, South Carolina

Two hour presentation covering critical speed analysis and slip angle analysis to an audience of 45 law enforcement officers and professional engineers.

July 15 - 19, 2013 MCRC Crash Reconstruction School (Level II and Level III) Hosted by Charles County Sheriff's Office, Waldorf, Maryland Instructor

Instructed week one of two. Taught Math Review, Geometry Review, Trigonometry Review, Minimu Speed, Critical Speed, Airborne Analysis, Scene Mapping and Diagraming and other related topics.



June 17 – 21, 2013	Crush Energy Analysis
	Baltimore County Police Department – MCRC
	Co-instructor

Taught blocks of instruction, assisted with classroom preparation, provided individual instructions to students, assisted students during class projects, assisted with field project.

March 18-22, 2013	Pedestrian Collision Investigation
	WATAI, Belleview – Seattle Area, Washington
	Co-instructor

Assisted with an advanced level course taught to 30 police officers. Topics included: Roadway Evidence, Vehicle Evidence, Pedestrian Equations, Photography, Off-tracking vehicles. Instructed blocks of lecture portion of the class, assisted with classroom preparation, provided individual instructions to students, assisted students during class projects. Set up and assisted with dynamic testing, pedestrian collisions.

March 27, 2013 Critical Speed and Slip Angle Analysis – 2 hour presentation Conference Presenter/Speaker Crash Reconstruction Training Conference Hosted by Maryland Crash reconstruction Committee Linthicum, Maryland

Two hour presentation covering critical speed analysis and slip angle analysis to an audience of 150 law enforcement officers.

December 18 - 20, 2012 Basic Collision Investigation (Entry Level Police Training) Southern Maryland Criminal Justice Academy Lead Instructor

Conducted a three day training class. Instructed entry level police students in areas such as: Witness Reliability, Laws of Motion, Kinetic Energy, Basic Speed Formula, Photography, Vehicle Evidence Examination, and Roadway Evidence Examination. Conducted a dynamic skid test and a practical exercise to demonstrate the theory and reinforce the practices that were taught in class.



Oct 29 – Nov 2, 2012 Pedestrian Collision Investigation Peel Regional Police, Ontario Canada Co-Instructor

Assisted with an advanced level course taught to 30 police officers. Topics included: Roadway Evidence, Vehicle Evidence, Pedestrian Equations, Photography, Off-tracking vehicles. Assisted with classroom preparation, provided individual instructions to students, assisted students during class projects.

September 10 – 21, 2012 Basic Collision Investigation School United States Capitol Police Department Co - Instructor

Taught an 80 hour collision investigation course to 25 police officers. The topics included Newtonian Physics, Braking Efficiency, Vehicle Dynamics, Time Distance Analysis, Critical Speed Analysis, Basic Speed Equation and other collision reconstruction related material. The course included dynamic testing.

June 18 – 22, 2012	Science of Collision Reconstruction
	Baltimore County Police Department
	Lead Instructor

Taught a 40 hour reconstruction course to 30 police officers. The topics included Newtonian Physics, Momentum, Braking Efficiency, Slip Angle Analysis, Vehicle Dynamics, Time Distance Analysis, Critical Speed Analysis and other collision reconstruction related material. The course included dynamic testing.

April 5, 2012 Three vehicle fatal motor vehicle collision – Case Study Howard County Police Academy – MCRC Presenter

Presented a case study of a fatal motor vehicle collision with criminal overtones to 50 attendees.



March 27 – 29, 2012 Basic Collision Investigation (Entry Level Police Training) Southern Maryland Criminal Justice Academy Lead Instructor

Conducted a three day training class. Instructed entry level police students in areas such as: Witness Reliability, Laws of Motion, Kinetic Energy, Basic Speed Formula, Photography, Vehicle Evidence Examination, and Roadway Evidence Examination. Conducted a dynamic skid test and a practical exercise to demonstrate the theory and reinforce the practices that were taught in class.

March 12 -16, 2012	Crush Energy Analysis
	North Las Vegas Police Department – North Las Vegas, NV
	Co-instructor

Taught blocks of instruction, assisted with classroom preparation, provided individual instructions to students, assisted students during class projects.

March 5 – 9, 2012 Crush Energy Analysis Utah Highway Patrol – Salt Lake City, UT Co-instructor

Assisted with classroom preparation, provided individual instructions to students, assisted students during class projects.

February 23, 2012 Three vehicle fatal motor vehicle collision – Case Study College of Southern Maryland – MCRC Presenter

Presented a case study of a fatal motor vehicle collision with criminal overtones to 60 attendees.

January 16 – 27, 2012	Collision Reconstruction School
	Linthicum Heights, Maryland
	Co-instructor

Taught numerous blocks of instructions during an 80 hour reconstruction school to a class of police officers.



November 7 – 11, 2011	Advanced Collision Reconstruction Update
	West Chester, PA
	Co-instructor

Assisted with classroom preparation, provided individual instructions to students, assisted students during class projects.

October 17 – 28, 2011	Advanced Collision Investigation
	(Entry Level Reconstruction Training)
	Virginia State Police, Richmond, VA
	Co-instructor

Taught numerous blocks of instruction. Assisted with coordinating a class project. Evaluated student's performance. Proctored the final examination.

September 12-16, 2011 Special Problems in Collision Reconstruction (Advanced Level Reconstruction Training) Baltimore County Police Department, Dundalk, MD Co-instructor

Taught various blocks of instructions. Provided assistance to students. Coordinated a class project involving research in the field of collision reconstruction.

May 23 – 27, 2011 Excel for Collision Reconstruction (Advanced Level Reconstruction Training) South Dakota Highway Patrol Academy, Pierre, SD Co-instructor

Assisted with class preparation, gave individual instructions to members of the class. Provided assistance to students during a class projects. Proctored the final examination.



September 21 – 23, 2010	Basic Collision Investigation
	(Entry Level Police Training)
	Southern Maryland Criminal Justice Academy
	Instructor

Conducted a two and one half day training class. Instructed entry level police students in areas such as: Witness Reliability, Laws of Motion, Kinetic Energy, Basic Speed Formula, Photography, Vehicle Evidence Examination, and Roadway Evidence Examination. Conducted a dynamic skid test and a practical exercise to demonstrate the theory and reinforce the practices that were taught in class.

August 23-24, 2010	Advanced Collision Investigation (Level II)
	Baltimore County Police Department
	Co-instructor

Taught Kinetic Energy, Vehicle Dynamics, Conservation of Momentum and In-line Momentum to a class of 36 police officers from various departments within the State of Maryland.

May, 2010 Advanced Collision Reconstruction with Excel Applications WATAI, Redmond, Washington Co-instructor

Assisted with classroom preparation, provided individual instructions to students, assisted students during class projects.

January, 2010 In-service Training Calvert County Crash Reconstruction Team Prince Frederick, Maryland Instructor

Taught Momentum, Principal Direction of Force, Delta V to 14 members of the Reconstruction Team. Discussed a case study and described the approaches, methods and calculations used in the case.



November, 2009 Advanced Collision Reconstruction with Excel Applications Ontario Provincial Police Headquarters, Orillia, Canada Co-instructor

Assisted with classroom preparation, provided individual instructions to students, assisted students during class projects.

September, 2009	MCRC Crash Reconstruction School (Level II and Level III)
	Hosted by Maryland Transit Authority Police Department,
	Baltimore, Maryland
	Co-instructor

Taught Delta V, Principal Direction of Force, Human Factors in Collision Reconstruction.

April 27 – May 8, 2009 MCRC Crash Reconstruction School (Level II and Level III) Hosted by Calvert County Sheriff's Office, Prince Frederick, Maryland Instructor

Coordinated the class schedule and scheduling of the instructors. Taught Math Review, Geometry Review, Trigonometry Review. Facilitated the final examination and live crash.



COLLISION RESEARCH AND DYNAMIC TESTING

May 3, 2016 Orlando, Florida World Reconstruction Exposition 2016 – WREX 2016 Crash Testing Assisted with planning, preparation and documentation of three crash tests for a conference audience of over 900 people. Involved in the planning and developmental stages of the crash tests. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

April 18, 2016 Alymer, Ontario, Canada Police Reconstruction Course Ontario Police College Crash Testing Assisted with planning, preparation and documentation of one crash test. Involved in the planning and developmental stages of the crash test. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

October 14, 2015 Ocean City, Maryland 2015 Combined Reconstruction Conference Crash Testing Assisted with planning, preparation and documentation of several crash tests. Involved in the planning and developmental stages of the crash tests. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

September 21, 2015 Alymer, Ontario, Canada Ontario Police College Crash Testing Assisted with planning, preparation and documentation of four crash tests. Involved in the planning and developmental stages of several crash tests. Constructed a crash test pulley system. Fabricated robotic steer control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.



September 16, 2015 Peoria, Illinois Illinois Association of Technical Accident Investigators 29th Annual Conference Crash Testing Assisted with planning, preparation and documentation of several crash tests. Involved in the planning and developmental stages of the crash tests. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

July 27, 2015 Charleston, South Carolina 2015 Annual SCARS / Southeastern Reconstruction Conference Crash Testing – Crash Data Specialists Prepared crash test dummy that was utilized during testing. Conducted base line skid testing in order to determine the coefficient of friction of the roadway surface. Assisted with setup and documentation of eight pedestrian v. vehicle test crashes.

October 6, 2014 Seattle, Washington WATAI Fall Reconstruction Conference Crash Testing Assisted with planning, preparation and documentation of several crash tests. Involved in the planning and developmental stages of the crash tests. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

September 23, 2014 State College, Pennsylvania Pennsylvania State Police Reconstruction Seminar Crash Testing Assisted with planning, preparation and documentation of several crash tests. Involved in the planning and developmental stages of the crash tests. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.



August 19, 2014 Alymer, Ontario, Canada 2014 CATAIR Annual Meeting andConference Ontario Police College Crash Testing Assisted with planning, preparation and documentation of one crash test. Involved in the planning and developmental stages of the crash test. Constructed a crash test pulley system. Fabricated robotic brake control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

July 21, 2014 Charleston, South Carolina 2014 Annual SCARS / Southeastern Reconstruction Conference Crash Testing – Crash Data Specialists Assisted with planning, preparation and documentation of four crash tests. Conducted precrash (baseline) and post-crash ACM imaging of all supported vehicles, ride-along modules, assisted with installation of the cable tow-in operating system on the vehicles, documented the crash tests utilizing photo and video equipment.

June 4, 2014

Ottawa Police Service – Ottawa, Ontario, Canada

Pedestrian Collision Investigation Crash Testing

Prepared crash test dummy that was utilized during testing. Conducted base line skid testing in order to determine the coefficient of friction of the roadway surface. Assisted with setup and documentation of nine pedestrian v. vehicle test crashes.

July 22, 2013 Charleston, South Carolina 2013 Annual SCARS / Southeastern Reconstruction Conference Crash Testing – Crash Data Specialists Assisted with planning, preparation and documentation of five crash tests. Conducted pre-crash (baseline) and post-crash ACM imaging of all supported vehicles, ride-along modules, assisted with installation of the cable tow-in operating system on the vehicles, documented the crash tests utilizing photo and video equipment.



April 15 – 19, 2013 Alymer, Ontario, Canada Ontario Police College Crash Testing Assisted with planning, preparation and documentation of four crash tests. Involved in the planning and developmental stages of several crash tests. Constructed a crash test pulley system. Fabricated robotic steer control components. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

March 21, 2013 WATAI, Belleview –Seattle Area, Washington Pedestrian Collision Investigation Prepared crash test dummy that was utilized during testing. Conducted base line skid testing in order to determine the coefficient of friction of te roadway surface. Assisted with setup and documentation of five pedestrian v. vehicle test crashes.

July 23, 2012 Charleston, South Carolina 2012 Annual SCARS / Southeastern Reconstruction Conference Crash Testing – Crash Data Specialists Assisted with planning, preparation and documentation of five crash tests. Conducted pre-crash (baseline) and post-crash ACM imaging of all supported vehicles, ride-along modules, assisted with installation of the cable tow-in operating system on the vehicles, documented the crash tests utilizing photo and video equipment.

June 21, 2012 Baltimore, Maryland Dynamic Vehicle Testing Coordinated, planned and documented dynamic testing as part of an advanced level crash reconstruction course. The testing included skid tests and critical speed analysis. The testing was done in order to demonstrate principles taught in class.



April 16 – 20, 2012 Alymer, Ontario, Canada Ontario Police College Crash Testing Assisted with planning, preparation and documentation of four crash tests. Involved in the planning and developmental stages of several crash tests. Constructed a crash test pulley system. Assisted with design and installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

July 25, 2011 Charleston, South Carolina 2011 Annual SCARS / Southeastern Reconstruction Conference Crash Testing – Crash Data Specialists Assisted with planning, preparation and documentation of three crash tests. Conducted precrash (baseline) and post-crash ACM imaging of all supported vehicles, assisted with installation of the robotic operating system into the vehicles, documented the crash tests utilizing photo and video equipment.

June 8, 2011 Alymer, Ontario, Canada Ontario Police College Pedestrian Reconstruction School Operator in two pedestrian v. vehicle test crashes. Operated a passenger vehicle and struck the pedestrian at 35 mph while the vehicle was braking. Operated a passenger vehicle and

the pedestrian at 35 mph while the vehicle was braking. Operated a passenger vehicle and struck the pedestrian at 50 mph vehicle was under constant speed. Dummy was utilized during testing. The dummy weight was 105 lb. Assisted with setup and documentation of 4 other pedestrian v. vehicle test crashes.



August 10, 2010 Richmond, Virginia Contracted by Collision Analysis and Reconstruction Virginia State Police Operator in two vehicle to vehicle collisions used to demonstrate collision sequence to the class of 30 police officers. Collision number 1: operated a vehicle at 30 miles per hour and collided with the vehicle traveling 10 miles per hour. Collected collision data such as: time of the impulse, distance, lateral and longitudinal accelerations, video and still photographs of the collision. Collision number 2: operated a vehicle at 37 miles per hour and collided with a stationary vehicle in a t-bone type of collision with front airbag deployment. Collected collision data such as: time of the impulse, distance, lateral and longitudinal accelerations, video and still photographs of the collision.

July 28, 2009

Dunkirk, Maryland

Conducted a vehicle acceleration study of more than 60 passenger vehicles at the intersection of MD Route 4 and Apple Way. The data was used to determine the average acceleration of a passenger vehicle. The data was further broken down into two types of acceleration: threat vehicle present and threat vehicle absent. The two sets of data were compared and differences in acceleration rate were documented for future use in the field of collision reconstruction.

July 15, 2009 Baltimore, Maryland Was a subject in a night time driver perception response study conducted in conjunction with IPTM Human Factors Class. Data was cataloged and analyzed for use in the field of collision reconstruction.

July 14, 2009 Chesapeake Beach, Maryland Conducted driver response study at the intersection of MD Route 261 and MD Route 260. During the study the response to a green light by the driver of the lead vehicle was measured and data compiled into database for further analysis and application in the field of collision reconstruction.



PROFESSIONAL ORGANIZATIONS MEMBERSHIP

ACTAR	Accreditation Commission for Traffic Accident Reconstruction
INCR	International Network of Collision Reconstructionists
MdATAI	Maryland Association of Traffic Accident Investigators – Board of Directors
CDRTool	International Network of Bosch CDR System Users
HAPS	Harvard Associates in Police Science
MACCHIA	Mid-Atlantic Cold Case Homicide Investigators Association

PROVIDED EXPERT TESTIMONY IN THE FOLLOWING COURTS:

- The Circuit Court for Anne Arundel County, Maryland
- The Circuit Court for Saint Mary's County, Maryland
- The District Court of Maryland for Baltimore County
- The District Court of Maryland for Prince George's County



PROFESSIONAL TRAINING AND EDUCATION

8/2016	17 th Annual Cold Case Homicide Investigations Conference 32 hours Mid-Atlantic Cold Case Homicide Investigators Association Annapolis, Maryland
7/2016	Mass Casualty Homicide Investigations – 32 hours Office of the Chief Medical Examiner Harvard Associates in Police Science Baltimore, Maryland
6/2016	Human Trafficking Investigation and Enforcement – 24 hours Governor's Office of Crime Prevention Towson University Bel Air, Maryland
7/2015	In-Custody Death Investigation Seminar – 32 hours Office of the Chief Medical Examiner Harvard Associates in Police Science Baltimore, Maryland
9/2014	Infotainment System and Mobile Communication Device Forensic Analysis – 8 hours Berla Corporation Mitchelville, Maryland
3/2011	POLEX (Police Executive Development) – 80 hours MPCTC Sykesville, Maryland Pennsylvania State University March 21-28, 2011; April 4-8, 2011
3/2011	Commercial Motor Vehicle Drug Interdiction School – 24 hours US DOT , hosted by Charles County Sheriff's Office
9/2010	Vehicle Inspection Course – Level I – 40 hours North American Standard Commercial Vehicle Enforcement Division Maryland State Police, Linthicum, Maryland



9/2010	Driver Inspection Course – Level III – 40 hours North American Standard Commercial Vehicle Enforcement Division Maryland State Police, Linthicum, Maryland
6/2010	Police Motorcycle Operator School – 80 hours Metropolitan Police Department, Washington, D.C.
4/2010	Sobriety Checkpoint Manager School – 4 hours Maryland State Police
11/2009	Emergency Vehicle Operation Course Instructor Training – 80 hours Maryland Police Training Commission
7/2008	The Basic Hostage Negotiation School – 40 hours Prince George's County Sheriff's Office Instructor – Elizabeth Mints
5/2007	Frances Glessner-Lee Seminar in Homicide Investigation – 40 hours Office of the Chief Medical Examiner, Baltimore, Maryland
4/2007	General Police Instructor Certification Course – 56 hours Maryland Police Training Commission
4/2007	Introduction to Computer Crime Investigations – 8 hours Maryland State Police
12/2006 8 hours	Advanced Course on Reid Technique in Interviewing and Interrogation –
	John E. Reid and Associates Instructor – David M. Buckley
11/2006	The Reid Technique in Interviewing and Interrogation – 32 hours John E, Reid and Associates Instructor – David M. Buckley
11/2005	Police LASER Motor Vehicle Speed Detecting Device – 8 Hours Calvert County Sheriff's Office, Maryland
11/2005	Police Radar Motor Vehicle Speed Measurement Device – 24 Hours Calvert County Sheriff's Office, Maryland



7/2005	Chemical Test Instrumentation – 40 Hours Certification to operate Intoxilyzer 5000, Guth Model 34C Simulator and SD-2 RBT Maurice T. Turner Institute of Police Science Metropolitan Police Department, Washington, D.C.
7/2005	DWI Detection and Standardized Field Sobriety Tests Training – 40 Hours Maurice T. Turner Institute of Police Science Metropolitan Police Department, Washington, D.C.
12/2004	Technology and Operation of the LIDAR PRO-LASER III – 8 hours Maurice T. Turner Institute of Police Science Metropolitan Police Department, Washington, D.C.
12/2003 – 4/2003	Lateral Transfer Police Officer Training – 16 Weeks Maurice T. Turner Institute of Police Science Metropolitan Police Department, Washington, D.C.
10/2003	Street Crimes and Surveillance Techniques – 24 Hours John E. Reid and Associates Instructor – Patrick McCarthy Fairfax, Virginia
5/2003	Patrol Rifle Certification – 40 Hours United States Capitol Police, Washington, D.C.
4/2003	Civil Disturbance Unit Training – 32 Hours United States Capitol Police, Washington, D.C.
07/2002 – 11/2003	Basic Police Training – 24 Weeks Federal Law Enforcement Training Center