

ALAN J. STOLZER, Ph.D., FRAeS

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EDUCATION

Ph.D. in Technology Management – Quality Systems, Indiana State University (2002).

Title of Dissertation: *Fuel Consumption Modeling of a Transport Category Aircraft: A Flight Operations Quality Assurance (FOQA) Analysis*. Advisor: Dr. Ronald Woolsey.

M.S. in Aeronautical Science, Embry-Riddle Aeronautical University, Daytona Beach, Florida (1995).

B.S. in Aviation Technology, College of the Ozarks, Point Lookout, Missouri (1982).

PROFESSIONAL CERTIFICATIONS

Aviation Certifications (Federal Aviation Administration):

Airline Transport Pilot Certificate - 3335601

Certified Flight Instructor, Instrument and Multi-engine Ratings

Ground Instructor Certificate, Advanced and Instrument Ratings

Mechanic Certificate with Airframe and Powerplant Ratings

Designated Pilot Examiner (1989 to 1998)

Quality Certifications (American Society for Quality):

Certified Quality Engineer - 47511

Certified Quality Manager - 6754

Certified Quality Auditor - 33777

Project Management Certification (Project Management Institute)

Project Management Professional - 445933

ACADEMIC POSITIONS

Associate Dean of Research and Graduate Studies, College of Aviation, Daytona Beach Campus, Embry-Riddle Aeronautical University. August 2013 to present.

Responsibilities include developing and implementing strategies to increase the college's research stature and funding, facilitate new research initiatives, providing supervision and administration of the graduate programs in the college, maintain appropriate liaisons with research and graduate functions throughout the university. Provide management oversight of the master of science in aeronautics program, including curriculum, budget, personnel, policies, students, advising, assessment, and other administrative tasks.

Professor and Chair, Department of Doctoral Studies, College of Aviation, Daytona Beach Campus, Embry-Riddle Aeronautical University. February 2010 to present.

Responsibilities include management of curriculum, budget, personnel, policies, students, advising, assessment, residencies, and other administrative tasks. Inaugural chair of this new department. Led or otherwise have been involved with all developmental activities associated with a new doctoral program and start-up academic department. Teaching activities in Safety Management Systems (SMS) and doctoral residencies. Research activities, funded and non-funded, in areas of SMS, quality and aviation, and Flight Operations Quality Assurance.

Residency Coordinator for the Ph.D. in Aviation Program; Professor of Applied Aviation Sciences, College of Aviation, Daytona Beach Campus, Embry-Riddle Aeronautical University. July 2008 to February 2010. Administrative work involves program coordination including developing and delivering multiple residency seminars for doctoral students. Teaching activities in Safety Management Systems (SMS). Research activities, funded and non-funded, in areas of SMS, quality and aviation, and Flight Operations Quality Assurance.

Professor of Engineering Technology; Director of Quality Engineering Systems in Transportation (QUEST) Research Center. Parks College of Engineering, Aviation and Technology, Saint Louis University. August 2006 to June 2008. Appointment included Graduate School faculty. Research work included funded projects – see ‘Grants and Contracts’. Teaching included aviation safety and quality, project management, quality engineering, safety and health for engineers, and others.

Associate Dean and Professor of Engineering Technology, Parks College of Engineering, Aviation and Technology, Saint Louis University. Fall 1996 to August 2006 (note: faculty appointment changed from Aviation Science to Engineering Technology in 2005). Appointment includes Graduate School faculty. Reporting to the Dean of the college, responsibilities included: assist in managing day-to-day operation of the college, including the college’s \$10M budget; oversee departmental activities; assist in academic, curricula and budget planning; supervise support functions of the college; classroom teaching (courses taught include Aviation Orientation, Aviation Safety Quality Issues (graduate), Human Factors and Safety for Engineers, Quality Engineering).

Professor and Chair, Department of Aviation Science, Parks College of Saint Louis University. Spring 1987 to fall 1996. Responsibilities included: develop and maintain curricula; call and preside at departmental meetings; plan courses within departmental cycle; specify prerequisites, examination and qualification standards; develop and manage learning assessment system; manage budgets totaling over \$1.5 million; prepare catalog and bulletin material; upgrade equipment and training aids; supervise academic and flight instruction; and supervise more than 40 department personnel.

Chief of Flight Training, Department of Aviation Science, Parks College of Saint Louis University. Spring 1987 to fall 1996. Responsibilities included: supervise all flight training activities and serve as FAR Part 141 Chief Instructor for all courses; supervise flight instructors and support staff; develop and maintain flight training curricula; maintain training standards of flight program; develop policies regarding the flight

instruction program; oversee aircraft maintenance program on University fleet; and oversee aircraft dispatch program.

Associate Professor and Assistant Chief Flight Instructor, Parks College of Saint Louis University. Spring 1986 to spring 1987.

AVIATION POSITIONS

Director of Flight Operations, Parks College -- Spirit Facility. Fall 1985 to spring 1986. Responsibilities included: managing FAR Part 135 charter program, flight instruction, and aircraft rental program.

Chief Pilot, Northwest Air Charter. Spring 1984 to spring 1985. Responsibilities included: serving as pilot for air ambulance, charter and corporate flights; performing duties of chief pilot for FAR Part 135 operation.

Pilot, Springdale Air Service. Spring 1982 to spring 1984. Responsibilities included: serving as pilot for FAR Part 135 operation.

Flight Instructor, Aircraft Maintenance Technician, College of the Ozarks. Summer 1980 to spring 1982.

REFEREED PUBLICATIONS, BOOKS, BOOK CHAPTERS, PRESENTATIONS

Refereed Publications:

Boyd, D., **Stolzer, A.** (2015). Accident-precipitating factors for fatal accidents in turbine-powered general aviation aircraft. *Journal of Aviation Technology and Engineering* (under review).

Brady, T., **Stolzer, A.** (2015). Creating and developing the nascent academic discipline of aviation. *Journal of Aviation, Aerospace, Education and Research* (under review).

Brady, T., **Stolzer, A.**, Brickhouse A., Cortés, A., Freiwald, D., McCune, D., Raghavan, J. (2015). Marbles – The application of Input-Output concepts to Safety Management Systems. *Journal of Aviation Technology and Engineering* (accepted for publication).

Boyd, D., **Stolzer, A.** (2015). Causes and trends in maintenance-related accidents in FAA-certified single engine piston aircraft. *Journal of Aviation Technology and Engineering*, 5(1), 17-24.

Stolzer, A. (2011). The rationale for Embry-Riddle Aeronautical University's Ph.D.in Aviation: A brief explication (Forum). *Journal of Aviation/Aerospace Education & Research*, 20(2).

Stolzer, A., Halford, C. (2007). Data mining methods applied to Flight Operations Quality Assurance (FOQA) data: A comparison to standard statistical methods. *Journal of Air Transportation* 12(1). Note: Received the Sorenson Best Paper Award.

Mitchell, K., Sholy, B., **Stolzer, A.** (2007). Flight Operations Quality Assurance for general aviation aircraft: A hardware design concept. *IEEE Aerospace & Electronics Systems Magazine* 22(6).

Stolzer, A., Wu, H., Halford, C. (2006). Six Sigma applied to Flight Operations Quality Assurance: An exemplar case study. *International Journal of Applied Aviation Studies (IJAAS)*, 6(1), 11-24.

Stolzer, A., Halford, C. (2004). Wanted: Quality in Airline Safety. *Journal on Aviation/Aerospace Education and Research (JAAER)*, 13(3), 27-32.

Stolzer A., Karunamoorthy, S., Kirkpatrick, C. (2003). Hierarchical system of outcomes assessment at Parks College of Engineering and Aviation. *Proceedings of the 2003 American Society for Engineering Educational Annual Conference & Exposition*, Paper 107, Session 1360. Nashville, TN.

Stolzer, A. (2003). Fuel consumption modeling of a transport category aircraft: A flight operations quality assurance (FOQA) analysis. *Journal of Air Transportation* 8(2). Note: Received the Sorenson Best Paper Award.

Stolzer, A. (2002). Fuel consumption modeling of a transport category aircraft using flight operations quality assurance (FOQA) data: A literature review. *Journal of Air Transportation*, 7(1), 93-102.

Arbuckle, G., Gee, G., Goss, P., Floyd, D., Petretich, C., Samuel, E., Sinn, J., **Stolzer, A.** (2002). Quality systems specialization (QSS): Early experiences in the online technology management Ph.D. *Quality Progress*.

Brady, T., **Stolzer, A.,** Muller, B., Schaum, D. (2001). A comparison of the learning styles of aviation and non-aviation college students. *Journal on Aviation/Aerospace Education and Research (JAAER)*, 11(1), 33-41.

Stolzer, A. (2000). Collegiate aviation maintenance programs: Focus on quality or safety? *Journal on Aviation/Aerospace Education and Research (JAAER)*, 9(2), 37-43.

Stolzer, A. (1998). The General Aviation Revitalization Act of 1994: An overview of tort reform. *Journal on Aviation/Aerospace Education and Research (JAAER)*, 8(2), 45-57.

Stolzer, A. (1995). Study of demand for light, primary training aircraft in collegiate aviation programs. *Journal on Aviation/Aerospace Education and Research (JAAER)*, 6(1), 19-23.

Books and Book Chapters:

Friend, M., **Stolzer, A.** (2016, anticipated). *Management of Safety Systems*.

Stolzer, A., Goglia, J. (2015). *Safety Management Systems in Aviation* (2nd ed.). Aldershot: Ashgate Publications. ISBN: 978-1-4724-3175-2.

Stolzer, A., Halford, C., Goglia, J. (2011). *Implementing Safety Management Systems in Aviation*. Aldershot: Ashgate Publications. ISBN: 978-1-4094-0165-0. Available electronically. Translated into Chinese.

Stolzer, A. (2009). Data Mining for Aviation Safety. In Nisbet, R., Elder, J. & Miner, G., *Handbook of Statistical Analysis & Data Mining Applications*. Burlington, MA: Elsevier. ISBN: 978-0-12-374765-5.

Stolzer, A., Halford, C., Goglia, J. (2008). *Safety Management Systems in Aviation*, Aldershot: Ashgate Publications. ISBN: 978-1-4094-0165-0. Available in electronic format. Translated into Portuguese and Chinese.

Presentations:

Brady, T., **Stolzer, A.** (2015, March). *Creating and Developing the Nascent Academic Discipline of Aviation*. Presentation delivered at the International Conference on Doctoral Education, Orlando, FL.

Stolzer, A. (2014, July). *Embry-Riddle Aeronautical University's Ph.D. in Aviation Program: Bucking the Trend*. Poster presented at the International Conference on Information Communication Technologies in Education, Kos, Greece.

Stolzer, A. (2009, March). *Safety Management Systems: Update and Progress*. Presentation delivered at the National Training Aircraft Symposium, Daytona Beach, FL

Technical Reports:

Stolzer, A. (lead author). (2013). *Aviation Safety Information Analysis and Sharing – General Aviation (ASIAS-GA): GA – Systems Safety Management Research, 2013*. Washington, DC: Federal Aviation Administration.

Stolzer, A. (lead author). (2013). *Enhanced General Aviation Pilot Study*. Washington, DC: Federal Aviation Administration.

Stolzer, A. (lead author). (2012). *Aviation Safety Information Analysis and Sharing – General Aviation (ASIAS-GA): GA – Systems Safety Management Research*. Washington, DC: Federal Aviation Administration.

Stolzer, A. (lead author). (2010). *Aviation Safety Information Analysis and Sharing – General Aviation (ASIAS-GA): GA – Systems Safety Management Research* (Technical Report [Number Pending]). Washington, DC: Federal Aviation Administration.

GRANTS, CONTRACTS, FUNDING

Measuring the Effectiveness of Safety Management Systems, Principal Investigator, 2014. Federal Aviation Administration, 2014. \$150K. Grant awarded and active.

General Aviation Joint Steering Committee/Safety Analysis Team Loss of Control Working Group, Principal Investigator, 2011. *Center for General Aviation Research (C-GAR)*, Federal Aviation Administration. Proposal was funded for \$135K. Extended 2012. Project complete.

Design and Manufacturer Safety Management Systems (D&M SMS), Principal Investigator, 2010. *Center for General Aviation Research (C-GAR)*, Federal Aviation Administration. Extended 2010. Total funding \$120K. Project complete.

General Aviation System Safety Management Research: Aviation Safety Information Analysis and Sharing for General Aviation (in SMS), Lead Principal Investigator, 2009. *Center for General Aviation Research (C-GAR)*, Federal Aviation Administration. Extended 2010, 2012. Multi-university project. ERAU total funding \$257K. Project complete.

A Database Management System for General Aviation Safety, Co-Investigator, 2010. *Center for General Aviation Research (C-GAR)*, Federal Aviation Administration. Project complete.

Authored Congressional earmark request for establishment of a *Center for Safety Management Systems* at Saint Louis University. Proposal was funded for \$2.2M, 2008.

Aircraft Structures for Inspectors – training contract, Federal Aviation Administration, Principal Investigator, 1998. Proposal was approved and contract awarded. Training courses delivered from 1998 through 2004. Resumed in 2007. Project complete.

Autonomous Wireless Health Monitoring of Critical Structures, *Missouri Transportation Institute*, Co-Investigator, 2007, \$85K. Project complete.

Emergency Preparedness Exercise: Disease Outbreak within a Commercial Aircraft Setting, Principal Investigator for Aircraft Cabin Environmental Research (ACER) component of drill, Federal Aviation Administration, 2006, \$50K. Project complete.

Emergency Preparedness Exercise: Disease Outbreak within a Commercial Aircraft Setting, Principal Investigator for development of After Action Report in accordance with HSEEP protocols, Boston Massport, 2006, \$32K. Project complete.

Advanced Aircraft Systems – training contract, Federal Aviation Administration, Principal Investigator, 1997. Proposal was approved and contract awarded. Project complete.

Project Fast Flight, Federal Aviation Administration, Principal Investigator, 1991, \$873K. Project complete.

Project High Flight, Federal Aviation Administration, Co-Investigator and Grant Manager, 1989, \$521K. Project complete.

DISSERTATION / THESIS ADVISING

Serve(d) on the following doctoral dissertation committees (date reflects year completed):

- Arun Saini, Committee Chair. Title TBD, ERAU, in progress.
- Kevin O’Leary, Committee Chair. Title TBD, ERAU, in progress.
- Daniel Ronneberg, Committee Chair. Title TBD, ERAU, in progress.
- Harold Townsend, Committee Chair. *Effect of Air Carrier Restructuring Strategies on Post-bankruptcy Performance*, ERAU, 2014.
- James Cistone, Committee Member. *Analysis of Airport Surface Deviations using the Human Factors Analysis and Classification System (HFACS)*, ERAU, 2014.
- Robert Joslin, Committee Chair. *Validation of New Technology Using Legacy Metrics: Examination of SURF-IA Alerting for Runway Incursion Incidents*, ERAU, 2013.
- Benjamin Goodheart, Committee Member. *Identification of Causal Paths and Prediction of Runway Incursion Risk Using Bayesian Belief Networks*, ERAU, 2013.
- Melaku Tadesse, Committee Member. *Evaluation of the Level of Influence of Organizational Factors on the Effective Implementation of Safety Management System in the United Arab Emirates*, Argosy University, 2012.

Served on the following master’s thesis committees:

- Claas-Tido Boesser, *The Effects of Angle of Attack Indication on Maintaining System Resilience in the Event of an Aircraft Malfunction*, ERAU, 2013.
- Brittnee Branham, *Validation of the GAJSC Loss of Control During Approach and Landing Study*, ERAU, 2013.
- David Zwegers, Advisor and Chair. *Analysis of Commercial Aviation Safety Teams Characteristics and Governance Models*, ERAU, 2011.
- Evan Gedenger, ERAU, 2009.
- Keisha Pollard, SLU, 2007.
- Brian Macklin, SLU, 2007.
- Sara Niemantsverdriet, SLU, 2007.
- John Lohmar, Advisor and Chair. *Safety Management Systems in the Warbird Community*. SLU, 2007.
- Michael Gomez, *Barriers to implementing Aviation Safety Action Programs in maintenance organizations*. SLU, 2005.

- Adam Schulman, *Financial Stability and Airline Safety: Relationships, Causes and Consequences*. SLU, 2005.
- Guillermo Palleija, *A study of fatigue factors in regional turboprop operations*. SLU, 2004.
- Art DeGuire, *A study of the level of preparedness among aviation students*. SLU, 2004.
- Mulugeta Tekle, *A study of wake turbulence using Flight Operations Quality Assurance (FOQA) data*. SLU, 2003.
- Enrique Saiz, *Fundamentals of FOQA and a sample application*. SLU, 2003.

ACCREDITATION ACTIVITIES

Aviation Accreditation Board International (AABI) (formerly Council on Aviation Accreditation):

Chair of the Accreditation Committee of AABI from 2002 - 2012.

Secretary of the Board of Trustees of AABI from 2005 - 2007.

Elected to 3-year term on the AABI Board of Trustees in 1998. Reelected in 2001, 2004, 2007, 2010 and 2013.

Served on visiting team for AABI site visits to the following colleges and universities:

- Western Michigan University, 2012. *Observer*.
- Seneca College, Toronto, Canada, 2011. *Observer*.
- Kansas State University, 2010. *Observer*.
- University of Oklahoma, 2010. *Observer*.
- Korea Aerospace University, Seoul, Korea, 2007. *Observer*.
- Purdue University, 2007. *Observer*.
- Hankuk University, Seoul, Korea, 2006. *Team Chair*.
- University of North Dakota, 2002. *Team Chair*.
- North Shore Community College, 2001. *Team Chair*.
- Metropolitan State College, 2000. *Team Chair*.
- St. Cloud State University, 1999. *Team Chair*.
- Embry-Riddle Aeronautical University, 1998. *Team Chair*.
- Mercer County Community College, 1998. *Team Chair*.
- University of North Dakota, 1997. *Team Member*.
- Hampton University, 1996. *Team Member*.

Served as Chair of the AABI committee to prepare the Five-Year Interim Report for the Council for Higher Education Accreditation (CHEA), 2006-2007, 2010-2012.

Served on several ad hoc committees, including: Graduate Education (2009); Multi-Campus/Distance-Hybrid (2009); Outcomes Implementation (2006-2007).

Other:

Served as Assistant Chair of the Visiting Team to the National Test Pilot School in Mojave, California, for the Western Association of Schools and Colleges, 2003-2004.

Served as an invited program reviewer on a visit to Arizona State University in 1996.

AWARDS / RECOGNITIONS

Finalist for ERAU Abas Sivjee Outstanding Research Award, 2015.

Elected *Fellow of the Royal Aeronautical Society*, 2014.

Received the Meritorious Award from College of the Ozarks for *Distinguished Achievement*, 2014.

Received a Certificate of Appreciation and Special Recognition for serving as *Chair of the AABI Accreditation Committee for 10 Years*, 2012.

Received the Blackboard Catalyst Exemplary Course Award for *DAV 712 Aviation Safety Management Systems*, 2012.

Received the Federal Aviation Administration Air Transportation Centers of Excellence *Outstanding Faculty of the Year Award*, 2010.

Received from the Aviation Accreditation Board International the first *Paul A. Whelan Award for Significant Contributions*, 2008.

SELECTED OTHER PROFESSIONAL ACTIVITIES

Federal Aviation Administration-sponsored *General Aviation Issues Analysis Team*, Member, 2014 – present.

NextGen Institute Industry Management Council, Washington, DC, Member, 2014 – present.

Editor / review, as indicated, for the following publications:

- International Journal of Aviation, Aeronautics, and Aerospace, 2014 – present, Invited Reviewer
- International Journal of Doctoral Studies, 2014 – present, Invited Reviewer
- Journal of Transportation Technologies, 2012 – present, Invited Reviewer
- Journal of Aviation Technology & Engineering, 2011 – present, Associate Editor for Safety
- Journal of Air Transportation, 2003 – 2007, Editorial Board / Panel of Reviewers
- International Journal for Applied Aviation Studies, 2003 – 2011, Consulting Editor
- Journal of Aviation/Aerospace Education and Research, 2003 – present, Editorial Board
- Collegiate Aviation Review, 1999 – present, Invited Reviewer

Federal Aviation Administration-sponsored *Safety Analysis Team* of the General Aviation Joint Steering Committee, Member, 2011 – present.

Active participant in first three *Working Groups* of the Safety Analysis Team – Loss of Control during Approach and Landing (2012), Loss of Control all other phases (2013), and System and Component Failure – Powerplant (2014) – using Commercial Aviation Safety Team methodology to study selected accident reports to generate Safety Enhancements.

Aeronautica Consulting, LLC, Vice President, 2013 – present.

Completed Data Mining course delivered by Statsoft, Inc., 2011.

Completed the MITRE Aviation Safety Management Systems Class delivered by ATC Vantage in January 2009.

Joint Planning and Development Office's Next Generation Air Transportation System Institute, Safety Working Group, Washington, D.C., Member, 2009 – 2010.

SMS Associates, LLC, President and Co-Founder, 2007 – 2012.

Completed Safety Management System (& Company Aviation Safety Officer) course delivered by Beyond Risk Management and Execu-Teck Consultants in Calgary, Alberta, Canada, 2007.

Board of Directors for the Missouri Transportation Institute, Member, 2006 – 2007.

Completed Design of Experiments course delivered by the American Society for Quality, 2005.

Professional Advisor for a student – Carl Halford – in his pursuit of B.A. and M.A. degrees at DePaul University, 2004 – 2006.

Evaluation Team for Boston-Logan Airport Emergency Response Full-Scale Exercise, Member, 2005.

Education and Training Board for the American Society for Quality, Member, 2005 – 2007.

Invited exam evaluator for the American Society for Quality, 2004 – 2006.

Expert consultant and witness on lawsuit involving aircraft accident, 2004 – 2005.

Elected to 3-year term on University Aviation Association Board of Trustees, 1997.

Moderated a panel on Flight Education Issues at the 1994 UAA Fall Conference.

Member of University Aviation Association since 1988. Chaired Flight Education committee from 1992 – 1994.

Served as a Designated Pilot Examiner for private, commercial, instrument, and multi-engine certificates and ratings from 1989 to 1998 – over 175 practical tests conducted.

Served as a subject matter expert (multi-engine instructor) for Booz, Allen & Hamilton on a Job Task Analysis in support of an FAA Regulatory Review project in 1988.

AERONAUTICAL EXPERIENCE

Pilot (active) - flown more than 40 makes and models of fixed-wing aircraft. Flight time summary: 8,000 hours total time; 6,500 hours pilot-in-command; 4,000 hours multi-engine; 2,300 hours instruction given; 1,000 hours night; 700 hours instrument; 500 hours turbine.

PROFESSIONAL ORGANIZATIONS

American Society for Quality (active in Central FL Chapter)

Project Management Institute (active in Central FL Chapter)

Aviation Accreditation Board International (formerly Council on Aviation Accreditation)

Experimental Aviation Association

University Aviation Association