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CASEY D. BREEN
SENIOR CONSULTANT &
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Mr. Breen is a degreed Mechanical Engineer with a minor in Biomechanics with Engineering Systems Inc. (ESi) in Ft. Myers, Florida. Mr. Breen has experience in analysis of accidents and injuries, testing, research and the operation of on and off-road motorcycle based vehicles. He has investigated several hundred off-road vehicle accidents. In addition, he has conducted research and testing related to the performance of passenger vehicles, personal watercraft, and recreational marine vessels. His professional experience includes vehicular accident investigation and reconstruction, risk analysis, mechanical design, and product research.

Areas of Specialization

Motorcycles, ATVs, Side-by-Sides, Golf Cars, and other Specialty Vehicles
Automotive and Marine Accident Investigation/Reconstruction
Accident Data Analysis
Product Design/Testing
Risk Analysis
Biomechanics

Education

B.S., Mechanical Engineering, Minor Biomechanics, University of Florida, 2006

Accreditations

The Accreditation Commission for Traffic Accident Reconstruction (ACTAR)
Traffic Accident Reconstructionist
May 19, 2017
Registration Number: 3177

January 2020

Professional Affiliations/Honors

Society of Automotive Engineers (SAE)

American Society of Mechanical Engineers (ASME)

Positions Held

Engineering Systems Inc., Ft. Myers, Florida

Senior Consultant, 2018 – Present

Senior Staff Consultant, 2014 – 2017

Staff Consultant, 2006 – 2013

Engineering Intern, 2002 – 2005

Technical Reports

Mr. Breen has conducted investigation and research resulting in numerous technical reports addressing various topics, including:

Accident Reconstruction

Novice Rider Studies

Off-Road Vehicle (ORV) Design, Handling and Stability

Motorcycle Operation, Handling and Accident Reconstruction

Golf Car and Low Speed Vehicle (LSV) Handling/Standards

Motorcycle Manuals and Safety Information Development

Motorcycle App Safety Information Development

ORV Accident Reconstruction

Recreational Boats

Human Anatomical Studies

Personal Watercraft (PWC) Crash Testing

Recreational Product Accident Analysis and Design

Continued Education

Symposium on Traffic Safety, Institute of Police Technology and Management (IPTM),
Orlando, Florida, June 2019

Applied Vehicle Dynamics Course, Autobahn Country Club, Joliet, Illinois, October 2018

Human Factors in Traffic Crash Reconstruction, Institute of Police Technology and Management
(IPTM), Fort Myers, Florida, November 2019

Symposium on Traffic Safety, Institute of Police Technology and Management (IPTM),
Orlando, Florida, May 2017

Traffic Crash Reconstruction¹, Northwestern University Center for Public Safety,
Fort Myers, Florida, May 2014

Traffic Crash Investigation 1, Northwestern University Center for Public Safety

Introduction to Marine Accident Investigation, American Boat & Yacht Council (ABYC),
Ashburn, Virginia, October 2011

The Tire as a Vehicle Component, Society of Automotive Engineers (SAE), Troy, Michigan,
October 2011

Tire and Wheel Safety Issues, Society of Automotive Engineers (SAE), Troy, Michigan,
October 2011

Investigation of Motorcycle Crashes, Institute of Police Technology and Management (IPTM),
Ft. Myers, Florida, January 2009

Injury Scaling: Uses and Techniques Course, Association for the Advancement of Automotive
Medicine (AAAM), Los Angeles, California, January 2008

Investigation of Commercial Vehicle Accidents, ESI-Workshop, Presented by David Brill and
William Dobson (IPTM Adjunct Faculty), Ft. Myers, Florida, September 2007

Vehicle Accident Reconstruction Methods, Society of Automotive Engineers (SAE),
Ft. Myers, Florida, October 2006

Injuries, Anatomy, Biomechanics & Federal Regulation, Society of Automotive Engineers
(SAE), Troy, Michigan, July 2006

ATV Safety Institute Rider Course, April 2006

Motorcycle Safety Foundation Rider Course, MSF, June 2004

Publications/Presentations

Guideline for Recreational Power Boat Stability

The Society of Naval Architects and Marine Engineers (SNAME)

SNAME/IBEX Symposium

September 2019

Technical Review, CPSC All-Terrain Vehicle Research

Consumer Product Safety Commission (CPSC) Presentation

June 2019

Recreational Boating, Excessive Speed Research

American Boat and Yacht Council (ABYC)

December 2016

“Applications of Failure Analysis Techniques in ATV Accident Investigation”

Materials Science & Technology (MS&T 2015), ASM International

October 2015

“Risk Acceptance and Root Cause Analysis for Recreational Products and Activities”

Sports & Fitness Industry Association (SFIA) Summit

Phoenix, Arizona, April 2014

“The Sinking of the Ethan Allen: Accident Reconstruction and Human Factors Methodology”

The Society of Naval Architects and Marine Engineers (SNAME)

National Harbor, Maryland, March, 2012

“Demonstration and Description of Yamaha Rhino Novice Operation”

Primary Researcher, April 2008

MiscellaneousBoys Varsity Basketball Assistant Coach, Bishop Verot High School, Ft. Myers, Florida,
2006 – Present

Licensed Motorcycle Operator

PADI Open Water SCUBA Certification, 1995

State of Florida Licensed Boat Operator, 1996

American Motorcyclist Association (AMA) Member