TARA LEIPOLD

248.996.0830
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MARINE & TRAFFIC ACCIDENT RECONSTRUCTION | FIRE ORIGIN & CAUSE INVESTIGATION | MECHANICAL FAILURE ANALYSIS

EDUCATION

UNIVERSITY OF DAYTON

BS Mechanical Engineering **2023**
Minor: Human Movement Biomechanics

LICENSES & CERTIFICATIONS

CITI Human Subjects Research Certification

FAA Remote Pilot Certificate

AFFILIATIONS

American Boat and Yacht Council
SAE International
Alpha Kappa Psi

PROFESSIONAL PROFILE

Ms. Tara Leipold is a Scientist at Explico. Ms. Leipold's area of practice involves the investigation and reconstruction of vehicle and and maritime accidents, fire and explosion investigation, warnings, and general mechanical engineering fields. Her work, involves the inspection of vessels, vehicles, and incident sites; the analysis of operator and occupant behavior; evaluation of vessel dynamics and design; and product design and failure analysis. She has also been involved with hazard analyses, and warning label development for products associated with the marine industry.

Ms. Leipold holds a BS in Mechanical Engineering with a minor in Human Movement Biomechanics from the University of Dayton. Ms. Leipold is actively pursuing professional and technical advancements to further her expertise in accident reconstruction, maritime matters, and mechanical engineering.

AREAS OF EXPERTISE

Marine Accident Reconstruction
Accident Reconstruction
Fire Origin and Cause Investigation
Mechanical Failure Analysis
Damage Analysis
Evidence Documentation

Experience

Explico

2025 - Present	*Scientist*
2023 - 2024	*Associate Scientist*
2023	*Accident Reconstruction Consultant*
2021, 2022	*Engineering Intern*

University of Dayton

2021 - 2023	*Teaching Assistant*
2023	*ETHOS Community Parter Liaison*
2022	*Physics Department Grader*
2021	*Research Assistant*

Awards and Honors

University of Dayton Cum Laude Graduate, 2023

University of Dayton Dean's List, 2019 - 2023

University of Dayton Trustee's Merit Scholarship, 2019 - 2023

Research and Publications

Neal, J., Leipold, T., and Petroskey, K., "The Effect of Image Stabilization on PhotoModeler Project Accuracy," SAE Technical Paper 2024-01-2474, 2024, https://doi.org/10.4271/2024-01-2474.

Olberding, J., Petroskey, K., Leipold, T. Coefficient of Restitution and Collision Pulse Duration in Low-Speed Vehicle-to-Barrier Impacts. Society of Automotive Engineers, SAE 2023-01-0624.

Figueroa J R, Kappler E, Petroskey K, Arndt S, Leipold T. Naturalistic Observations of Human Driving Perceptions and Vehicle Kinematics at Stop Sign-Controlled Intersections. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2022.

Research Assistant — Vijayan, V.; Fang, S.; Reissman, T.; Reissman M.E.; Kinney, A.L. How Does Added Mass Affect the Gait of Middle-Aged Adults? An Assessment Using Statistical Parametric Mapping. *Sensors* 2022, 22, 6154.

Professional Development

Society of Automotive Engineers (SAE)

Photogrammetry and Analysis of Digital Media, Denver, CO, April 2025

Applying EDR Data to Traffic Crash Reconstruction, Washington D.C., April 2024

Vehicle Crash Reconstruction: Principles and Technology, Denver, CO, October 2023

Fire Investigation

National Fire, Arson & Explosion Investigation Training | Vehicle Fire Investigation

American Boat and Yacht Council (ABYC)

Marine Accident Investigation, February 2024

Northwestern University Center for Public Safety

Crash Data Retrieval System Operators Course, Naperville, IL, May 2024

Recon3D

Recon3D Training, September 2023