DJS associates
Forensic Consulting, Technology & Animations

BAILEY A. HENTZ, B.S.A.E., ACTAR
Collision Reconstruction Engineer

EDUCATION

Penn State University, University Park, PA – BS Aerospace Engineering, 2021

PROFESSIONAL LICENSES AND CERTIFICATIONS

Traffic Accident Reconstructionist (ACTAR #4403)

CONTINUING EDUCATION

Symposium on EDR Research and Training – NAPARS, April 2024
Evaluating Red Light Running Cases – NAPARS, October 2023
Event Data Recorder Use in Traffic Crash Reconstruction – Abington, PA, November 2022
Traffic Crash Reconstruction – Northwestern University Center for Public Safety, February 2022
Vehicle Dynamics – Northwestern University Center for Public Safety, January 2022
Traffic Crash Investigation – Northwestern University Center for Public Safety, December 2021

EXPERIENCE

April 2023 – Present
Collision Reconstruction Engineer – DJS Associates, Inc., Abington, PA
Consulting engineer in the area of collision reconstruction. Investigations include site and vehicle inspection utilizing 3D laser scanning technology, electronic surveying equipment, digital photography, UAVs, and videography. Services including expert reports and testimony rendered on behalf of both defendant and plaintiff in civil and criminal matters.

August 2021 – April 2023
Engineering Analyst – DJS Associates, Inc., Abington, PA
Responsible for providing engineering analysis on case files related to collision reconstruction and vehicle mechanics, as well as project management. Use of 3D laser scanning technology, electronic surveying equipment, digital photography, and videography to investigate and document sites and vehicles. Services rendered on behalf of both defendant and plaintiff in civil and criminal matters.

September 2020 – May 2021
UAV Design Team – Penn State University, University Park, PA
Design and programming of unmanned aerial vehicles (UAVs). Signal detection algorithm development, path planning and machine autonomy for aerospace systems, creating dynamic simulations for aerospace vehicles. Dynamic analyses for grounded and aerial vehicles.

NOT RETAINED

June 2017 – August 2018 **Civil Engineering Intern – Pennsylvania Turnpike Commission (Summer Position)**
Responsible for drone survey support, project management, structural analysis, design support, formal engineering documentation.

PROFESSIONAL MEMBERSHIPS

Penn State Aerowomen
Society of Women Engineers (SWE)
National Association of Professional Accident Reconstruction Specialists (NAPARS)

RELEVANT COURSEWORK:

Calculus and Vector Analysis: Three-dimensional analytic geometry; vectors in space; partial differentiation; double and triple integrals; integral vector calculus.

Advanced Computer Programming: Engineering and scientific programming including object-oriented programming, parallel programming, and various modern languages (e.g. C++, Java, and Ada).

Engineering Statics and Strength of Materials: Rigid body equilibrium; internal loads; stress & strain; combined loading.

Autonomous Vehicle Design: Signal detection algorithm development; path planning and machine autonomy; dynamic vehicle simulations.

System Dynamics and Control: Vibrations of single, multiple, and infinite degree-of-freedom systems; operational methods applied to aerospace vehicles; design of controllers.

Stability and Control: Static and dynamic stability and control of aircraft; open and closed loop systems.

Aerodynamics: Fluid mechanics of viscous and compressible flows, laminar boundary layers, turbulent flows, isentropic flows, shock waves, supersonic life and drag. Derivation of the governing equations for the conservation of mass, momentum, and energy for compressible flow.

PRESENTATIONS

"Engineering Technology Update," Webinar, Pennsylvania Bar Institute: Auto Law Update, Abington, PA, October 2026

"Accuracy in Engineering Animations," New Jersey State Bar Association (NJSBA) Virtual Fall Conference, Webinar, Abington, PA, October 2025

"Engineering Technology Update," Webinar, Pennsylvania Bar Institute: Auto Law Update, Abington, PA, October 2025

"Low Speed, High Stakes: Reconstructing 'Fender-Benders,'" Webinar, Abington, PA, October 2025

"Acquisition, Analysis, Animations – An A+ Approach to Accident Analysis," Webinar, Gloucester County Legal Education Association, Abington, PA, September 2025

"Beyond the Black Box: Data for Modern Reconstruction," Webinar, Prominent Pennsylvania Law Firm, Abington, PA, May 2025

"Acquisition, Analysis, Animations – An A+ Approach to Accident Analysis," Webinar, Monongalia County Bar Association: Monthly Member Meeting, Abington, PA, November 2024

"Engineering Technology Update," Webinar, Pennsylvania Bar Institute: Auto Law Update, Abington, PA, November 2024

NOT RETAINED

“Forensic Engineering: New Technology and Ethical Considerations,” Rutgers University RIME Bridge Resources Program, Ewing, NJ, March 2024

“Engineering Technology Update 2023,” Dispute Resolution Institute: Personal Injury Practicum 2023, Philadelphia, PA, October 2023

“Technology in Collision Reconstruction: On the Plaintiffs’ Side,” The Gavel Transportation Group, July 2023

NOT RETAINED

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