

SAMANTHA B. HARKER

ADDRESS

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CONTACT

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Work – (850) 228-3335

EDUCATION

Bachelor of Science – Florida State University, Tallahassee, FL
Biochemistry with emphasis on Biology and Mathematics

PROFESSIONAL AFFILIATIONS

- Full Accreditation as a Traffic Accident Reconstructionist by the Accreditation Commission for Traffic Accident Reconstruction (ACTAR) #3235.
- Licensed sUAS Aircraft Pilot

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

CERTIFICATIONS AND CONFERENCES

- *MADYMO Training Course*
TASS International, Livonia, Michigan; September 2016
- *Vehicle Dynamics for Passenger Cars and Light Trucks*
SAE International, e-Seminar; January 2017
- *Traffic Crash Investigation 1*
Northwestern University, e-Seminar; March 2017
- *Advanced Traffic Crash Investigation*
IPTM, e-Seminar; May 2017
- *ARC-CSI Crash Conference*
Las Vegas, NV, September 2017
- *Bosch CDR Tool Technician Training*
IPTM, e-Seminar; July 2019
- *Occupant Kinematics for the Traffic Crash Reconstructionist*
IPTM, Tampa, Florida; April 2022
- *Stapp Car Crash Conference*
Stapp Association, Atlanta, Georgia; November 2025

EXPERIENCE

Cummings Scientific, LLC, Tallahassee, FL

Forensic Scientist, Simulations Engineer
2015-Present

- Reconstruction of vehicular accidents including automobile, heavy truck, bus, and motorcycle using field surveys, damage profiling, scale replication, dynamic and kinematics analysis, vehicle safety system analysis, possible mechanical failure pre-collision, and re-enactment of events.
- Computer modeling of vehicular accident and occupant kinematics using MADYMO.
- Use of math and physics to calculate factors such as impact and departure speeds, angles and delta-v to show the path each vehicle traveled.

Evans Engineering Inc., Orlando, FL

Executive Secretary
2009-2010

- Project manager support, directing messages from clients.
- Assistance in planning and preparation of meetings, conferences and calls.
- Compilation, copying, sorting, and filing records of all business transactions.
- Maintenance of filing, inventory, mailing, and database systems.
- Word-processing and secretarial support.

SKILLS

- Accident reconstruction – Reconstruction of automobile, heavy truck, bus, 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/fall accidents.
- Computer based accident reconstruction and simulations – using PC-Crash and MADYMO (Mathematical Dynamics Modelling)
- Crash testing – Data acquisition, crush analysis and reduction
- Finite element analysis – using mechanical modeling programs
- Human factor analysis – human perception and reaction times, visibility analysis
- Seat belt analysis – analysis of material evidence to determine if seat belts were operational, if occupants were wearing their seat belts, and if injuries may have been lessened through use of seat belts

SIGNIFICANT COURSEWORK AND HONORS

- Physics – Calculus based Physics I and II with corresponding laboratory experience
- Chemistry – Physical Chemistry I and II, Advanced Analytical Chemistry, Biochemistry I and II with corresponding laboratory experience
- Math – Statistics, Calculus I and II
- Phi Sigma Theta National Honor Society (2012-2014)
- Alpha Epsilon Delta Honors Group (2010-2012)
- National Honor Society of Secondary Schools (2009)

PRESENTATIONS AND VOLUNTEER

- *Scientific Demonstration for SciGirls*
FSU's Mag Lab, Tallahassee, FL, July 2016
- *MADYMO National Users Meeting*
TASS International, Ann Arbor, MI, September 2016
- *Capital Regional Science and Engineering Fair*
FSU's Civic Center, Tallahassee, FL, February 2017
- *STEM Day Physics Presentation*
Roberts Elementary, Tallahassee, FL, March 2018