

# Steven J. Meyers

# Air Safety Consultant President and Chief Technical Officer

Steven Meyers is an experienced aircraft accident investigator that combines scientific analysis, material science, laboratory testing, piloting expertise, aircraft maintenance, and human factors to investigate air safety issues. He has a Masters Degree in Aeronautical Science, B.S. in Engineering Physics, A.S. in Manufacturing Engineering Technology, and an Extension Diploma in Applied General Metallurgy.

## **Profile**



**Aviation and Human Factors:** Piloted / instructed in 60+ different types of aircraft ranging from turbines to gliders to seaplanes. FAA rated Multi-Engine, Instrument, Commercial Pilot; Active Flight Instructor (CFI); FAA licensed Airframe and Power Plant Mechanic (A&P) with FAA Inspection Authorization (IA). Understands the Person-Machine-Environment interface.



**Accident Investigator:** Applies scientific methods to accurately reconstruct and explain the circumstances of an accident. Investigations ranging from the in-flight failure of composite airframe structures to the use of unapproved parts to reconstructing ground vehicle incidents. Adjunct Faculty Member in the Aviation Department of Lewis University teaching courses in Applied Aircraft Accident Investigations and Human Factors. IL licensed Private Detective.



**Material Scientist:** Brings a strong experience in applying modern materials science coupled with a focus on failure analysis and the use of standardized testing techniques. Evaluates the effects of corrosion, temperature, and mechanical stresses on the performance of materials. Analysis performed on fractured thru-bolts, crankshafts, fuel pumps, carburetors, and bearings.



**Failure Analyst:** Provides practical and comprehensive laboratory testing that is independent and unbiased. Capable of performing a broad range of tests to determine the strength, physical, chemical, and wear properties of metals, coatings, ceramics, composites, and plastics. Access to ASTM qualified test machines, optical microscopes, SEM, FTIR, load cells, and accelerometers.



**USAF Non-Commissioned Intelligence Officer:** Confident public speaking skills with experience in preparing briefings and making recommendations to high-level military commanders.

## **Expertise**

Aircraft Design and Operation
Aircraft Performance
Avionics & Autopilots
Piloting & Training
Reciprocating Engines
Major Repairs & Alterations
Human Factors
TAA Aircraft
FAA Regulations & Certification

Wreckage Reconstruction
In-Flight Break-Ups
Mid-Air Collisions
Flight Path Reconstruction
Crashworthiness
Loss of Control
System Failures
In-Flight Fires
Cockpit Automation

Mechanical Testing
Material Compatibility
Patent Infringement
Failure Analysis
Composite Materials
Mechanical Fasteners
Tribology & Wear Testing
Fretting, Galling & Corrosion
Lubricants, Greases, & Fuels

#### Education

## **Degrees, Certificates, & Military**

- Master of Aeronautical Science, Embry-Riddle Aeronautical University, 2009
- Bachelor of Science in Engineering Physics, Benedictine University-IIT, 1997
- Associates of Applied Science in Manufacturing Engineering Technology, College of Du Page, 2008
- Extension Diploma, Applied General Metallurgy, Materials Engineering Institute, 2010
- Certificate, Program Management, DePaul University, 2001
- USAF Intelligence School: Collection, Analysis, and Dissemination of Classified Information, 1994
- USAF Special Operations School: Asian-Pacific: Cultural, Sociological, and Political Studies, 1995
- USAF Non-Commissioned Officer School: Leadership and Management Training, 1997-2000
- USAF Combat Survival School: Survival (Land and Water), Evasion, Resistance, and Escape, 1998

#### **Studies**

## **Professional Development**

## **Failure Analysis and Accident Investigation:**

- Vehicular Accident Reconstruction and Investigation Course, Northwestern University, 2000
- Aircraft Accident Investigation Course, University of Southern California (USC), 2001
- Principles of Failure Analysis Course, Materials Engineering Institute (ASM International), 2003
- Advanced Aircraft Accident Investigations Course, Embry Riddle Aeronautical University, 2008
- Mechanical Testing of Metals Course, Materials Engineering Institute (ASM International), 2009
- Reliability and 1309 Design Analysis For Aircraft Systems, University of Kansas, 2013
- Certificated Fire, Arson, and Explosion Investigation Training, NAFI, 2015

#### **Technical Training:**

- Metal Castings Technologies Course, Cast Metals Institute-American Foundry Society, 2003
- Managing Complex Product Development Programs Course, MIT, 2003
- Vehicle Dynamics and Control, Skip Barber Racing School, 2005
- Lubrication and Tribology Testing Workshop, STLE, 2006
- Corrosion Detection, Prevention and Control Workshop, NACE, 2009
- Certified Lubricant Specialist, Society of Tribology and Lubricant Engineers (STLE)

#### **Specialized Flight Training:**

- Specialized High Altitude Physiological Education & Training, FAA Aero-Medical Institute, 2001
- Spatial Disorientation Simulator Training, FAA Aero-Medical Institute, 2001
- Post-Crash Survival & Cabin Evacuation Training, FAA Aero-Medical Institute, 2001
- PA-60 Navajo Simulator Training, Advanced Weather Avoidance, & Single Pilot IFR, RTC, 2004
- Garmin G1000 Refresher Training, Glass Simulator Center, 2013
- PC-12 NG Simulator Training, SIMCOM Aviation Training, 2013
- Cessna CJ3+ Simulator Training, PROFLIGHT Simulator Training, 2013
- Agricultural Pilot Flight Training, Eagles Vista, 2014
- Piper PA-46 Pilot Flight Training, RWR Pilot Training, 2014

#### **Studies**

## **Professional Development (continued)**

## **Specialized Flight Training (continued):**

- Flight Instructor Renewal Course, American Flyers 2001-2015
- Cirrus Factory Transition Training -SR-20, 2015
- Cirrus Factory Simulator Training -SR-22, 2015
- Boeing KC-135R Simulator Training, USAF-ANG 128<sup>th</sup> Air Refueling Wing, 2015
- Bush and Mountain Flying, Bush Air-Safety Training, 2015
- Managing Wildlife Strikes, Bird Strikes Committee USA-Safety Training, 2015

## **Aircraft Maintenance Training:**

- Textron-Lycoming Aircraft Engines, Factory Power Plant Education & Training, 2002
- Teledyne-Continental Aircraft Motors, Factory Power Plant Education & Training, 2002
- Advanced Composite Material Fabrication and Repair Training, Flight Safety International 2002
- Williams International, Factory FJ44/33 Turbine Engine Education and Training, 2007
- Pratt & Whitney PT6A Series Familiarization Training, Flight Safety International, 2013
- Attended factory sponsored seminars on FADEC systems, propellers, governors, alternators, starters, magnetos, fuel injection systems, brakes, fuel cells, and vacuum pumps, 1994-2015
- Auto Engine Conversions for Experimental Aircraft, EAA Maintenance Training, 2015
- FAA Inspection Authorization Renewal Training, Lewis University & DPA FSDO, 2001-2015

## **FAA Ratings**

## **Airman & Mechanic Certificates**

#### Commercial / Instrument:

- Single Engine Land
- Single Engine Sea
- Multi-Engine Land
- Glider

#### Instructor:

- Single Engine Land
- Adv. Ground Instructor

## **Endorsements:**

- High Performance
- Turbine Training
- Tail-wheel
- Complex

#### Maintenance

- Airframe
- Powerplant
- Inspection
  - Authorization (IA)

#### **Piloting**

#### Aircraft Flown

Aviat A-1A; Auster-5J4; Beechcraft A-36, F-33A, BE-76, BE-90C, C24R, V-35; Boeing PT-17; Cessna 140, 150, 152, 170, 172, 172RG, 175, 177, 180 Float, 182, 182RG, 206, 310, 337, 414; Cirrus Aircraft SR20, SR22; Commander Aircraft -115; Diamond Aircraft DA-20, DA-40, HK36TC; ERCO Ercoupe -415C; EAD Socata Rallye 100; Experimental Long EZ, Glasair III, RV-6A, Breezy; Grumman AA-5B; Grobe Motorglider; Lake LA-4; Piper J-3, PA23-150, PA23-180, PA23-235, PA25, PA28-150, PA28-160, PA28-161, PA28-180, PA28-181, PA28-235, PA-30B, PA32R-301, PA34-200, PA38, PA46-350; Mooney M20J; North American T-6, T-28; Pilatus PC-12; Ryan Navion NAV-4; Simulator Frasca: Pilatus PC-9, PA-60, B58, Citation III, King Air C-90, RTC: Piper PA-60, Flight Safety: Saab 340D, Pro Flight: CJ3+, SIMCOM: PC-12NG, USAF: KC-135R; Stinson-108; YAK-52W; and ZLIN Z-526F.

## **Employment**

#### 2006 to Present

## President and Chief Technical Officer, DVI Aviation Inc, Bolingbrook, IL

Mr. Meyers is responsible for all facets of operating DVI Aviation, and over his 22+ career in the Aerospace and Defense industries, he has conducted several hundred failure analysis and aircraft accident investigations. His experiences include airframe and powerplant system design and interface issues, flight and ground testing, human factor analysis of both flight and maintenance operations, and the evaluation of material wear and lubrication (tribology). These investigations have involved complex accident reconstructions, the development of unique/customized test procedures, and interdisciplinary expertise. He also developed and conducts *Human Factors* based flight reviews and ground school training. These in-depth instructional programs cover cockpit leadership techniques, error management, risk management, human factors, single pilot resource management, and expert based scenario training. Other aviation services include aircraft specific checkouts, flight department audits, safety seminars, and aircraft maintenance.

#### 2009 to Present

## Adjunct Faculty Member, Lewis University Aviation Department, Romeoville, IL

Lewis University is an FAA Aviation Maintenance Technician School (AMTS) certificated under 14 CFR Part 147. Mr. Meyers developed and instructs courses in *Applied Aircraft Investigation Techniques, Aviation Human Factors-Flight, and Human Factors in Aviation Maintenance*. These advanced level courses cover: the investigation process, Pilot errors, maintenance errors, material science, failure analysis, understanding the relationship of the person-machine-environment, and how to apply engineering and scientific methodologies.

#### 2005 to 2012

## Vice President, Institute of Tribology and Coatings (ITC), Sugar Grove, IL

ITC is a Not-For-Profit research and development organization that advances the utilization of tribological and advanced materials to reduce friction, wear, corrosion, and failures of military equipment operating in Iraq and Afghanistan. Mr. Meyers evaluated the mechanical failures of equipment and components from a broad cross-section of the military ranging: from small arms, to large bore cannons, to helicopters, to vehicles, to missile systems, to tracked vehicles, to evaluating the failure of the coatings on the bottom of the NSF's ski equipped LC-130 cargo aircraft. He developed modified ASTM methods for measuring abrasive and adhesive wear, developed sensors for measuring frictional energy in weapon systems, evaluated the performance of lubricants under extreme conditions, and developed blast resistant composite materials.

#### 2000-2005

## Director of Aerospace, Packer Engineering Inc, Naperville, IL

Packer Engineering is a nationally recognized multi-disciplinary engineering firm. Mr. Meyers consulted on many aspects pertaining to aircraft accident investigations, wreckage reconstruction, and the failure of aircraft components, ground vehicles, and support equipment. Mr. Meyers was also the Program Manager of a research program funded by U.S. Special Operations Command (SOCOM) to evaluate the structural failures of Navy SEAL watercraft and to develop replacement composite structures. He was also the Co-Program Manager for a research program, funded by the Office of Naval Research (ONR), to develop methods for the intelligent processing of advanced composite structures.

#### 1994-2001

# Non-Commissioned Intelligence Officer, USAF-ANG, 126<sup>th</sup> Air Refueling Wing, Chicago, IL

Mr. Meyers's responsibilities included planning, organizing, and managing unit intelligence mobility capabilities for possible deployment. Knowledgeable about the principles, practices and procedures of operational intelligence activities involving the application of intelligence information in direct support of combat flying operations. Knowledgeable of the techniques and procedures for collecting, researching, evaluating, analyzing, exploiting, and disseminating all source intelligence information. Knowledgeable of the intelligence reference libraries, capabilities of enemy offensive and defensive weapons systems, including the geographical, political, psychological, and military aspects of United States, allied, and foreign countries. Participated in the Bosnian and Kosovo Peace Keeping Efforts.

## 1998-2000

## Project Engineer, Flight Visions Inc, Sugar Grove, IL

Flight Visions designed and manufactured Heads-Up-Displays and weapon delivery systems for transport and fighter aircraft. Mr. Meyers contributed technical expertise to a wide variety of airframe applications, including: Boeing-Aerovodochy (L-139/159), Lockheed-Martin (F-35 JSF, C-130AMP), Northrop Grumman (F-14B), Israeli Aircraft Industries (KFIR), and Pilatus (PC-9).

#### 1998-2000

## Flight Instructor, Lumanair, Sugar Grove, IL

Lumanair is a 40+ year old fixed based operator with flight training and charter services. Mr. Meyers provided primary and advanced flight instruction, flight reviews, and aircraft checkouts.

## 1998

Intern and Project Engineer, Frasca Flight Simulators International, Champaign-Urbana, IL

Frasca manufactures flight training equipment for airlines, flight schools and military organizations worldwide. Mr. Meyers contributed technical expertise to both civilian and military applications.

#### 1993-1997

Apprentice Aircraft Mechanic / Lineman, A&M Aviation, Bolingbrook, IL

Performed routine maintenance on GA aircraft, and responsible for refueling and positioning of aircraft.

Leadership	Board, Officer, and Committee Experience
2013 to Present	Laboratory Technician Subject Matter Expert on the DACUM Advisory Board for
	Laboratory Curriculum Development at Waubonsee Community College
2011 to 2012	Aircraft Accident Investigator Subject Matter Expert on the FAA General
	Aviation Joint Steering Committee, Loss of Control Working Group
2011	Technical R&D Proposal Reviewer, U.S. Army, Joint Services Small Arms Program
	Office, Materials Processing Committee
2006 to 2012	Board of Director, Illinois Aviation Museum
2008 to 2009	Waubonsee Community College Manufacturing-Industrial Advisory Board
2003 to 2005	Board of Director and President, Packer Wings NFP
2004	In-situ Board Member, Aviation Professional Educational Center

## **Technical**

# **Selected Papers and Presentations**

## Papers:

- 1. Fildes, J.M., Kilparti, R., Meyers, S.J., Mulligan, C. (September 2012). "Evaluation of the Wear and Abrasion Resistance of Hard Coatings by BOTD Test Methods A Case Study." Elsevier Wear Journal, manuscript number: WEA100377.
- 2. Fildes, J.M., Kilparti, R., Meyers, S.J., & Schelp, E. (November 2011). "Improved Ball Crater Micro-Abrasion Test Based on a Ball on Three Disk Configuration". Elsevier Wear Journal, manuscript number: IH-6210. Wear 274–275 (2012) 414–422.
- 3. Fildes, J.M., Kilparti, R., Meyers, S.J., & Schelp, E. (2010). "Quantifying Abrasive and Adhesive Wear of Coatings with a Ball on Three Disk Configuration." Technical Report Supplied to U.S. Army Joint Munitions & Lethality LCMC ACQ Center, ARDEC, by the Institute of Tribology and Coatings.
- 4. Fildes, J.M., Kilparti, R., Meyers, S.J., & Schelp, E. (2010). "Micro-Abrasion Test Instrumentation Based on a Ball on Three Disk Configuration". Technical Report Supplied to U.S. Army Joint Munitions & Lethality LCMC ACQ Center, ARDEC, by the Institute of Tribology and Coatings.

- 5. Fildes, J.M., Kilparti, R., Meyers, S.J., & Schelp, E. (2010). "Bench-Scale Abrasive Wear, Adhesive Wear, and Coefficient of Friction Test Performance of Advanced Hard Coatings for Weapons Systems". Technical Report Supplied to U.S. Army Joint Munitions & Lethality LCMC ACQ Center, ARDEC, by the Institute of Tribology and Coatings.
- 6. Fildes, J.M. & Meyers, S.J. (February 2010)." *Collaborative Support for Weapons Tribology and Coatings*". Final Report Supplied to U.S. Army Joint Munitions & Lethality LCMC ACQ Center, ARDEC, by the Institute of Tribology and Coatings.
- 7. Meyers, S.J. (October 2009). "A Study of Flight Reviews Conducted in Technologically Advanced Aircraft". A Graduate Capstone Project Submitted to Embry Riddle Aeronautical University in Partial Fulfillment of the Requirement of the Degree of Master of Aeronautical Science.
- 8. Curry, D.G. Knutson D.F., & Meyers, S.J. (June 2009). *Are Technologically Advanced Aircraft Safer?* Binder, Aviation Insurance Association's Semi-annual Publication, June, 2009, Volume 33, Number1.
- 9. Curry, D.G. Knutson D.F., & Meyers, S.J. (April 2009). "Is Safer Really Safer: Pilot Error and Technologically Advanced Aircraft". Mentor, National Association of Flight Instructors, April, 2009, Volume 11, Number 4
- 10. Meyers, S.J. (2008). "High Technology Education to Work Opportunity Grant". Final Report Supplied to Illinois Department of Community and Economic Opportunity by Institute of Tribology and Coatings.
- 11. Fildes, J.M. & Meyers, S.J. (2008). "Collaborative Support for Weapons Tribology and Coatings." Final Report Supplied to U.S. Army Joint Munitions & Lethality LCMC ACQ Center, ARDEC, by the Institute of Tribology and Coatings.
- 12. Knutson, D.F., Meyers, S.J., & Yock, D. (2007). "Safety Comparison Between an Internal and External Flight Departments." Final Report Supplied to a Fortune 100 Corporation, by DVI Aviation Inc.
- 13. Meyers, S.J. (2007). "High Technology Education to Work Opportunity Grant". Final Report Supplied to Illinois Department of Community and Economic Opportunity, by Institute of Tribology and Coatings.
- 14. Meyers, S.J. (2006). "Investigation of Nano-particles within Cutting Fluids". Final Report Supplied to U.S. Army National Automotive Center, TARDEC, by the Institute of Tribology and Coatings.
- 15. Meyers, S.J. (2006). "Mid-East Military Wear Survey". Final Report Supplied to U.S. Army National Automotive Center, TARDEC, by the Institute of Tribology and Coatings.
- 16. Meyers, S.J. (2006). "Investigation and Development of Metrology Equipment for Measuring Wear in the Contact Zone". Final Report Supplied to U.S. Army National Automotive Center, TARDEC, by the Institute of Tribology and Coatings.
- 17. Meyers, S.J. (2001). "Feasibility Study of Stuff-Proof Composite Materials for the MKV Ship". Final Report Supplied to United States Special Operations Command.

- 18. Meyers, S.J. (1999). "Acceptance Test Procedures USN F-14B HUD". Technical Manual Supplied to Northrop-Grumman by Flight Visions Inc.
- 19. Meyers, S.J. (1999). "Functional Qualification Tests Pilatus PC-9 HUD". Technical Manual Supplied to Pilatus Aircraft Inc. by Flight Visions Inc.
- 20. Meyers, S.J. (1999). "HUD Assembly Line Procedures Boeing L-159". Technical Manual Supplied to Boeing and Aero Vodochy by Flight Visions Inc.
- 21. Meyers, S.J. (1999). "HUD Maintenance Procedures Boeing L-159". Technical Manual Supplied to Boeing and Aero Vodochy by Flight Visions Inc.
- 22. Meyers, S.J. (1997). "Electronic Control Loading of Flight Controls on the PC-9 Simulator". Technical Manual Supplied to Pilatus Aircraft by Frasca Flight Simulators International.

## **Presentations and Workshops:**

- 1. Meyers, S.J. (July 2012). "An Introduction to Pilot Command Training for General Aviation Pilots." Chicagoland Aviation, Lewis Lockport Airport, Romeoville, IL.
- 2. Meyers, S.J. (June 23, 2010). "A Case Study of Identifying Coatings to Improve the Performance of Weapons in Abrasive Environments." Presented at the National Small Arms Center Consortium Meeting, Battelle Institute, Columbus, OH.
- 3. Meyers, S.J. (April 22, 2010). "Human Factors: The Insidious Threat". Presented at the FAA Wings Safety Program at the Illinois Aviation Museum, Bolingbrook, IL.
- 4. Fildes, J.M. & Meyers, S.J. (December 2009). "Failure Analysis and Solutions for Abrasion Related Jamming of Weapons". Presented to the Annual Meeting of the National Small Arms Center, Maryland.
- 5. Meyers, S.J. (July 28, 2009). "Human Factors in Private Flying". Presented at the Civil Air Patrol Quarterly Safety Briefing, Clow International Airport, Bolingbrook, IL.
- 6. Meyers, S.J. (February 13, 2009). "Evaluating Airmen on Form 5 Check Rides". Presented at the National Check Pilot School, Civil Air Patrol, and West Chicago, IL.
- 7. Fildes, J.M. & Meyers, S.J. (December 3, 2008). "The Effectiveness of Bench-Scale Testing of Small Arms". Presented at the Annual Meeting of National Small Arms Center, Columbia, South Carolina.
- 8. Meyers, S.J. (February 28, 2008). "How to be a Pilot". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL.
- 9. Meyers, S.J. (February 8, 2007). "Returning to Aviation- How to Pass a Flight Review". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL

- 10. Meyers, S.J. (January 18, 2007). "Investigating Aircraft Accidents". Presented at Sun City Flyers, Huntley, IL.
- 11. Meyers, S.J. (October 27, 2006). "Role of Science in Education". Presented at Bolingbrook Educational Consortium, Bolingbrook, IL.
- 12. Meyers, S.J. (May 4, 2006). "How to Get Back Into Flying". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL.
- 13. Meyers, S.J. (November 17, 2005). "Air Safety Investigation". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL.
- 14. Meyers, S.J. (October 13, 2005). "Winter Flying Hazards". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL.
- 15. Meyers, S.J. (July 15, 2005). "Maintenance and Repair of Aging Aircraft". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL.
- 16. Meyers, S.J. (March 17, 2005). "Aerodynamics of General Aviation Aircraft". Presented at the FAA Wings Safety program at the Illinois Aviation Museum, Bolingbrook, IL.
- 17. Fildes, J.M. & Meyers, S.J. (March 12, 2005). "Composites as Engineered Materials", Presented at Lewis University- FAA IA Renewal Workshop, Romeoville, IL.
- 18. Meyers, S.J. (February 23, 2005). "Composites in Aviation". Presented at Milwaukee Society of Automotive Engineers (SAE) Meeting, Milwaukee, WI.
- 19. Meyers, S.J. (November 27, 2004). "Air Safety- Learning from Accidents", Presented at FAA Wings Safety Program, Bolingbrook, IL.
- 20. Fildes, J.M. & Meyers, S.J. (November 19, 2004). "Composite Airframe Structures". Presented at Chicago Area Business Aviation Association Quarterly Meeting, Oakbrook, IL.
- 21. Meyers, S.J. & Nowicki, J.W. (October 2, 2004). "Maintenance of Ultra light and Sportcraft Aircraft".

  Presented at Fox Valley Ultra Light Club FAA Wings Safety Program, Bolingbrook, IL.
- 22. Dorr, J., Fildes, J.M., & Meyers, S.J. (September 30, 2004). "Design, Fabrication, and Inspection of Composites", Presented at Organization of Flying Adjusters Annual Meeting, Key largo, FL.
- 23. Meyers, S.J. & Nowicki, J.W. (February 18, 2004). "Building/ Flying a 1903 Wright Flyer". Presented at American Society of Mechanical Engineers (ASME) Quarterly Meeting, Chicago, IL.
- 24. Meyers, S.J. & Nowicki, J.W. (December 9, 2003). "Operating Antique Aircraft Engines". Presented at Society of Automotive Engineers (SAE) Quarterly Meeting, Milwaukee, WI.
- 25. Meyers, S.J. & Nowicki, J.W. (February 3, 2003). "The Science of the 1903 Wright Flyer Engine". Presented at Technical Managers Association of Chicago (TMAC) Monthly Meeting, Lisle, IL.

- 26. Meyers. S.J. (February 15, 2002). "Investigating GA Accidents". Presented at Experimental Aircraft Association (EAA) Chapter 464 Monthly Meeting, Bolingbrook, IL.
- 27. Meyers, S.J. (August 15, 2002). "Anatomy of Aircraft Accident Investigations". Presented at EAA Chapter 101 Monthly Meeting, Schaumburg, IL.

## Affiliations

## **Professional Memberships / Honors**

- American Institute of Aeronautics and Astronautics
- ASM International
- ASTM International

Voting Member on ASTM F44 Technical Committee for General Aviation Aircraft
Voting Member ASTM Loss of Control (aircraft) Task Group-WK 41075
Voting Member on ASTM D02 Technical Committee for Petroleum Products and Lubricants
Voting Member on ASTM G02 Technical Committee for Wear and Erosion

- Society of Tribology and Lubricant Engineers (STLE)
- FAA Aviation Safety Counselor, 2002-2006
- National Association of Fire Investigators, Member Certificate # 17309
- Aircraft and Owners and Pilot Association
- Experimental Aircraft Association EAA Designated Technical Counselor
- National Association of Flight Instructors
- Sigma Pi Sigma- National Physics Honor Society

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