

JOHNNIE PAUL HENNINGS

Accident Reconstruction Analysis, PLLC.
5801 Lease Lane, Raleigh, NC 27617
Phone: (919) 787-9675

Professional Engineer – NC License No. 39281

EDUCATION

NORTH CAROLINA STATE UNIVERSITY RALEIGH, NC
Bachelor of Science Mechanical Engineering
December 1997

CENTRAL CAROLINA COMMUNITY COLLEGE SANFORD, NC
Courses in mathematics and physics

EXPERIENCE

Accident Reconstruction Analysis, PLLC RALEIGH, NC
Principal Engineer:
April 2016 to Present

Accident Reconstruction Analysis, Inc. RALEIGH, NC
Staff Engineer:
January 1998 to 2016

Accident Reconstruction Analysis, Inc. RALEIGH, NC
Assistant Engineer:
April 1996 to December 1997
Assist with inspection and documentation of accident and fire scenes; Design and implement testing procedures and fixtures; Research and collect information for reports; Prepare exhibits for court trials; assisted in documentation of physical evidence in criminal, civil and insurance cases.

Walnut Creek Amphitheater RALEIGH, NC
Operations
March to September 1993 and 1995
Full-time position for general maintenance of facility; Oversee redesign projects; Facility modification and preparation for upcoming events.

INVESTIGATIVE SERVICES

Structural Services

- Water intrusion cause and origin
- Structural integrity and damage
- Mold causation
- Code violations

- Failure investigations
- Structural load calculations
- Retaining wall failure
- Hurricane and storm damage
- Remedial repair plans

Vehicle Accident Reconstruction

- Investigation of single vehicle, multi-vehicle and heavy vehicle accidents
- Investigation of motorcycle, bicycle and pedestrian accidents
- Light filament on/off analysis
- Hydroplaning accidents
- Roadway surface defects
- Stoplight/intersection accidents
- Scene surveys with laser surveying equipment
- Reconstruction of timelines, sight distance, and accident events
- Proficient with reconstruction software packages
- Certified Vetronix/Bosch Crash Data Specialist
- Retrieval and interpretation of “Black Box” crash data from accident vehicles
- Retrieval and interpretation of ECM and other data from commercial vehicles
- Proficient with reconstruction software packages HVE, Reality, and PC-Crash

Other Services

- General mechanical and component analysis
- Research and testing for compliance of building codes, trade standards, ASTM standards or ANSI standards
- Investigations related to failure of mechanical components and assemblies
- Reconstruction and testing of failed mechanical and structural components
- Investigation of industrial machinery failures
- Litigation support and testimony in criminal matters

Testimony Experience

- Deposition Testimony
- Arbitration Testimony
- Civil Trial Testimony
- Criminal Trial Testimony
- N.C. Industrial Commission Testimony

Certifications

North Carolina State Board of Registration for Professional Engineers and Land Surveyors:
 Engineer in Training, 2001, Registered Professional Engineer, 2012

Honors

Nazemi Award for Thermal Systems Design
First Place NCSU Senior Engineering Design

Presentations/Classes/CLE

April 2009 – North Carolina Advocates for Justice – Trucking Litigation Seminar – *Inspecting Heavy Vehicle Brake Systems*

September 2010 – US Food Service – Safety Managers’ Meeting - *Reconstruction Basics for Trucking Companies*

August 2013 – South Carolina Criminal Justice Academy - Traffic Safety Officer’s Conference – *Reconstruction of Motorcycle Accidents*

October 2013 – Juris Educational Resources – Annual Legal Nursing Conference– *Forensic Investigations*

July 2014 – Presentation to NC Secretary of Transportation, Tony Tata, and members of the NC House of Representatives – *Engineering Errors in Timing of Red Light Cameras*

October 2014 – Juris Educational Resources – Annual Legal Nursing Conference– *Human Factors in Accident Reconstruction*

April 2015 – North Carolina Advocates for Justice – Trucking Litigation A-Z – *Truck Accident Reconstruction: Black Boxes, Brakes, and Other Unique Aspects of Investigating and Reconstructing Truck Wrecks*

April 2015 – North Carolina School of Science and Math – *Forensic Methods in Automobile Accident Reconstruction*

May 2015 – North Carolina Association of Defense Attorneys, Construction Law Practice Group – *Analyzing and Attacking Repair Estimates*

October 2015 – Raleigh Wake Paralegal Association – *Automobile Accident Reconstruction*

April 2016 – Cranfill, Sumner & Hartzog - CLE – *Admissibility Issues of Animations and Simulations*

March 2018 – Duke Law School – *Examples of Accident Reconstruction Mistakes*

October 2021 – Indigent Defense Services – *Rules 702-705 Testimony of Expert Witnesses*

Arbitrations/Other

Spring 2007 – Pelican Point Home Owner’s Association vs Zurich Insurance Co

September 2010 – Brown vs Foster

September 2013 – Byrd Transportation vs Betty Stephenson

July 2013 – Davidson County Planning Board – Proposed Shooting Range

October 2014 – Chatham County Planning Board – Proposed Storage Facility

April 2015 – Weiner vs Lee

Training Courses and Continuing Education

2001 CDR Technician and Analyst Training Course

2005 HVE Accident Reconstruction Course

2006 CDR Technician and Analyst Training Course

2007 HVE Accident Reconstruction Forum

2008 CDR Technician and Analyst Training Course

2013 Dehumidification in Industrial and Building Applications

2013 Welding Technology and Inspection Procedures

2013 Rock Blasting Fundamentals

2014 Signalized Intersections – Part 1

2014 Stress and Failure Analysis of Fiber Reinforced Composite Structures with Computer
Based Solutions

2015 Fundamentals of Material Science

2015 The Engineer in the Courts

2016 OSHA Construction Site Safety

2016 Deterioration of Concrete

2016 ADA Standards for Accessible Designs

2016 Hurricane Mitigation: Summary Report on Building Performance

2017 Digital Forensics of Heavy Vehicle Event Data Recorders

2017 Foundations in Expansive Soils

2018 Introduction to Electrical Power Requirements for Buildings

2018 Aerial Photogrammetry

2019 Chillers, Refrigerant Compressors, and Heating Systems

2019 Diesel Engine Fundamentals

2019 Essentials of Heating and Cooling of Buildings

2019 Emerging Technologies Connected Vehicles

2020 Building Envelope Impact on HVAC Energy Use

2020 Construction Site Safety

2020 Design of Small Water Systems

2020 Engineers Guide to Corrosion – Causes, Protection, and Control

2020 Mechanical Fasteners

2021 Pumped Storage Hydropower and Conduit Hydropower

2021 Jet Turbine Engine Fundamentals

2021 Fundamentals of Metals