

## Beau A. Biller

### Address:

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### Personal:

Born July 2, 1980, Clearwater, Florida

### Education:

**B.S. - Florida State University**, Tallahassee, FL  
Mechanical Engineering with emphasis on Mathematics, Materials Science and Physics

### Professional:

Full Accreditation as a Traffic Accident Reconstructionist by the Accreditation Commission for Traffic Accident Reconstruction. (ACTAR # 1951)

**Member:**     **NATARI** - National Association of Traffic Accident Reconstructionist and Investigators  
                  **SAE** - Society of Automotive Engineers  
                  **ASME** - American Society of Mechanical Engineers

### Conference and Course Attendance:

- **Crash Data Recorder Tool** – User Certification Course; IPTM, University of North Florida; August 2004
- **Traffic Accident Reconstruction I**, Northwestern University, Evanston, IL; October, 2004
- **Traffic Accident Reconstruction II**, Northwestern University, Evanston, IL; November, 2004
- **Commercial Vehicle Braking Systems**, Society of Automotive Engineers Seminar, Detroit Michigan; April, 2005.
- **Vehicle Accident Reconstruction Methods**, Society of Automotive Engineers Seminar, Detroit Michigan; April, 2005.
- **Applied Vehicle Dynamics**, Society of Automotive Engineers, Big Beaver, Pennsylvania; May 2006
- **Photo Modeler Collision Reconstruction Training**, EOS Systems, Atlanta, Georgia; November 2007

## Experience:

**Engineering Investigations, LLC**, Tallahassee, Florida; Engineering, Accident Reconstruction, & Safety Analysis; 2007-Present

- Reconstruction of vehicular accidents; dynamic and kinematic analysis; skid coefficients; lamp filament analysis; computer analysis; momentum exchange; occupant restraint analysis; occupant kinematics and dynamics; automobile, truck, motorcycle, bicycle, and pedestrian accidents.
- Inspection of commercial vehicle braking systems.
- Downloading and interpretation of vehicle CDR data.
- Product failure analysis; accident and injury analysis; safety standards compliance analysis.
- Vehicle accident re-enactments
- Advanced Photogrammetry

**Cummings Scientific, LLC**, Tallahassee, Florida; Engineering, Accident Reconstruction; 2007-Present

- Reconstruction of vehicular accidents; dynamic and kinematic analysis; skid coefficients; lamp filament analysis; computer analysis; momentum exchange; vehicle crush energy calculations; visibility analysis; occupant restraint analysis; occupant kinematics and dynamics; automobile, truck, motorcycle, bicycle, and pedestrian accidents.
- Downloading and interpretation of vehicle CDR data.
- Interpretation of commercial vehicle ECM data.
- Mathematical modeling of vehicular accidents and occupant kinematics.
- Computer modeling of vehicular accident and occupant kinematics.
- Computer Animations
- Vehicle crash testing

**Quest Engineering and Failure Analysis**, Tallahassee, Florida; Engineering, Accident Reconstruction; 2004-2007

- Reconstruction of vehicular accidents; dynamic and kinematic analysis; skid coefficients; lamp filament analysis; computer analysis; momentum exchange; vehicle crush energy calculations; visibility analysis; occupant restraint analysis; occupant kinematics and dynamics; automobile, truck, motorcycle, bicycle, and pedestrian accidents.
- Inspection of commercial vehicle braking systems.
- Downloading and interpretation of vehicle CDR data.
- Mathematical modeling of vehicular accidents and occupant kinematics.
- Computer modeling of vehicular accident and occupant kinematics.
- Vehicular accident re-enactments.
- Vehicle crash testing

**Florida State University**, Tallahassee, Florida; Advanced Engineering Dynamics, Teaching/Research Assistant; 2002-2003

- Research in the Advanced Materials Laboratory
- Engineering materials testing and research
- Computer FEA analysis
- Member of “Team Rancho” vehicular sub-frame design team

### Skills:

- **Accident Reconstruction** - Reconstruction of automobile, heavy truck, bus, heavy equipment, tractor-trailers, trains, motorcycles, ATVs, bicycles, and pedestrian accidents. This includes the analysis of accident events and physical evidence to determine causation, critical accident events, sequence of events, compliance with procedures, and injury mechanisms. Typical projects include vehicular, construction, and slip/trip & fall accidents.
- **Product Failure Analysis** – analysis of specific projects with regard to materials failure, fatigue, corrosion, safety and design.
- **Computer based accident reconstruction and simulations** – using HVE, EDCrash, PC Crash, EDSMAC, MADYMO and physics based simulation programs.
- **Crash testing** - data acquisition, crush analysis and reduction.
- **Investigative services** - Scene investigation, surveys, and drawings, skid analysis, photography, vehicle inspection, damage analysis, vehicle dynamics.
- **Photogrammetry** of digital and scanned photos using a variety of CAD programs and Photomodeler to analyze skid patterns, crush depths, and accident scenes.
- **Finite element analysis** – using state of the art mechanical modeling programs.
- **Human factor analysis** – human perception and reaction times, visibility analysis.
- **Seat Belt Analysis** – Engineering analysis of material evidence to determine if seat belts were operational and if occupants were wearing their seat belts.

### Significant Coursework:

#### **Accident Reconstruction**

**Mathematics** – Probability and Statistics, Calculus I, II, &III, Linear Algebra, Ordinary and Partial Differential Equations

**Physics and Engineering** – Chemistry with Laboratory Experience, Electricity and Magnetism with Laboratory Experience, Statics, Dynamics, Feedback and Control Systems, Mechanics of Materials, Materials Science, Thermodynamics with Laboratory Experience, General and Special Relativity, Quantum Mechanics, Quantum Field Theory,

### Presentations and Talks:

1. Biller, B. A., Accident Reconstruction. Continuing education course at Kubicki Draper's 2008 Annual Claims Conference. January 2008, Kissimmee, FL.
2. Biller, B. A., Nationwide Insurance Company Claims Examiner Seminar. CE credits given by the Florida Department of Financial Services. February 6, 2008, Pensacola, FL.
3. Biller, B. A., Auto-Owners Insurance Claims Examiner Seminar. CE credits given by the Florida Department of Financial Services. February 19, 2008, Tallahassee, FL.