

Mr. Bedsworth is a Senior Managing Consultant and degreed Mechanical Engineer with Engineering Systems Inc. (ESi), located in Miami, Florida. He has over 20 years' experience in all phases of boat manufacturing, including design, testing, plant operations, manufacturing, and new product development. In addition, he has experience in analysis of accidents, environmental regulations, and safety. Included in his expertise are engine design, mechanics, emissions, and related applications.

Prior to joining ESi, Mr. Bedsworth held positions ranging from Plant Manager and Chief Engineer to Vice President of Manufacturing and Development. As Chief Engineer, he was responsible for all phases of design, including prototype development and testing, production implementation, and tooling for all products.

Mr. Bedsworth has investigated and testified in cases involving a variety of specialty equipment including exercise equipment and hydraulic lift systems, as well as vehicle cases involving yacht propulsion system failures, commercial vehicles, experimental aircraft, and specialty vehicles. He has also testified as an expert witness in depositions and qualified as an expert in federal court.

Education

BS, Mechanical Engineering/ Internal Combustion Engines and Exhaust Emissions. University of Miami. 1986

Languages

- English, Native.

Positions Held

Engineering Systems Inc., Aurora, Illinois

- Senior Managing Consultant, 2015 – Present
- Senior Consultant, 2004 – 2015
- Associate Staff Consultant, 2002 – 2003

Contact Information

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ESi Miami

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Miami, FL 33166

Areas of Specialization

- Yacht and Vehicle Engine and Driveline Technology
- Design and Performance
- Marine Product Development and Performance
- Automotive and Marine
- Specialty Vehicle and Commercial Vehicle Accident Reconstruction
- Fire Cause and Origin
- Mechanical/Property Loss Investigation

Spantel Communications, Inc., Malaga, Spain

- Chief Technology Officer, 2000 – 2002

K.C. Breen and Associates Inc., Ft. Myers, Florida

- Affiliated Consultant, 1994 - 20012

Continuing Education

- **Accessing & Interpreting Heavy Vehicle Event Recorders-** Society of Automotive Engineers, May 2015
- **Operation & Maintenance of Heavy Air Brake Systems-** Bendix Corp., April 2015
- **Crash Data Retrieval Data Analyst** – November, 2013
- **Certified Fire & Explosion Investigator, Certified Fire & Explosion Instructor-** National Association of Fire Investigators, March 2013
- **Marine Electrical Certification-** American Boat and Yacht Council, July 2012
- **Crash Data Retrieval Specialist (CDR) Technician Level 1& Level 2-** BOSCH CSI, May 2012
- **Diesel Engine Certification-** American Boat and Yacht Council, March 2012
- **Standards Certification-** American Boat and Yacht Council, March 2012
- **Occupant and Vehicle Kinematics in Rollovers-** Society of Automotive Engineers, January 2009
- **Advanced Commercial Motor Vehicle Crash Investigation-** Institute of Police Technology and Management, December 2008
- **Investigation of Commercial Vehicle Accidents,** Ft. Myers, Florida - September 2007
- **Marine Electrical Certification-** American Boat and Yacht Council, January 2007
- **Vehicle Accident Reconstruction Methods-** Society of Automotive Engineers, October 2006
- **Inspection and Investigation of Commercial Vehicle Crashes-** Institute of Police Technology and Management, University of North Florida, June 2006
- **Product Liability for Yacht Designers and Engineers, New Product Development and Composite Construction, The Marine Surveyor as Expert Witness, The Three Cable Boat Investigating Fire Damaged Boats-** International Boatbuilders' Conference, October 2005
- **Propeller Injury Avoidance Task Force-** United States Coast Guard Office of Boating, Safety, February and October 2005
- **United States Coast Guard Carbon Monoxide Seminar-** United States Coast Guard, February and October 2005
- **Special Problems in Traffic Accident Reconstruction-** Institute of Police Technology and Management, 2005

- **Marine Survey, Working with Insurance Claims Departments, Understanding Fiberglass Failure, Composites-** Engineering Basics, International Boatbuilder's Conference, October 2004
- **Propeller Injury Avoidance Task Force-** United States Coast Guard Office of Boating Safety, February and October 2004
- **United States Coast Guard Carbon Monoxide Seminar-** United States Coast Guard February and October 2004
- **Traffic Crash Reconstruction-** Institute for Police Technology and Management, October 2004
- **National Safe Boating Council and National Safe Boating Congress International Boating and Water Safety Summit,** April 2004
- **Forensic Composite Research, Testing Metals for Marine Applications Evaporative Emissions and Fuel Systems Integrated Onboard Computer Systems Introduction to Infusion Solutions, Sound-Emissions Regulations, Styrene: Toxicology, Epidemiology and Regulations, Evaluating Secondary Bond Characteristics-** International Boatbuilder's Conference, October 2003
- **Propeller Injury Avoidance Seminar-** United States Coast Guard Office of Boating Safety, February and October 2003
- **United States Coast Guard Carbon Monoxide Seminar,** February and October 2003
- **Special Problems in Traffic Accident Reconstruction-** Institute of Police Technology and Management, 2003
- **Marine Accident Reconstruction-** American Boat and Yacht Council, 2003
- **The Clean Air Act Fabricator Strategies under Title V-** Presented by GLS and the U.S. EPA, Tampa, Florida, 1995
- **Hazardous/Toxic Waste Management for the Boating Industry Workshop, MACT Tier II Study-** Presented by NMMA, Tampa, Florida, 1995
- **Joint Conference on Air Cushion Technology-** Annapolis, Maryland, Conference sponsored by the U.S. Hovercraft Society and the ASNE, 1988

Professional Affiliations/Honors

ASM International

- Member

National Association of Fire Investigators (NAFI)

- Member

Society of Automotive Engineers (SAE)

- Member

American Boat & Yacht Council (ABYC)

- Member

Member of Engine and Powertrain PTC

- Member

American Society of Testing and Materials (ASTM)

- Member

American Society of Mechanical Engineers (ASME)

- Member

United States Power Squadron (USPS)

- Member

S.P. Instructor in Boating Safety, Seamanship and Boat Handling

- Instructor

Project Experience

Accidents involving cranes, man lifts, bucket lifts, forklifts and elevators

Vehicle accidents including commercial vehicles and vehicle roll-over

Fire investigations including cars, boats, yachts, commercial vehicles, and industrial equipment

Accidents involving power implements, construction and exercise equipment

Failures of electromechanical systems and hydraulic systems for lifting and material handling

Boat building Standard of Care

Standard of Care in vehicle and boat/yacht repairs including gas and diesel engines and drive train components

Workplace injuries from mechanical equipment

Losses involving special purpose vehicles and PTO (Power Take Off) driven equipment

Boat design including engine and other component selection and installation

Cause of boat accidents including operator responsibilities

Failure of ultra-light and experimental aircraft engines

Publications

“Commercial Vehicle Skid Distance Testing and Analysis,” **Bedsworth, K.**, Butler, R. Rogers, G., Breen, K., and Fischer, W., SAE International 2013-01-0771, Detroit, MI, April 2013

“Developments in Alternate Marine Transportation,” Society of Automotive Engineers, March 1995, 1995-08-01

“Hydrogen Engine Performance Analysis, Final Report,” DOE Contract EC-77-G-03-1212, August 1982

Presentations

“Commercial Vehicle Skid Distance Testing and Analysis,” **Bedsworth, K.D.**, Butler, R.J., SAE World Congress, Detroit, MI, April 17, 2013

“Driver and Occupant Dynamics in a Staged Transit Bus Crash,” IPTM – University of North Florida, Jacksonville, FL, April 2007

“The Investigation and Analysis of Off-Road Recreational Vehicle Accidents,” IPTM – University of North Florida, Jacksonville, FL, April 2006

“Summary of Recent Developments in the Recreational and Commercial Light Hovercraft Industry,” Intersociety High-Performance Marine Vehicle Conference, June 1992

Fourth Annual Light Hovercraft Design Conference- Speaker, Troy, OH, 1990

Third Annual Light Hovercraft Design Conference- Chairman/Speaker, Terre Haute, IN, 1989

“Alternate Fuels Performance and Emissions Characteristics,” January 1984

“Methane Fueled Engine Performance and Emissions Characteristics,” The 18th Intersociety Energy Conversion Engineering Conference, August 1983