DORI WATTS

MS

248.915.0703
dwatts@explico.com

BIOMECHANICS

EDUCATION

WAYNE STATE UNIVERSITY

PhD Candidate	Biomedical Engineering	
MS	Biomedical Engineering	2021

LAWRENCE TECHNOLOGICAL UNIVERSITY

BS	Biomedical Engineering with a concentration in Pre-Medicine	2018

LICENSES & CERTIFICATIONS

Certified Aerial Lift Operator

Certified Crash Data Retrieval (CDR) Technician

Engineer in Training

Certified Remote Pilot in Command

AFFILIATIONS

Society of Automotive Engineers
Tau Beta Pi
Alpha Eta Mu Beta
Society of Women Engineers (SWE)
Biomedical Engineering Society (BMES)

PROFESSIONAL PROFILE

Ms. Watts' area of practice involves the investigation and reconstruction of accidents including those resulting in traumatic injury. As a Senior Scientist for Explico, Ms. Watts performs inspections, reviews peer-reviewed, generally accepted scientific literature, and organizes other incident-related materials such as police reports and medical records to provide ample support for accident reconstruction, biomechanics, and human factors analyses.

Ms. Watts has experience investigating, documenting, and 3D scanning evidence from a variety of vehicle collisions, workplace incidents resulting in injury, and vehicle-pedestrian collisions, to name a few. She is also a certified Crash Data Retrieval (CDR) technician and Remote Pilot in Command. During inspections, she regularly images event data recorders in order to retrieve information from crash events and operates drones to capture aerial data. Ms. Watts uses information gathered in the field to perform analyses to reconstruct a wide variety of incidents.

Ms. Watts is currently a student at Wayne State University, where she is pursuing her PhD in biomedical engineering on the injury biomechanics track. Prior to joining Explico, Ms. Watts was a biomedical engineering student at Lawrence Technological University, where she was also the captain of the varsity women's golf team. During the school year, she tutored math, science, and engineering courses. During the summers, she held internships to gain experience in engineering.

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AREAS OF EXPERTISE

Marine Accident Reconstruction

Accident Reconstruction

Product Design and Failure Analysis

Fire Origin and Cause Investigation

Mechanical, Hydraulic, and Fuel System Design and Failure Analysis

Hazard Analysis

Product Warnings and Collateral Literature

EXPERIENCE

Explico

2022 - Present	*Senior Scientist*
2021 - 2022	*Scientist*
2018 - 2021	*Associate Scientist*
2018	*Biomechanics Intern*

Yale University

2017	*Undergraduate Research Fellow*

Tenneco Automotive

2015, 2016	*Finite Element Analysis Intern*

PRESENTATIONS

Guest lecture presentation on Forensic Engineering at LTU, 2019

Yale University Poster Presentation and final presentation

Science Fair at LTU — presented summer research

Presented poster at BMES meeting

Senior Project poster session and final presentation

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EXPLICO

RELEVANT UNIVERSITY COURSEWORK

Accident Reconstruction

Learned to reconstruct accidents using conservation of momentum, conservation of energy, Newton's laws, and physical evidence.
Reconstructed a complex rollover scenario from provided photographs for the final project.

Forensic Engineering

Reviewed case studies of how to use engineering basics to solve complex problems in a forensic setting.

Biomechanics and Tissue Mechanics

Basic principles of human biomechanics an introduction to motion capture.

Impact Biomechanics

Learned about FMVSS crash tests, NCAP testing, various types of impact dummies, and injury criterion as they relate to motor vehicle collisions.

AWARDS

Biomedical Engineering Most Outstanding Student, 2018

Women's Golf Champion of Character, 2015 and 2018

NAIA Scholar Athlete, 2017 and 2018

Lawrence Technological University Dean's List, 2014-2018