KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

The ARC Network & Collision Safety Institute:

CDR User's Conference: CDR: Past, Present and Future; SAE EDR Committee and NHTSA Part 563 Update; GM OE Update; Chrysler OE Update; Toyota Update and Comparison of Toyota ROT and CDR Data; A Comparison of Raw Data in ECU's versus Data Found, or Not Found in CDR Reports and Considerations of Possible Challenges to Investigator Integrity; Practical Methods to Accomplish Direct EEPRM Retrievals and Assessment of Information Patterns in that Data; Using Monte Carlo Method with Crash Event Data; Chip Swapping: Risk v Reward; The Ford PCM Restraint Deployment Signal: Expectations versus Reality; CDR Data From More Than One Car? Fitting it Together; Is a Search Warrant Required? Case Law review; Frye/Daubert and the Admission of Expert Testimony; CDR Admission and Expert Preparation; RCM and PCM Data Together; Re-powering 101; Houston, TX, **January 2012**

Clearly Visible Presentations, LLC:

Optics, Lighting and Visibility for the Forensic Investigator: The Physics of Light; Photometry; Basic Optics: Reflection, Transmission & Absorption; The Human Vision System; How Light Sources Influence the Scene; Atmospheric Influences; Retro-reflective Materials; Fluorescence; Photography & Videography; Sun Angle, Glare; Documenting a site at night; Low Light Photography; and Forensic Photography review; West Chester, OH, **September, 2011**

Crash Data Specialists, LLC:

***Crash Data Retrieval (CDR) Analysis and Applications Course*:** CDR: Terms and Conventions found in relation to CDR/EDR field; Airbag deployment decision-making basics; Crash Sensing and critical timelines; Crash Pulse recording methodologies currently used; Delta-V recording variations; Pre-crash data sources; Chrysler supported vehicle reports and recorded data from first coverage up to the most recent supported vehicles; Ford supported vehicle reports including ACM and PCM (powertrain control modules) data elements from beginning of Ford CDR coverage up to the latest ACM which now contain pre-crash data; Ford PCM data timing relating impact to "time 0" and restraint deployment signal (RDS) reception; General Motors CDR reports by generation including ROS (rollover sensor) data, Engineering Translation reports including the latest model year 2010/2011 ACM data and variants; Accuracy and Reliability as displayed through results of controlled testing from various sources; Case studies and in class assignments to tie CDR report analysis to crash investigation; Stratham, NH, **June, 2011**

Accident Analysis & Reconstruction, Inc – Crash Data specialists, LLC:

Advanced Reconstruction with CDR Data: Overview of Pre Crash Data Sources and Recorded Crash Pulse Data; Calculating Δv from Acceleration Data; Calculating Impulse Δv from x/y Δv Data; Calculating PDOF from x/y Δv Data; Adjusting x Axis Δv to Represent Impulse Δv; Single Equation Approach to 360°Momentum Analysis; Calculating Impact & Post Impact Velocities from CDR Data (Δv & pdof); Reconciling Pre Crash and Post Crash CDR Data; Analyzing CDR Data in Context of Your Reconstruction; Millersville, MD, **March, 2011**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

The ARC Network & Collision Safety Institute:

CDR User's Conference: CDR: Past, Present and Future; Evaluation of Torque Data Recorded by a Ford PCM; CDR: Insurance and Legal Issues; Three (03) Low Speed Crash Tests; CDR Data Momentum Solutions: Thinking Inside the Triangle; Case Studies including Toyota EDR Data; GPS Navigation Units Provide Recorded Data for Use in Accident Reconstruction; Preserving Heavy Truck ECM Files; Applying Heavy Vehicle EDR Data in the Real World; Crash Data Collection Guide for GM Airbag Electronic Control Units; CSV Pro 2011 Class; Chrysler Non-deployment Data: How to Identify it and what does it tell you; Crash Testing Data Review; Houston, TX, **January, 2011**

Society of Automotive Engineers (SAE) International:

Introduction to Failure Analysis Methods: Failure Theories, Ductile and Brittle Behavior, Fracture Mechanics, Failure Analysis: Methods, Tools & Fractography, Fatigue, Stress Corrosion Cracking and Hydrogen Damage, and Material Defects & Non-destructive Evaluation; Easton, PA, **May 2010**

Introduction to Statistical Analysis of Time Dependent Failures: Time dependant Failure Modes, Review of Basic Statistics, Time Failure Data & Statistical Distributions, Introduction to the Weibull Distribution, Analysis of Data, Application to Reliability Analysis, and Integration with Testing; Easton, PA, **May, 2010**

Vericom Computers, Inc.:

Vericom Computer Familiarization for Traffic Crash Investigation: Skid friction testing, coefficient of friction, braking systems, acceleration, gradient and super-elevation, courtroom presentation, Profile software training, analyzing the deceleration curve, lateral acceleration, measuring brake pedal pressure, measuring brake system air pressure, measuring reaction time, introduction of OBDII (on-board diagnostics interface) to Vericom, measuring low speed impacts with an accelerometer, and application of multi-axis accelerometer; Windham, NH, **May, 2010**

.

Collision Safety Institute:

Technician Course Instructor Program: What is a CDR; Process Overview; Function Overview; System Overview; The Mechanics of a Download; CDR System Software Operations; Troubleshooting the CDR Software; System Output; Legal Considerations; and, Data Harvesting; Houston, TX, **January, 2010**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

The ARC Network & Collision Safety Institute:

CDR User's Conference: The CDR Product – future releases and product support, highlights of version 3.4; Highlights of new Chrysler, Ford and GM coverage; Wet or frozen ACM Access Considerations; CDR Data Exclusion – A case Study; Case Study : Two-Vehicle Fatal Crash Investigation and a Non-Deployed Air Bag Results in a Recall; Airbag Control Module Data; Seat Belt Systems and Their Interface with CDR Data; Insurance Applications & Legal Considerations for CDR; Ford PCM Data – The Restraint Deployment Signal (RDS) and Impact Speed Timing Considerations; An Examination of "Strange" Ford PCM Behavior; Ford RCM Runtime Considerations Based on Testing; Retrieving & Translating Event Data from non-CDR Vehicles, including 2003-2005 Ford Explorer & various Toyota, Hyundai and Mazda Models; Data from non-CDR System OEMs; Chrysler Data Reliability from Crash Tests including the "Chrysler non-Deployment"; Finding Delta-V in Chrysler Data; Chrysler Update; Late breaking CDR system information; Houston, TX, **January, 2010**

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:

Heavy Vehicle Crash Reconstruction: Dynamic Crash Tests of Tractor-Trailer v. Passenger Vehicle; Tractor-Trailer v. Pickup Truck; Newton's Laws and Conservation of Momentum with application in Heavy Truck Crashes; ECM Accuracy and Test Results; Effects of Adjustments in Air Brake Operation; CMV Electronic Data; and Analysis of DDEC Reports to Verify Hours of Service Compliance, Ocean City, MD, **October, 2009**

The ARC Network & Collision Safety Institute:

Crash Conference: Six (06) Dynamic Crash Tests; Evaluating Nighttime Response; Optics, Lighting & Visibility for the Forensic Investigator; Estimation of Vehicle Speed & Trajectory Based on Video from a Vehicle-Mounted Camera; Commercial Vehicle Dynamics Factors in Collision Reconstruction; Death Investigations & Their Psychological Effect on Police Officers and Reconstructionists; Accuracy of Critical Speed Formula(CSF) when Applied to Yaw Marks Leading to Rollovers of SUVs; Braking Efficiency of Motorcycles; A Common Sense Approach to Explaining Real World Acceleration Values; Air Brake Fundamentals & Advanced Technology plus Air Brake Performance; Practical Applications of Accelerometer Data for Accident Reconstructionists; iWitness Photogrammetry; Crash Test Data Review and Analysis; Las Vegas, NV, **June, 2009**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

The ARC Network & Collision Safety Institute:

CDR User's Conference: CDR Product: Past, Present and Future; Highlights of New Model Coverage: Ford, Chrysler & GM; EDR Data & Collision Reconstruction Analysis: A Criminal Investigation Case Study; Accuracy of selected 2008 Chrysler Airbag Control Module EDR Pre-crash Speed Data During Braking; Using Ford PCM Data to Evaluate Deceleration Rates and Braking Distance; GM Rollover Sensor (ROS) Applications; CSV Export Functionality for CDR v. 3.1 including Chrysler; Advanced Data Collection Techniques; CDR Legal Issues; Signal Processing Applied to Vehicle Speed Measurements and Recording; GM Data Timing Analysis; CSV Pro User's Workshop; ACM Reprogramming; Results of Full Scale Chrysler Crash Tests; Houston, TX, **January, 2009**

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:

Advanced Topics in Collision Investigation and Reconstruction: Lateral Pole Collision; Commercial Vehicle: Event Data Recorders; Pole Crash Testing; Critical Speed Yaw: Special Situations (Assisted with Yaw testing on grass); Alcohol, Cannabis, Stimulants, Opiates & Driving; Perception/Reaction Issues; Airborne Analysis; EDR Update; and Test Data Review; Atlantic City, NJ, **October, 2008**

Collision Safety Institute:

***Crash Data Retrieval (CDR) Data Analyst Certification Course*:** General Legal Considerations; Terms and Conventions; Airbag Control Algorithm; Reading a CDR report for a GM vehicle; Reading a CDR report for a Ford vehicle; Admissibility Issues; Westlake, OH**, May, 2008**

Collision Safety Institute:

Technician Course Instructor Program: What is a CDR; Process Overview; Function Overview; System Overview; The Mechanics of a Download; CDR System Software Operations; Troubleshooting the CDR Software; System Output; Legal Considerations; and, Data Harvesting; Houston, TX, **February, 2008**

The ARC Network & Collision Safety Institute:

CDR User's Conference: Introduction to Version 3.0; GM Rollover Sensor (ROS) EDR Data; Chrysler 3.0 Release; CDR Case Study: Failure to Finish; Dealing with severely damaged ACM's; PCM Data Overview; 3.0 PCM Workshop; Using the CSV Export Function 3.0 Ford PCM Data; Accuracy of Ford PCM Speed Data During Hard ABS Braking; The Accuracy of Speed Recorded by a PCM and the Effects of Brake, Yaw and other factors; Real World Applications of Crash Data including Ford PCM; GM CDR Case Study; Vehicle Speed Sensor Calibration and its Potential Effect on Pre-Crash Vehicle Speed Data as Recorded by an EDR; Houston, TX, **January, 2008**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

Collision Forensic Solutions, LLC:

Forensic Scene Investigators; MapScenes Evidence Recorder 4.0: Forensic Mapping Introduction; CAD Concepts; Legal Issues; Setting Up a Total Station; Introduction to the Evidence Recorder; Measuring Basic Scenes with the Evidence Recorder; Downloading a scene to MapScenes; Downloading data to a New Scene; Automated Line Work Features of the Evidence Recorder; Measuring Scenes with Automated Life Work with the Evidence Recorder; Advance Features of Evidence Recorder; Measuring Scenes with Advanced Features of the Evidence Recorder; Collecting Baseline Offset and Draw a Room Data with the Evidence Recorder; Manual Collection of Baseline Offset and Draw a Room Data; Downloading the Scene with Baseline Offset Measurements, Vertical Scene Mapping with the Evidence Recorder; Measuring a Scene using Vertical Scene Mapping Features; Moving the Total Station; Measuring a Scene Requiring a Station Change with the Evidence Recorder; Re-Occupying Using the Re-Section Feature; Measuring a Scene Requiring a Station Change Using the Re-Section; Measuring a Scene Requiring Station Changes, Lines, Descriptions, Remote Elevations, VSM, Resection; and the Measuring of Vehicle Crush; Hampton, NH, **December, 2007**

Society of Automotive Engineers (SAE) International:

Highway Vehicle Event Data Recorder Symposium: Regulatory Status Part 563; State EDR Laws/ Legal Issues; Integrating the Capture of EDR Data into a National In-depth Collision Investigation Program; 15 Years' Experience of Crash Recorders in Sweden; SAE HVEDR SC J2728; ISO TC 12/WG7 & SAE VEDI J1698; VERONICA Project, Ralf-Roland Schmidt-Cotta, Siemens AG, Siemens VDO Automotive; Practical Application of EDR Data and Data Validity; The Use of Scan Tools to Augment EDR Data; Using EDR Data to Understand the Operation of Advanced Air Bags; Data Validity; Even-triggered Video Recording for the Technology Assessment; Event Data Recording: View from the Insurance Industry; The Use of Vehicle Telematics to Assess Criteria Consistent with Severe Injury; The NHTSA NASS EDR Database; Applied Uses of Commercial Truck EDR Data; Using EDR in Crash Reconstruction to Better Understand Injuries from a Biomechanics Standpoint; EDR Applications: Motor Carriers of Passengers & Private Truck Fleet; General Motors EDR Data; Current Ford EDR's: Available Data and Data Access; Overview of Toyota's Latest EDR; Ashburn, VA, **September, 2007**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

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; High Side 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:

Crash Conference: 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 PCM's 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**

Collision Safety Institute:

Crash Data Retrieval (CDR) Data Analyst Certification Course: **General Legal Considerations; Terms and Conventions; Airbag Control Algorithm; Reading a CDR report for a GM vehicle; Reading a CDR report for a Ford vehicle; Admissibility Issues; Roanoke, VA,** 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**

The ARC Network & Collision Safety Institute:

CDR User's Conference: The Future of the CDR System; GM Vehicles: When non-deployments are saved or not saved, and the GM Logic; The Accuracy of General Motors Event Data Recorders in NHTSA Frontal Barrier Tests; Detailed Evaluation of Vehicle Speed and Speed Recorded by an SDM; Average Daily Ignition Cycles in SDM-Equipped GM vehicles; Two-dimensional analyses of EDR information; New Vetronix Releases of Ford Event Data Recorders; When do Airbags Deploy?; Final NHSTA Ruling and its Implications; Survivability Aspects of the 563 Rule; Using Diagnostic Tools with the Crash Data Retrieval System; Houston, TX, **January, 2007**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

Northwestern University Center for Public Safety:

***Pedestrian Vehicle Traffic Collisions**:* Introduction to Vehicle Pedestrian Collisions; Vehicle Pedestrian Collision Velocity Problems; Vehicle Pedestrian Accident Reconstruction; Pedestrian Injuries; Forensic Aspects of Vision; Car vs. Pedestrian Case Study; Bus vs. Pedestrian Case Study; Pedestrian Velocity Field Testing; Pedestrian Drag Factor Field Testing; Nighttime Visibility Field Testing; Evanston, IL, **November, 2006**

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

F3T2 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:

Crash Conference: 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 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**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

Society of Automotive Engineers (SAE) Seminar:

Occupant and Vehicle Kinematics in Rollovers: Overview of Field Rollover Crashes; Real World Studies; Seatbelt and Ejection; Cars vs. LTV; Rollover Types; Occupant Biomechanics and Occupant Kinematics; The Roof Crush Phenomenon; Far vs. Near Side Kinematics; Maneuvers Leading to a Rollover; J-Turn; Fishhook; Other Pre-rollover Maneuvers; Laboratory Tests and Vehicle Data; Tripping Conditions; Fallovers; SAE J2112 Dolly Rollover; ADAC Corkscrew; Field Relevancy of Laboratory Tests; Electronics and Sensing; Rollover Sensing System Overview; Rollover Components; Rollover Arming; Rollover Architecture; Sensor Selection; Rollover Algorithm; Rollover Safety Systems; Seatbelt; Curtain; Rollover Modeling; PC-Crash; and MADYMO; Detroit, MI, **April, 2006**

Society of Automotive Engineers (SAE) 2006 World Congress:

Presentation, Questions, Answers of 2006 SAE papers, Detroit, MI, **April, 2006**

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

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 Heights, NY, **March, 2006**

Collision Safety Institute:

Technician Course Train-the-Trainer Course: What is a CDR; Process Overview; Function Overview; System Overview; The Mechanics of a Download; CDR System Software Operations; Troubleshooting the CDR Software; System Output; Legal Considerations; and, Data Harvesting; Dallas, TX, **February, 2006**

The ARC Network & Collision Safety Institute:

CDR User's Conference: Vetronix CDR System Update; Incorporating CDR Services in an Existing Forensic Practice; Implementing Policy for Crash Data Retrieval; CDR as a Tool for Intelligent Transportation Systems and Human Factors Issues; A Review of Various ACM Types and Data Recorded; Analysis of the GM Sensing and Diagnostic Module in 360° Linear Momentum Collisions: Real Case Analysis; CDR Data Presentation and Validation in Legal Proceedings; A Comparison of ACM's to Flight Data Recorders: The 'Black Box' Misperception; Investigation into the Durability of ACM's; Quantifying Uncertainties in Ford and GM EDR's; The Accuracy of Speed Recorded by an SDM and the Effects of Brake and Yaw Events; Overview of New GM Modules using CAN Bus Technology; and, Practical Applications for CDR gathered CAN Bus Data; Dallas, TX, **February, 2006**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

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**

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**

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

Seminar: Perception/Reaction Basics; Driver Decision Making; Driver Response Time Research; Estimating Driver Response at Night; Documenting Lighting; and Response to Traffic Signals, Yorktown Heights, NY, **March, 2005**

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:

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**

Canadian Association of Technical Accident Investigators and Reconstructionists (CATAIR) Conference:

Post-Impact Trajectory Analysis; Occupant Loading Witness Marks on Seat Belt Assemblies & Child Restraint Systems; Real World Instability of Heavy Trucks; Railroad Collisions, Automotive and Pedestrian; When Science Knocks and Judges Answer the Door; Fredericton, New Brunswick, Canada, **August, 2004**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

University of North Florida, Institute of Police Technology & Management (IPTM):

Applied Physics for Traffic Crash Investigators: **Math Overview; Vectors; Newton's Laws of Motion and Concepts of Weight and Friction; Work Energy and Power; Rectilinear Motion; Torque; Rotational Mechanics; Conservation of Linear Momentum; Conservation of Linear Momentum, Vector Analysis; Crash Dynamics, Vehicle and Occupants; Uniform Circular Motion; Uniform Projectile Motion; Tire Forces; Fredericton, New Brunswick, Canada,** August, 2004

The ARC Network & Collision Safety Institute:

Crash Conference: Crash Testing; Commercial Vehicle Skid Testing; Crash Testing, a Historical Perspective; CDR System Update; Legal Implications of CDR Data Retrieval and Use; Crush Measuring Protocol; Evaluating and Using Crash Test Data; Commercial Vehicle Event Data Recorders (EDR) Systems; Restraint Evaluation for Collision Analysis; Field Measurements; HVE Applications, Crash Test Simulation; Momentum and CDR Output; Field Data Review; Las Vegas, NV, **June, 2004**

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

Three-Point Airborne Analysis; Pedestrian Collisions; and Pole Impacts, Yorktown Heights, NY, **February, 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

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:

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**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

The ARC Network & Collision Safety Institute:

Crash Conference: Airborne & Crash Testing; Reconstructing Airborne Events-Analysis & Modeling; Commercial Vehicle Event Data Recorders (EDR); Crush; From Scene to Courtroom; NHSTA 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**

Northwestern University Center for Public Safety:

Traffic Accident Reconstruction 2: Motorcycles Trigonometry for Accident Reconstruction; Conservation of Momentum; Occupant Motion; Pedestrian Accidents; Motorcycle Case Study; Car vs. Truck Case Study; Car vs. Pedestrian Case Study; Single Vehicle Case Study; Evanston, IL, **April, 2003**

Northwestern University Center for Public Safety:

Traffic Accident Reconstruction 1: Driving Strategy & Tactics; Mechanics; Gear Position and Speed; Vehicle Behavior in Collisions; Articulated Vehicles; Conservation of Momentum; Energy; Opposite Direction Case Study; Railroad-Car Case Study; Semi Tractor/Trailer vs. Car Case Study; Same Direction Case Study; Single Car Case Study; Chevrolet vs. Pontiac Case Study; Single Tractor/Trailer Case Study; Truck vs. Semi-Tractor Case Study; Evanston, IL, **April, 2003**

Northwestern University Center for Public Safety:

Accident Investigation 2: Nighttime Photography; Tire Examination; Vehicle Damage; Collision Deformation Classification; Measurements and Behavior in Collisions; Lamp Examination; Information from Roads; Photogrammetry; Thrust Diagramming Exercises; Vehicle Damage Summary Field Project; Project; Boone County, Indiana Collision Reconstruction Project; Evanston, IL, **March, 2003**

Northwestern University Center for Public Safety:

Accident Investigation 1: Traffic Accident Information From and About People; Photography for Traffic Accident Investigation; Traffic Accident Information from Roads; Traffic Accident Information from Vehicles; Measuring at the Scenes of Traffic Accidents and Drawing After-accident Situation Maps; Simple Estimates of Vehicle Stopping Distances and Speed from Skid Marks; At-scene Measurements Projects; Vehicle and Photography Field Project; Site measuring Field Project; Evanston, IL, **March, 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 Name in Functions; Writing MACROS and Custom Functions; Conditional Functions; Database Operations; and Charting & Graphing; Chantilly, VA, **February, 2003**

KENNA MARIE JOHNSTON
Mechanical Engineer
Accredited Reconstructionist
The Crash Lab, Inc.

Post Office Box 850
Hampton, N.H. 03843-0850
(603) 926-0624 - FAX: (603) 929-0744
e-mail: kenna@thecrashlab.com
www.TheCrashLab.com

EDUCATION:

Maine Bar Association/Maine Trial Lawyers Association:
Anatomy of a Car Accident; Low Speed, Low Damage, Low Verdict (?); Portland, ME, **January, 2003**

Northwestern University Center for Public Safety:
***Vehicle Dynamics*:** Dynamics; Energy; Momentum; Speed Estimates from Irregular Skid Marks; Uniformly Accelerated Motion; Co-efficient of Friction; Acceleration/Deceleration Values; Time/Distance; Evanston, IL, **October, 2002**

University of North Florida, Institute of Police Technology & Management (IPTM):
Motorcycle Crash Investigation: Motorcycle Identification; Motorcycle Geometry fundamentals; Turning Crash Analysis; Straight Line Crash Analysis; Evidence from the Roadway; Vehicle Evidence; Motorcycle Tire Analysis; Operator and Human Factor Information; Friction and Uniform Motion; Field Testing; Intersection Crash Analysis; Motorcycle vs. Vehicle Crash; Helmets and Safety Equipment; Fredericton, New Brunswick, Canada, **September, 2002**

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

Vericom Computers, Inc. & Maine State Police:
Vericom VC 3000 Performance Testing Computer: Braking Test Computer; Data Acquisition System, On-board Dynamometer; Vassalboro, ME, **June, 2002**

The University of Akron: Akron, OH, May 2002
B.S. Degree, Mechanical Engineering Technology, Cum Laude

The University of Akron: Akron, OH, **May, 1999**
A.S. Degree, Mechanical Engineering Technology, With Distinction