

WENDY SANDERS

248.345.0402
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PhD, PE, CFEI, CVFI

**MARINE & TRAFFIC ACCIDENT
RECONSTRUCTION | FIRE ORIGIN
& CAUSE INVESTIGATION | HUMAN
FACTORS | MECHANICAL FAILURE
ANALYSIS**

EDUCATION

UNIVERSITY OF MICHIGAN

PhD	Mechanical Engineering	2004
MSE	Mechanical Engineering	2000
BSE	Mechanical Engineering	1997

LICENSES & CERTIFICATIONS

Professional Engineer MI
Certified Fire and Explosions Investigator
Certified Vehicle Fire Investigator

AFFILIATIONS

American Boat and Yacht Council
Vice Chair - Technical Board
Chair - Product Interface PTC
SAE International
National Association of Fire Investigators
National Fire Protection Agency
Human Factors and Ergonomics Society
National Boating Safety Advisory Committee

PROFESSIONAL PROFILE

Dr. Wendy Sanders is a licensed Professional Mechanical Engineer and consultant with forensic engineering expertise in marine and automotive accident reconstruction, fire and explosion investigation, thermal-fluid sciences, human factors, warnings, and general mechanical engineering fields.

Dr. Sanders has specific expertise in accident analysis and reconstruction for recreational boating accidents, including propeller-related incidents, carbon monoxide exposures, and collisions. Her work includes the analysis of operator, occupant, and pedestrian behaviors and human factors related to accident analysis, guardings, and warnings. Her automotive expertise includes accident analysis and reconstruction for passenger vehicles, including single and multiple-vehicle collisions, vehicle-pedestrian incidents, and specialty vehicles.

Dr. Sanders utilizes her multi-disciplinary training and experience to assist clients in understanding and addressing complex scenarios.

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

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EXPERIENCE

Explico

2019 - Present *Principal Engineer*

Jensen Hughes

2017 - 2019 *Director, Midwest Forensic Operations*

Design Research Engineering

2006 - 2016 *Senior Project Engineer*

Exponent Failure Analysis Associates, Inc.

2004 - 2006 *Engineer*

University of Michigan

1999 - 2004 *Research Assistant*

Daimler Chrysler / Chrysler Corporation

1999 - 2001 *Research Engineer, Advanced Engine Technologies*

1998 - 1999 *Powertrain Product Assurance Planning Specialist*

1997 - 1998 *Supplier Quality Management*

PEER REVIEWER

Society of Automotive Engineering International Journal of Transportation Safety

PEER-REVIEWER PUBLICATIONS

Sanders, W., Petroskey, K., Tibavinsky, I., Vozza, A., "Validation of Telemetry Data Acquisition in Marine Environment," Society of Automotive Engineers, SAE 2021-01-0897, 2021.

Sanders, W., Ceccio, S., Perlin, M., Dowling, D., "Bubble friction drag reduction and scaling at high Reynolds numbers and large scales," Journal of Fluid Mechanics, vol. 552, pp. 353-380, April 2006.

Sanders, W., "Bubble Drag Reduction in a Flat Plate Boundary Layer at High Reynolds Numbers and Large Scales," *University of Michigan*, January 2004.

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PRESENTATIONS

Sanders, W. "The Role of the ABYC Standards in Fire & Explosion Investigations," American Boat and Yacht Council Marine Law Symposium, New Orleans, LA, January 2020

Sanders, W., Paul, C., Chacon, R., "Expert Witness Depositions," American Boat and Yacht Council Marine Law Symposium, Seattle, WA, January 2019

Sanders, W. Angersola J., "Case Study — Collision on Lake Lanier" American Boat and Yacht Council Marine Law Symposium, Charleston, SC, April 2018

Sanders, W., "How Clients Prepare and Use Their Experts," American Boat and Yacht Council Marine Law Symposium, Charleston, SC, January 2017

Sanders, W., Taylor R., Morphy, E., "Hazard Identification Methodology for Recreational Boats," United States Coast Guard National Boating Safety Advisory Council Meeting, Washington, D.C., April 2010

Sanders, W., Ceccio, S., Perlin, M., Ivy, E., Winkel, E., Cho, J., Dowling, D., "Bubble friction drag reduction at high Reynolds number," American Physical Society Meeting, East Rutherford, NJ, November 2003

Sanders, W., Ceccio, S., Perlin, M., Ivy, E., Dowling, D., "Microbubble drag reduction at high Reynolds number," 4th ASME/JSME Joint Fluids Engineering Conference, Honolulu, HI, July 2003

Sanders, W., Ceccio, S., Perlin, M., Ivy, E., Dowling, D., Winkel, E., Judge, C., "Flat-plate turbulent boundary layer measurements at high Reynold number," American Physical Society Meeting, Austin, TX, November 2002

Sanders, W., Ceccio, S., Perlin, M., Ivy, E., Dowling, D., Winkel, E., Judge, C., "Flat-plate turbulent boundary layer measurements at high Reynold number," American Physical Society Meeting, Austin, TX, November 2002

Sanders, W., Ceccio, S., Perlin, M., Judge, C., Winkel, E., Dowling, D., "Turbulent boundary layer pressure fluctuations at large scales and high Reynolds number," Acoustical Society of America Conference, Pittsburgh, PA, June 2002

Sanders, W., Ceccio, S., Perlin, M., "The University of Michigan HIPLATE experiment," 3rd Symposium on the Smart Control of Turbulence, Tokyo, Japan, March 2002

Sanders, W., Ceccio, S., Sick, V., "Applicability of electrical impedance tomography to the study of gasoline direct injection sprays and combustion," 2nd World Congress on Industrial Process Tomography, Hanover, Germany, August 2001

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PROFESSIONAL DEVELOPMENT

Northwestern University Center for Public Safety

Accident Reconstruction

HVE

Forum, 2016

Fire Investigation

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

Society of Automotive Engineers

Applying Automotive EDR Data to Traffic Crash Reconstruction

Crash Safety Solutions

Advanced Human Factors for Traffic Crash Reconstruction