

HOLLIS HANSON

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TRAFFIC ACCIDENT RECONSTRUCTION

EDUCATION

BS **WHEATON COLLEGE**
Physics
Double minor: Mathematics and Astronomy
Cum Laude; Eliza Wheaton Scholar

2026

PROFESSIONAL PROFILE

Ms. Hollis Hanson is an Associate Accident Reconstructionist with a background in physics, mathematics, and astronomy. At Explico, Ms. Hanson uses her technical and analytical training to assist with accident reconstruction matters.

Ms. Hanson's research experience includes experimental design, laboratory testing, high-speed imaging, image processing, data reduction, calibration, Python-generated light curves, and quantitative analysis. She has applied tools including Google Colab, SAOImageDS9, Aperture Photometry Tool, plate solving, and Lomb-Scargle periodograms.

In addition to her technical work, Ms. Hanson has teaching, mentoring, coaching, and leadership experience, including work as an AstroCamp Instructor, Wheaton Academic Mentor, observatory operator and assistant, Space Camp crew trainer, resident advisor, and varsity volleyball team captain.

AREAS OF EXPERTISE

Accident Reconstruction
Evidence Documentation
Data Analysis for Research and Testing
Physics-Based Analysis
Laboratory Testing and Analysis
High-Speed Imaging and Data Processing



EXPERIENCE

Explico

2026-Present Associate Accident Reconstructionist

AstroCamp

2026-Present Instructor

Wheaton College

2023-2026 Wheaton Academic Mentor

2022-2024 Observatory Operator and Assistant

U.S. Space & Rocket Center

2025 Crew Trainer

Astronomy Tutoring

2022 Astronomy Tutor

RESEARCH

Analysis of the Magnus Effect on a Volleyball | Wheaton College, 2026

- Designed and built a spin and release mechanism for a volleyball.
- Used an Edgertronic high-speed camera to capture data.
- Processed data in Google Colab to track a point on the volleyball.

Galaxy Observation and Processing of NGC 278 Images | Wheaton College, 2024

- Collected multi-filter images of NGC 278 using iTelescope T5 at Utah Desert Observatory.
- Reduced and calibrated data using SAOImageDS9.
- Performed image alignment, stacking, and contrast enhancement.

Independent Short Period Variable Star Observation of TX CVn | Wheaton College, 2024

- Adapted research procedure after on-campus observatory hardware failure by transitioning to iTelescope.
- Conducted measurements using SAOImageDS9 and Aperture Photometry Tool.
- Created Python-generated light curves using personal data and AAVSO archival data.

Short Period Variable Star Observation of EC 01541-1409 | Wheaton College, 2023

- Performed plate solving and image calibration for data from iTelescope T32 in Australia and T72 in Chile.
- Applied Lomb-Scargle periodograms to determine variable star periodicity.
- Submitted final data to AAVSO.

International Baccalaureate Physics Internal Assessment | Parker, CO, 2021

- Designed and executed an experiment measuring torque across different volleyball serve types.

AWARDS AND HONORS

- College Sports Communicators Academic All-District Team, 2025
- NEWMAC Fall Sportsmanship Team, 2024 and 2025
- NEWMAC Volleyball All Academic Team, 2023, 2024, and 2025
- Space Camp Crew Trainer Congeniality Award, 2025
- Dean's List, four semesters, 2023 and 2024
- NCAA Division III Starting Middle Blocker, 2022-2025
- National Women in Sports Award, 2022
- PAW Award, 2022
- Balanced Award, International Baccalaureate, 2022
- Scholar Athlete Award, seven times, 2018-2022
- Colorado Motor Carriers Association Scholarship Recipient, 2022, 2023, and 2024
- Wheaton College Presidential Scholarship, 2022