GORDON "Chip" JOHNSTON
President, Accredited Reconstructionist
The Crash Lab, Inc.

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OBJECTIVE:

The application of professional experience with tutorial and academic preparation allowing for professional growth and recognition.

PROFESSIONAL EXPERIENCE:

- Accredited Traffic Accident Reconstructionist, ACTAR #43, The Accreditation Commission for Traffic Accident Reconstruction, effective October 7, 1992, exceeding 37 years of Collision Experience

- Preparation of Collision Reconstruction for Counsel in Civil and Criminal Litigation, ~50/50% Civil Plaintiff/Defendant case ratio

- Preparation of Collision Reconstruction for the New England Law Enforcement Community

- Recognized Expert to give testimony before Federal and States Courts: greater than 80 Testimony, greater than 85 Deposition, appearances since 1990

- State of New Hampshire, Department of Safety, Division of State Police, Retired

- Adjunct Faculty member, University of North Florida, Institute of Police Technology & Management, (IPTM), Jacksonville, FL

- Certified Instructor, The Commission on Criminal Justice Standards and Training State of Florida

- Adjunct Faculty member, New Hampshire Police Standards and Training Council, (NHPS&TC), Concord, NH

- Governor's Appointment, State of New Hampshire Traffic Safety Commission

- Treasurer, National Association of Professional Accident Reconstruction Specialists, Inc., (NAPARS) since 1992

STATE POLICE :

- Patrol Supervisor
- Assistant Commander of the Technical Accident Reconstruction Unit
- Division Instructor for Patrol Preparation and In-Service Training
- Troop Training Officer
- Division Review and approval of Collision and Accident Reconstruction Reports
- Instructor, Police Standards & Training Council
- At-Large Instructor for Local and County Police in Collision Investigation and related courses.

TRAFFIC COLLISION INVESTIGATION INSTRUCTOR/ COURSE DIRECTOR:

***At-Scene Accident Investigation/Traffic Homicide Investigation*:** Introduction to Traffic Accident Investigation, Classification of Traffic Accidents, Series of Events, Physical Evidence from the Roadway and Vehicle, Accident Photography, Estimating Vehicle Speed, Traffic Template, Measuring & Diagramming Accident Scenes, The Human Element, Interviewing Drivers & Witnesses, Analysis of Information, and, Case Preparation

Advanced Accident Investigation: Mathematics Review, Vehicle Lamp Evaluation & Analysis, Tire Forensics, Photogrammetry, Vehicle Dynamics-Acceleration & Deceleration Rate, Motion, Time, & Distance, Airborne Flips, Falls, & Vaults, Conservation of Linear Momentum, Vehicle Damage Evaluation, Vector Sum Analysis, Human Factors, Physical Evidence from the Roadway and Vehicle, and, Advanced Measuring & Diagramming

Traffic Accident Reconstruction: Mathematics & Algebras Review, Formula Derivations, Newton's Laws of Motion, Kinetic Energy and Minimum Speed Formulas, Time, Distance and Velocity Equations and Accident Reconstruction, Conservation of Linear Momentum, Motorcycle Collisions, Vector Sum Analysis, Physical Evidence from the Roadway and Vehicle, Geometry and Trigonometry Review, Radius and Tangent Offset Equations, Airborne Formulas, Critical Speed, Commercial Vehicle Collision Reconstruction, Lane Change and Critical Turn-Away Equations, and, Multiple Departure Momentum

- Instructor/Course Director, ***At-Scene Accident Investigation/Traffic Homicide Investigation***, University of North Florida, IPTM:

Lake Oswego, OR, January 1996
Lake Worth, FL, February 1993
Germantown, TN, March 1991
Howell, NJ, March 1988
Prince Georges County, MD, September 1986
Meriden, CT, March 1994
Meriden, CT, September 1991
Jacksonville, FL, September 1990
Richmond, KY, October 1987

- Instructor/Course Director, ***At-Scene Accident Investigation for Supervisors***, New Hampshire State Police, Concord, NH, February 1989

- Instructor/Course Director, ***Advanced Accident Investigation***, University of North Florida, IPTM:

  Raleigh, NC, November, 1996
  Jacksonville, FL, January 1995
  Fort Meyers, FL, February 1994
  1993Gainesville, FL, January 1993
  Columbia, SC, October 1990
  Tampa, FL, October 1988
  Miami, FL, June 1995
  Jacksonville, FL, April 1994
  St. Petersburg, FL, November
  Bergen County, NJ, April 1991
  Bergen County, NJ, May 1989

- Instructor, Traffic Accident Reconstruction, University of North Florida, IPTM:

  Raleigh, NC, July 1996
  Albany, NY, November 1994
  Donelson, TN July 1995
  London, OH, September 1994

- Lead Instructor, ***Advanced Accident Investigation***, NHPS&TC, Concord, NH February 1989, November 1988, May 1988

- Instructor, ***Photography in Traffic Accident Investigation***, University of North Florida, IPTM:

  Northfield, NJ, May 1993
  Tallahassee, FL, January 1991

- Lead Instructor, Recruit Academy, ***Basic Accident Investigation***, NHPS&TC, Concord, NH: October 1989, May 1989, February 1989, October 1988, July 1988, October 1986

- Instructor/ Course Director, ***Basic Accident Investigation for Local & County Police Officers***, NHPS&TC, Kensington, NH, January 1987

- Lead Instructor, ***Patrol Preparation, Accident Investigation***, New Hampshire State Police, Concord, NH, March 1988, December 1986, March 1986, March 1985

EDUCATION:

Mechanical Forensics Engineering Services, LLC, The Maine State Police & The Maine Bureau of Highway Safety:

Advanced Motorcycle Crash Reconstruction: Nomenclature; Motorcycle Types; VIN Decoding; Hurt Report; Hurt Findings; Motorcycle Technology 1980's and Today; Friction and Statistics; Skidding Friction; Motorcycles Sliding on Their Side; Motorcycle

Slide to Stop Tests, IPTM Data; Summary of Motorcycle Friction Tests; Steering and Braking; Motorcycle Speed Estimates; Dynamic Instabilities; Highside Dynamics; Investigations-Interviews and Inspections; Motorcycle and Recreational Vehicle Safety; Motorcycle Post-Accident Inspection Techniques; Energy Considerations; Crush Energy; Airborne/Vaults; Rider Trajectories; Throw Distance; Vault Distance and Speed; Conservation of Linear Momentum and Vector Diagrams; and Drag Sleds and Vehicle Skidding; Augusta, ME, June, 2007

The ARC Network & Collision Safety Institute:

Four (04) Dynamic Crash Tests; Hit and Run Evidence; Smart Drive System Crash Data; Investigating Snowmobile Crashes; Seat Belts; Mechanism of Air Bag Injuries; Traffic Reconstruction at Traffic Signal Intersections; European Reconstruction Techniques; Human Factors beyond PRT; Investigating Nighttime Pedestrian Collisions; Reprogrammed PCMs and Crash Analysis; Angular Velocity Analysis of SUV Collisions using PC Crash; The Effects of Sample Rates and Averaging Methods on Accelerometer Based Skid Tests in Accident Reconstruction; Review of Low Speed Crash Tests and the Effect of Restitution; Crash Test Data Review and Analysis; Las Vegas, NV, June, 2007

United Transportation Training, Inc.:

Manual on Uniform Traffic Control Devices, Part 6, Temporary Traffic Control: General; Fundamental Principals; Temporary Traffic Control Elements; Pedestrian and Worker Safety; Flagger Control; Temporary Traffic Control Zone Devices; Type of Temporary Traffic Control Zone Activities; Typical Applications; Control of Temporary Traffic Incident Management Areas; and Temporary Traffic Control Elements; Ocean City, MD, May, 2007

New York Statewide Traffic Accident Reconstruction Society, Inc., (NYSTARS)

Investigating Bicycle Collisions: Nomenclature; Scene Documentation; Examination of Bicycle; Rules of Operation; and Velocities; Yorktown, NY, April, 2007

Texas Association of Accident Reconstruction Specialists, (TAARS), National Association of Professional Accident Reconstruction Specialists, (NAPARS) & 12 Other Participating Accident Reconstruction Organizations:

***F^3T^2 Conference*:** Dynamic vehicle to vehicle crash testing; Dynamic Truck-Tractor and Semi-Trailer Deceleration Testing; Experimental Program to Study the Tire-Road Friction Related to Drag Sleds; Critical Speed Yaw Testing; "Human Error, but Which Human and Whose Error"; Perception and Reaction; Applicability of Crush Analysis Formulas; Computer Simulations; Nighttime Perception and Reaction Times; Commercial Event Data Recorders; Nighttime Visibility Studies and Digital Photography; and Highway Sightlines for Accident Reconstruction; Houston, TX, September, 2006

The ARC Network & Collision Safety Institute:

Ten (10) Dynamic Crash Tests; Lower Extremity Injuries; Tire Marks; Aerial Photo Analysis; Rollovers; Curb Strikes; Motorcycles; CDR Legal Issues; Simulations; Friction Applications; Momentum With Secondary Contacts; PDOF; and Crash Test Data Review and Analysis; Las Vegas, NV, June, 2006

Maine State Police & National Association of Professional Accident Reconstruction Specialists, Inc., (NAPARS):

Commercial Vehicles; Nomenclature-Braking-Rollovers-Dynamics-ECM's-Dynamic Testing: Mechanical Nomenclature; Hands-on Workings and Identification of Nomenclature; Commercial Vehicle Brakes; What to Look For & What to Obtain; Rollovers; The Mechanics of Basic Roll stability; Dynamic Considerations in Rollover of Heavy Vehicles; Rollover and Electronic Stability Enhancements; Terminology; Basic Mechanics of Pneumatic Tires; Simplified Handling Analysis; Maintenance and Its Relationship to Braking Performance; Downhill Braking and Energy Considerations; Brake Force Balance and Why It's So Important, Even With ABS; ATC and ECS-What It Is and How It Works; Tractor and Trailer Brake System Compatibility; NHTSA and FMCSA Regulations; Modifying Brake Systems and What Could Go Wrong; New Developments in Brake Inspection & Diagnostic Equipment; ECM's; Test Skidding; and Student Driving of Heavy Commercial Articulated Vehicle; Augusta, ME, May 2006

New York Statewide Traffic Accident Reconstruction Society, Inc., (NYSTARS)

Critical Curve Speed, and Friction on Contaminated Roadways: Critical Speed Yaw Analysis; Critical Speed Yaw Calculations; Critical Speed Studies-The Accuracy of Speeds Calculated from Critical Curve Marks and Their Striations; Tire Marks and ESP; and Friction Tests on Contaminated Road Surfaces; Yorktown, NY, March 2006

Maryland Association of Traffic Accident Investigators & Accident Dynamics Research Center:

Human Factors: Understanding & Evaluating Driver Response: Response Time History; Delayed Perception; DRIVE3 Tutorial; Path Intrusions; Traffic Signals; Lead Vehicles; Decision Making; and Eye Witnesses; Anne Arundel, MD, March 2006

Jackson Hole Scientific Investigations & Traffic Safety Group:

Damage Analysis and Energy Methods in Traffic Crash Reconstruction: Selected Mathematical Topics; Energy Concepts & Analysis; Determining Appropriate Post-Impact Drag Factors; Understanding EBS & ΔV; Conservation of Linear Momentum and ΔV Vectors; Introduction to Crush & Hooke's Law; Collision Analysis Using Damage Momentum; Understanding & Determining Stiffness Coefficients; Damage (Crush) Collision Analysis; Using Simultaneous Equations to Solve In-Line Collisions; Crash Measuring Protocol & Measuring Techniques; Outdoor Project-Damage Analysis & Measuring; and, Pole Impacts & Fracture Energy; Biddeford, ME, June, 2005

The ARC Network & Collision Safety Institute:

Crash Testing, Barrier & Vehicle/Vehicle; Crash Testing, a Historical Perspective; Crash

Data Retrieval System (CDR) Update; Legal Implications of CDR Data & Use; Crush Measuring Protocol; Evaluating & Using Crash Test Data; Commercial Vehicle EDR Systems; Restraint Evaluation for Collision Analysis; Field Measurements; HVE Applications-Crash Test Simulation; Momentum & CDR Output; and, Crash Test Data Review and Analysis; Las Vegas, NV, June, 2004

Collision Safety Institute:

***Crash Data Retrieval System, Operator's Certification Course, GM, FORD, Isuzu, Saturn*:** Why Automotive Crash Data is Collected; Where the Data Comes From in the Car; What Type of Data is Collected; How to Collect Data; Mechanics of a download; and, What the Data Means (Data Interpretation); Chicago, IL, January, 2004

New York Statewide Traffic Accident Reconstruction Society, Inc., (NYSTARS) & Comprehensive Motor Vehicle Services & Consulting:

The Vehicle Autopsy: What is a Vehicle Autopsy; Purpose and Scope; Criteria Which Warrants an Autopsy; Personnel Authorized to Conduct an Autopsy; Criminal v. Civil Issues; Vehicle Dynamics Issues Relating to Crash Causation; Roadway Evidence v. Vehicle Association Importance; and, Vehicle Components and Crash Causation; Albany, NY, September, 2003

The ARC Network & Collision Safety Institute:

Airborne & Crash Testing; Reconstructing Airborne Events-Analysis & Modeling; Commercial Vehicle Event Data Recorders (EDR); Crush; From Scene to Courtroom; NHTSA Crash Data, Problems in Obtaining and Using; Collision Trauma Biomechanics; "Low Speed" Collisions, Analysis & Biomechanics; New Version CDR System, Selected Issues, GM & Ford; and, Field Data Review; Las Vegas, NV, June, 2003

Accident Analysis & Reconstruction, Inc., & Fairfax County Criminal Justice Academy:

Excel for the Accident Reconstructionist: Basic and Advanced Spreadsheet Operations; Formatting Cells; Text & Numbers; Working with Borders and Cell Shading; Conditional Formatting; Naming Cells and Constants; Working with Names in Functions; Writing MACROS and Custom Functions; Conditional Functions; Database Operations; and, Charting & Graphing; Chantilly, VA, February, 2003

Maine Bar Association/Maine Trial Lawyers Association:

Anatomy of a Car Accident; Low Speed, Low Damage, Low Verdict (?): Portland, ME, January, 2003

Vericom Computers, Inc. & Maine State Police:

Vericom VC3000 Performance Testing Computer: Braking Test Computer; Data Acquisition System; and On Board Dynamometer, Vassalboro, ME, June, 2002

Vetronix Corporation & Collision Safety Institute:

Crash Data Retrieval System, Operator's Certification Course, GM, Isuzu, Saturn: Why Automotive Crash Data is Collected; Where the Data Comes From in the Car; What Type of Data is Collected; How to Collect Data; Mechanics of a Download; and, What the Data Means (Data Interpretation), Baltimore, MD, April, 2002

Texas A&M University, Texas Engineering Extension Service:

Applied Physics for Collision Reconstruction: Kinematics; Newton's Laws; Momentum and Energy; Rotation; Weight Distribution During Braking; and, Vehicle and Occupant Data, Laurel, MD, October, 2000

Texas Association of Accident Reconstruction Specialists, (TAARS), National Association of Professional Accident Reconstruction Specialists, (NAPARS) & 21 Other Participating Accident Reconstruction Organizations:

WREX2000 World Reconstruction Exposition, **Accident Reconstruction, a Search for the Truth**: Research Opportunities with Event Data Recorders; Crash Data Retrieval System; Critical Speed; Crash Protocol; Coefficient of Friction Testing for Various Types of Tires; Drag Sled Testing; Motorcycle Barrier Crash Tests; Full Force/Weight Tests of Air Braked Truck; Truck Tractor & Semi Trailer Compared to Automobiles; Quantifying Uncertainty; Estimating Uncertainty in Reconstruction Calculations; Crush Deformation Measurement System and Current Validation of the EdCrash Computer System; Electronic Documentation of Crush Dimensions; Intelligent Transportation System/Commercial Vehicle Operations; Lamp Examinations; Vehicle Restitution; Alcohol Involvement; Rollei Metric System; Transportation Event Data Recorders; AIMS Solutions; Vehicle Considerations for Investigators; Forensic Mapping; Traffic Signal Timing Basics; Trailer Under-ride, Conspicuity, Human Factors and Rear Bumpers; Fundamentals of Crush; Role of the Weather Expert; Factors that Affect a Driver's Detection and Response Process; Highway Liability; Vehicle Suspension and Steering; Motor Vehicle Drive Trains; and, Motor Vehicle Handling, Texas A&M University, Texas Engineering Extension Service, College Station, TX, September, 2000

Lawyers & Judges Publishing Co., Inc.:

Accident Reconstruction & Litigation Seminar: The Role of Human, Vehicle and Environmental Factors in Traffic Accident Cases; Roadway through the New MUTCD; Methods of Measurement and Evaluation of Traffic Control Devices; Low-Speed Automobile Accidents; Occupant Kinematics; Dynamics and Biomechanics; Legal Evidentiary Considerations in Using Accident Reconstruction at Trial; Forensic Aspects of Vision & Highway Safety; Advanced Technology of Accident Reconstruction: From

the Accident Scene to Trial; Roadway Defects & Tort Liability; Memory and Eyewitness Reliability in Motor Vehicle Accidents; and, Bus & Recreational Vehicle Accident Reconstruction & Litigation, Washington, D.C. August, 2000

Autodesk, Inc.:

Fundamentals and Working with AutoCAD LT 2000: Franklin, MA, June, 2000

SEAK, Inc.:

Ninth Annual National Expert Witness & Litigation Seminar: A View from The Bench-Expert Witness Testimony; Impeachment of the Expert Witness, Persuading the Jury, Vehicle Low Speed Impact-Why Experts are Needed; How Attorneys Locate & Select Experts, Innovative Marketing Methods that Work, Testifying at Administrative Hearings-The Good, Bad & Ugly, Personal Injury as a Systems Failure, Analysis in Preparation for Testifying, Getting Down to Business-The Business Aspects of Expert Witnessing, Communication in the Courtroom, Court Appointed Scientific Experts, How to Succeed as an Expert Witness, Maintaining your Credibility & Integrity, How to Structure & Present Expert Testimony in a Post-*Kumho* Environment, How Experts can Prepare for a *Daubert* Challenge to Their Proposed Testimony, Mandatory & Voluntary Standards-Baselines for Identifying the Causation of Injuries & Fatalities & Resultant Negligence, The Ten Biggest Mistakes Experts Make & How to Avoid Them, How to Standup Under Cross-Examination, The Use & Abuse of Expert Testimony in Presenting Proof of Economic Damages, and, Expert Witness Trial Tactics-Direct & Cross-Examination, Hyannis, Cape Cod, MA, June, 2000

Texas A&M University, Texas Engineering Extension Service:

Advanced Scene Investigation Using Forensic Mapping & CAD: AutoSketch 6-7; Forensic Mapping; Coding, the Art; Measurement Validations; Data File; and, Systems Setup, Lawrence, MA, April, 2000

Northwestern University, Transportation Engineering Division, The Traffic Institute:

Traffic Control Devices Workshop (MUTCD): Uniform Traffic Control Devices; Urban Signing; Traffic Control Devices for Rural Highways; Principals of Positive Guidance; Traffic Sign Materials and Installation Practices; and, Application of the Positive Guidance Procedure, Boston, MA, July, 1999

Commonwealth of Pennsylvania, Department of Education, Traffic Institute forPolice Services (TIPS):

11th Annual Traffic Safety Enforcement Conference: Occupant Injuries; Human Factors in Collision Reconstruction; Friction Tests; Air Bag Deployment; Highway Engineering for the Non-Engineer; Reconstruction of Information from Engine Computers; Report Writing and Expert Testimony in Reconstructions; Momentum Analysis - Hints & Pitfalls; and, Crash Tests, Champion, PA, May, 1999

New York Statewide Traffic Accident Reconstruction Society, Inc. (NYSTARS)

Seminar:
Momentum Analysis and Animation; Crush Energy Analysis, Calculating Delta-V from Front-End Data; and, Vehicle Front-End & Pedestrian Impact Dynamics, Yorktown, NY, February, 1999

National Institute of Forensic Studies, Division of Impact General, Inc.:
Biomechanics of Injury from Traffic Collisions: The Physics & Mathematics of Vehicle Collisions; Occupant Kinematics and Analysis of Restraining Systems; and, Biomechanics of Low Speed Rear-End Collisions, St. Catherines, ON, August, 1998

Canadian Association of Technical Accident Investigators & Reconstructionists, (CATAIR) & New York Statewide Traffic Accident Reconstruction Society, Inc., (NYSTARS) Conference:
The Human Body in Collision: Injury Patterns; Blood Stain Patterns; Computer Injury Simulation; Air Bags; Head Injury; and, Child Restraints, St. Catherines, ON, August, 1998

MacInnis Engineering Associates, Ltd:
High Speed & Low Speed Impact Seminar & PC-Crash & PC-Rect Workshop: Engineering Evaluation of Minor Impacts, Passenger Car Bumpers, Impact Severity Using Barrier Data, Low Velocity Vehicle to Barrier & Vehicle to Vehicle Impact Tests, High Speed Vehicle to Vehicle Impact Tests, Minor Lateral & Sideswipe Impacts, and, Theory & Operation of PC-Crash & PC-Rect Computer Accident Reconstruction Programs, Vancouver, B.C., August, 1997

New Hampshire Bar Association Continuing Legal Education:
Automobile Injury: Auto Liability Insurance Coverage; Uninsured Motorists Coverage & Claims; Preservation of Evidence; Independent Medical Examinations; Use of Expert Witnesses; Ethical Considerations in Auto Cases; Issues Involving Pedestrians, Bicyclists & Minors; Principals of Accident Reconstruction; Settlement & Negotiations of Auto Cases; and, Special Issues in Automobile Injury Cases, Bedford, NH, November, 1996

Illuminating Engineering Society of North America (IES):
Vision; Color; Ballasts: Day lighting Calculations; and, Day lighting, Osram Sylvania, Danvers, MA, January, 1997
Luminaires and Their Photometric Data: Lighting for Visual Impact; and, Exterior Lighting, Boston Edison Company, Boston, MA, October, 1996
Light & Color: Light, Vision & Perception; and, Lighting Applications for Visual Performance, Osram Sylvania, Danvers, MA, September, 1996

Institute of Vehicular Safety:

Instructor Level-Concept of Day/Night Visibility for Traffic Accident Investigators: Concept of Night Visibility; Death on the Tracks; Department of Navy; Detectability of Highway Signs; Diseases of the Macula; Driver Performance Tentative Recommendations; Effective Use of Expert Witness; Eye Exam Form; Fatal Distraction - The Human Factors; Glaretester Record Form; Prototype of Bifurcated Opinion; Seeing with Motor Car Headlamps; Trucking Industry at War; Alcohol and Other Drugs; Demonstrative Evidence in Railroad Litigation; Discernability, That is the Question; Driver Expectancy in Highway Design & Traffic Operation; Equilateral Safety Triangle; The Eye is Not a Camera - The Camera is Not an Eye; Fatigue as a Factor in Vehicular Operation of Tractor Trailer; How We See - Quantity vs. Quality; Hypothetical Models of Preventable Collisions; Improved Commercial Vehicle Conspicuity & Signaling Systems; Light; Light Measurements & Control; Lighting Metrics; Locomotive Lights; Major Drug Categories; Measurements of Light; Measuring Nighttime Visibility; Mechanics of Walking; Medical Conditions Affecting Drivers; Night Vision Visual Perception & Increasing Motorcyclists Conspicuity; Pharmaceutical Manifestation; Predictability Model of Sun Glare at Railroad Highway Crossings; Using Photography to Preserve Evidence; Vision and Highway Safety; Visual Behavior as Related to Bicycle Riders; and, Why the Victim Can't See or Hear the Train, Columbus, OH, November, 1995

National Association of Professional Accident Reconstruction Specialists (NAPARS), Maryland Association of Traffic Accident Investigators (MATAI), National Association of Traffic Accident Reconstructionists and Investigators (NATARI), New Jersey Association of Accident Reconstructionists (NJAAR), New York Statewide Traffic Accident Reconstructionists (NYSTARS), Annual Joint Conference:

Highways: MUTCD; Pavement Design; Child Restraints-Determining Proper Use; Curve Collisions; Nighttime Photography; Recommended Procedures for Safety Performance Evaluation of Highway Features; Railroad Crossings; Highway Sight Distance; Highway Perception of the Intoxicated Driver; Design Immunity; and Intersection Sight Distance; Wilmington, DE, October 2005

Rollovers: Field testing of rollovers, airborne speed, and vehicle to vehicle impacts; Criminal Litigation in Accident Reconstruction; DNA in Accident Reconstruction; EXCEL and Spreadsheets for Accident Reconstruction; Electronic Crash Data Records (EDR) Update; Test Data and Damage Analysis; and NHSTA Early Warning Reporting Regulations; Ocean City, MD, October 2004

Pole/Tree Impacts: Sylvania-Osram, New Vehicle Lighting Technology; Pole Impacts; Pole Crash Testing; Digital Photography (Technical); Mercedes-Benz New Car Technology; Impact Factors Influencing Pattern of Injury; Frye and Daubert Decisions; Digital Photography (Legal); Biomechanics; and Test Data and Damage Analysis, Atlantic City, NJ, October, 2003

Introduction to Event Data Recorders & Crush Documentation & Analysis: Crush

Documentation & Analysis; Future of Occupant Safety Systems; Engine Control Module Overview; Crash Testing; Bus Skid Testing; Crush Measurement Protocol; and, Real World Experience with EDR/CDR Technology, Ocean City, MD, September, 2002

Investigating Bus & Train Collisions: Function of the Public Transportation Safety Board (PTSB): Basic Bus Collision Investigation Procedures; Low Speed/Short Stops; Fatal Crashes; Fires; Mechanical Failures and Airbrake Systems; Pennsylvania Turnpike Bus/Commercial Vehicle Fatal Crash Case Study; National Transportation Safety Board Overview of Train & Bus Related Crashes; Animations; Drag Sled Uncertainty Testing; Low Speed Train v. Vehicle Crash; four Car v. Bus Crashes; Bus Burning; Train Collision Investigation; Bus Acceleration & Deceleration Testing; Highway Rail-Grade Crossing Flasher Alignment Standards; and, Braking Forces and Delta-V Associated with Staged Crash Tests, Albany, NY, October, 2001

Commercial Vehicle Reconstruction: Driver Visibility Issues; Roadway-No Zone; Logbooks and Fatigue; Brake Performance; Bendix Brakes; Truck Under Ride Collisions; Tires-Recaps and Regrooves; Injury Patterns; Haz-Mat Transportation; Friction, Acceleration and Deceleration; Mack Trucks; On Board Computer Modules and Logbooks; and, Conspicuity and Trailer Under Ride, Allentown, PA, October, 1999

Motorcycle Accident Reconstruction: Damage and Motorcycle Collision Reconstruction; Motorcycle Accident Reconstruction and Rider Fatigue; Thinking and Driving in the 4th Dimension; Improving Your Photography of Evidence; Preserving Evidence with Photography; and, Staged Motorcycle Crashes with a Chevrolet Caprice, Ford Taurus, Mercury Sable, Dodge Van and "City" Bus, Waldorf, MD, October, 1998

Low Speed Crash Analysis & Forensic Tire Examinations: Low Speed Collision Vehicle Data and Test Data; Low Speed Collisions; Crash Worthiness & Human Tolerance; Child Restraints; Advanced Forensics - Vehicle Restraints; Small Occupant Dangers with Passive Restraints; Seat-Back Yielding Driver's Rear Impacts; Volvo's Exclusive Safety Devices; and, Michelin Tire Forensics, Atlantic City, NJ, October, 1997

High Speed Impact Analysis and Reconstruction: Delta-V Estimation in Side-Swipe Collisions, Use of Total Stations in Collision Scene Measurement; High Speed Crash Testing (3 Crashes), What's Available on the Internet, Crash Testing for Consumer Info-Comparison to Compliance Testing, Enforcement of Federal Motor Vehicle Safety Standards, N.T.S.B.-Overview of Operations, Low Speed Crash Tests-Summary of Latest Research, Comparison of Crash Tests to CRASH3 Delta-V Predictions, Crash Testing of Roadside Objects, Vehicle Defects & Recalls-Case Studies, Vehicle Impact Research Conducted by The Insurance Institute for Highway Safety, and, Truck Lift Kits-Effects on Vehicle Crashworthiness & Handling, Waldorf, MD, October, 1996

Human Factors in Accident Reconstruction: Delta-V; Seat Belts, Air Bags, Seat Construction & Injuries; Driver Expectancy; The Driving Task Including Mature Drivers; Physical Evidence v. The Eye; Occupant Kinematics; Commercial Driver Fatigue; Intoxicated Drivers; and, Driver Reaction Testing, Lancaster, PA, October, 1995

Motorcycle Collision Analysis and Reconstruction: Motorcycle Operation, Drag Factors for Motorcycles, Motorcycle Crash-Drop Testing, Motorcycle Conspicuity,

Starting Your Own Business, Motorcycle Accident Injuries, Motorcycle Rider & Alcohol Interaction, Linear Momentum & Physics, and, Small Business-Pension Plans & Taxes,
Atlantic City, NJ, October, 1994

Advanced Collision Analysis & Reconstruction: Digital Imaging Plotting, Vehicle Pedestrian & Vehicle-Pedacycle Impact Tests, The Use of Personal Computers in Accident Reconstruction, Insurance Fraud Investigation, Insurance Institute for Highway Safety's Crash Testing Facility, and, The Expert Witness, Ocean City, MD, October, 1993

University of North Florida, IPTM:

Special Problems in Traffic Accident Reconstruction: Accident Animation and Simulation - Legal Issues; Physical Evidence v. the Eye Witness; Vector Analysis Using Coordinate Math; Accident Reconstruction Math; Vehicle Fire Analysis; Occupant Kinematics and Human Tissue Injury Analysis; Developing Demonstrative Evidence; Friction and Tire Forces; Multi-Unit Commercial Vehicle Analysis; Motorcycle Accident Reconstruction; Headlight Pattern Analysis; Night Visibility and Human Factors; Tire Forensics; and, New Automotive Lamp Technology, Jacksonville, FL, April, 1995

Forensic Animation of Traffic Crashes: Introduction to File Management and Draw & Paint; Create Background Scene; Brushes & Movement; Preparing Frames; Rendering the Animation; Animbrushes; Preparing Script Files; and transfer to Video Tape, New Braintree, MA, October, 1994

Computerized Collision Diagramming: Introduction to Computerized Collision Diagramming; System Requirements; Definitions; On-Screen Menu Applications; Installation of Software Program; Entering Reference Points; On-Screen Bearings; Setting Limits; Drawing Techniques; Fonts & Symbols; Changing Properties; Drawing Radii Fillet; Constructing Intersections; Drawing Units & Dimensioning; Distance & Angular Measurements; Diagram Layering; Saving & Retrieving Parts; Diagram Scaling; and Printing/Plotting the Diagram, New Braintree, MA, October, 1994

Special Problems in Traffic Accident Reconstruction: Radial Tire Belt Separation; Restraint System Examination; Windows Software; AutoStats and Quik Calc; Truck Brake Failure Analysis; Vehicle Damage Analysis; Ground Based Aerial Crush Photography; Airbag Technology and Development; Virtual Phototyping in Accident Reconstruction; Understanding Medical Examinations Using Body Works; Commercial Vehicle Paper Trail; Rollovers and Visuals; Tartis System; Under Ride Accidents; Accident Reconstruction Reporting; and, Total Station, Jacksonville, FL, April, 1994

Investigation of Pedestrian Accidents & Human Factors: Medical Investigation; Pedestrians and Human Factors; Interviewing Techniques; Measuring and Diagramming Techniques; Pedestrian Conspicuity; and, Multiple Car/Pedestrian Crash Tests, Concord, NH, December, 1993

Advanced Traffic Accident Reconstruction with Microcomputers: Introduction to SLAM; Right Hand Coordinate System and Local X, Y Axes; Engineering Definition; Trig Review; Vector's: Their Addition and Planning; Kinetic Energy and Crush

Analysis; and, Examination of A & B Stiffness Coefficients, Jacksonville, FL, October, 1993

Inspection & Investigation of Commercial Vehicle Accidents: Types of Carriers; Parts and Accessories; Air Brakes Parts; Stopping Distances; Air Brakes System Diagrams; Service Data; Tires; Coupling Devices; Wheels; Axles; Steering Systems; Suspensions; Shock Absorbers; Hours of Service; Driver-Vehicle Inspection; and, Inspection of Cargo Tanks, Albany, NY, March, 1993

Special Problems in Traffic Accident Reconstruction: Critical Speed Problems; Tools & Techniques for Motorcycle Accidents; Interviewing Techniques; Pedestrians in Accidents; Trailer Conspicuity and Under Ride; Use of Crime Lab in Traffic Accident Reconstruction; Vehicle Damage Analysis; Sudden Vehicle Accelerations; The Right Hand Coordinate System in Momentum Analysis; Motorcycle Tires and Associated Problems; Occupant Strike Zones and Kinematics; Modified Vehicles in Accidents; Expert Witness Guidelines; and, Vehicle Stiffness Coefficients, Jacksonville, FL, April, 1991

Special Problems in Traffic Accident Reconstruction: Injury Patterns; Photogrammetry; Legal Issues; Motorcycle Dynamics; Vehicle Autopsies; Hazardous Materials; Motorcycle Stopping Characteristics; Railroad Crossing Accidents; Tire and Pavement Frictions; Trailer Stability in Articulated Vehicles; Weight Shift; Accident Reconstruction Photographics; IPTM Crash Study; Marine Accidents; and, Video Animation for Accident Reconstruction, Jacksonville, FL, April, 1990

Investigation of Motorcycle Accidents: Special Handling Characteristics of the Motorcycle; The Motorcycle Accident Scene; Accelerations and Decelerations; Motorcycle Damage Analysis; Motorcycle Speed Analysis; and, Motorcycle Stability and Instability, Concord, NH, January, 1990

Special Problems in Traffic Accident Reconstruction: Occupant Kinematics, Biomechanics of Trauma, Abbreviated Injury Scale, Preparation & Presentation of Demonstrative Evidence and, Computer Aided Accident Reconstruction, Jacksonville, FL, April, 1987

Photography in Traffic Accident Investigation: Principals of Photographs; Equipment and Use; Legal Aspects of Accident Photography; Night, Inclement Weather and Flash Photography; Vehicle Damage and Bodily Injury; and, Video Use at Accident Scenes, Jacksonville, FL, April, 1986

Special Problems in Traffic Accident Reconstruction: Train Accidents, Seat Belt Analysis & Failure, Case Preparation & Court Presentation, and, Pedestrian Accident Reconstruction, St. Augustine, FL, April, 1986

Traffic Accident Reconstruction: Mathematics & Algebra Review; Formula Derivations; Newton's Laws of Motion, Kinetic Energy and Minimum Speed Formulas; Time, Distance and Velocity Equations in Accident Reconstruction; Conservation of Linear Momentum; Motorcycle Collisions; Vector Sum Analysis; Physical Evidence from the Roadway and Vehicle; Geometry & Trigonometry Review; Radius & Tangent Offset Equations; Airborne Formulas; Critical Speed; Commercial Vehicle Collision Reconstruction; Lane Change & Critical Turn-away; Multiple Departure Momentum, Framingham, MA, May, 1984

International Association of Accident Reconstruction Specialists (IAARS) Accident Reconstruction Seminar:

Biomechanics of Low Speed Impacts: Low Velocity\Insurance Fraud; Elderly Driving Issues; Issues of Driver Awareness and Traffic Control Devices; Transfer & Trace Evidence; Blood Evidence & Accident Reconstruction; and, Tire Dynamics & Nomenclature, Boston, MA, July 1998

Commercial Vehicles, Human Factors, Forensic Tire Examinations: Portland, ME, July 1994; Boston, MA, June, 1987

Colorado School of Mines:

Forensic Physics Applied to Traffic Accident Reconstruction: Golden, CO, August,1993

U. S. Department of Transportation, Transportation Safety Institute:

Hazardous Materials Compliance and Enforcement Course: Concord, NH, January,1984

New Hampshire College:

B.S. Degree, Business Studies, Magna cum laude, Manchester, NH, January, 1993

Saint Anselm's College:

A.S. Degree, Criminal Justice, Manchester, NH, September, 1987

New Hampshire Police Standards & Training Council (NHPS&TC):

Principles of Physics for Accident Investigators: Amherst, NH, February, 1986

Police Instructor Training: Concord, NH, December, 1985

Advanced Technical Accident Investigation: Mathematics Review; Vehicle Lamp Evaluation & Analysis; Tire Forensics; Photogrammetry; Vehicle Dynamics, i.e. Acceleration & Deceleration Rate, Motion, Time, Distance; Airborne Flips, Falls, & Vaults, Conservation of Linear Momentum; Vehicle Damage Evaluation; Vector Sum Analysis; Human Factors; Physical Evidence from the Roadway and Vehicle; Advanced Measuring & Diagramming, Concord, NH, October, 1985

New Hampshire State Police Recruit Academy, Pembroke, NH, 1970

ASSOCIATIONS/MEMBERSHIPS:

American Association of Justice, Expert Witness Directory
Defense Research Institute, Inc., Expert Witness Directory
Delta Mu Delta National Honor Society in Business Administration
Expert Resources, Inc., (ERI)
Illuminating Engineering Society of North America, (IESNA), Associate Member
International Association of Accident Reconstruction Specialists, (IAARS)

National Association of Professional Accident Reconstruction Specialists, Inc.,(NAPARS)
National Forensic Center
New York Statewide Traffic Accident Reconstruction Society, Inc., (NYSTARS)
Professional Safety, Inc., (PSI)
Professional Society of Forensic Mapping, (PSFM)
Society of Accident Reconstructionists, (S.O.A.R.)
Society of Automotive Engineers, (SAE), Member Grade
Texas Association of Accident Reconstruction Specialists, (TAARS)