

Shawn A. Pruchnicki, MSc, RPh, CSPI

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Statement of Research Focus:

My research interest lies in the area of resilience engineering and how it can be operationalized in safety sensitive domains when confronted with an accident investigation. That is, how resilience engineering could be utilized to help understand causation and develop a more proactive approach to preventing accidents. Additionally, by applying the perspective of complexity theory when combined with resilience engineering methods, we may gain a better understanding of failure in complex socio-technical systems.

Professional Education:

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|----------------------------|---|
| April 2011 -Current | PhD program. Industrial Systems Engineering. Cognitive Engineering - Human Factors. Academic Advisor Dr. David Woods. The Ohio State University. Columbus, Ohio |
| August 2009 to August 2010 | PhD program. Systems Safety. Academic Advisor Dr. Sidney Dekker. Lund University. Lund, Sweden. |
| May 2006 | Masters of Aeronautical Science Program; Human Factors. Embry-Riddle Aeronautical University. Daytona Beach, Florida. |
| June 1990 | Paramedic Training. Nationally Registered. Grant Medical Center Life Flight Paramedic Program. Columbus, Ohio. |
| January 1990 | Professional Firefighting Training. Ohio Fire Academy. Reynoldsburg, Ohio. |
| July 1989 | Bachelor of Science in Pharmacy, Ohio State University. Columbus, Ohio. |

Professional Experience:

- August 2017-Present Adjunct Professor: Durban University of Technology, Durban South Africa. Center for Space Science Centre (SSC).
- August 2016-Present Aerospace consultant for MITRE in McLean, Virginia.
- August 2013-Present Academic Research Coordinator & Chief Flight Test Pilot: The Ohio State University, Columbus, Ohio. Center for Aviation Studies. Responsible for participating in and monitoring various research programs. Including flight test work as required.
- August 2013-Present Associate Site Director of FAA Center of Excellence (PEGASAS) at Ohio State University. Ohio State is a core school in this research consortium. Washington, DC.
- July 2012-Present Faculty (Full-time Lecturer): The Ohio State University, Columbus Ohio. Center for Aviation Studies and Integrated Systems Engineering (ISE).
Integrated Systems Engineering
Introduction to Cognitive Engineering 3700
Automation and Control 5740
Center for Aviation Studies
Aviation safety/human factors 3300
Advanced aircraft systems, multiengine and turbine aircraft 4300
Aviation weather & aircraft performance 2300
Accident investigation 3194
Independent Study (18 student/semesters) – Topics include: ATC, accident investigation, advanced accident causation, CRM, Angle-of-attack equipment in GA A/C, safety culture.
- Dec 2009- May 2015 Senior Research Engineer - Fulltime employee (6/10 to 6/12) & Independent contractor. San Jose State University in collaboration with the National Aeronautics and Space Administration (NASA) AMES Research Center Moffett Field, CA.
- Current research into the human factors issues regarding NextGen development. Including the following.
 - Aircraft alerting in non-normal events on the flight deck across numerous commercial aircraft
 - Single pilot workload study
 - Navigational Reference System (NRS) waypoint analysis
 - FAA research contract numbers:
 - 09-AJP61FGI-0101 & 09-AJP61FGI-0102

- Jun 2009-Present Owner and Chief Researcher; Human Factors Investigation and Education.
www.HFIE.org Columbus, Ohio
- Human Factors expertise specializing in accident investigation and safety/just culture implementation. Has worked with several airlines and medical organizations to help them achieve their safety goals.
- Jan 2009-June 2012 Adjunct Faculty: The Ohio State University, Columbus Ohio
- College of Engineering, Department of Aviation.
 Courses taught in undergraduate program – over 600 hours of undergraduate instruction given:
 - Aviation Safety (560)
 - Human Factors (540)
 - Accident Investigation (493)
 - Aviation History (322)
 - Advanced Human Factors & Accident Causation (493)
 - College of Pharmacy.
 Courses created and taught in Doctor of Pharmacy Program: Group Studies-Clinical Toxicology (694)
- Mar 1999-Apr 2009 Pilot, Captain CL-65. Comair. d.b.a. Delta Connection. Erlanger, KY
- Scheduled Part 121 airline
 - Cat II Qualified.
 - Line Check-Airmen invitation
 - Operations throughout United States, Mexico, Bahamas and Canada.
- Aug 1989-Present Poison Information Specialist. Pharmacist. The Central Ohio Poison Center. Columbus, Ohio.
- Responsible for telephone consultation for general public and health care professionals.
 - Clinical instructor for Doctor of Pharmacy students, Emergency Medicine physicians and Paramedics.
 - Over 70,000 calls managed to date.
- Jun 1988-Sept 1997 Firefighter/Paramedic. Jackson Township Fire Department. Grove City, Ohio.
- Large three station suburban fire department.
 - Functioned on medic unit, engine company, ladder company and heavy rescue vehicles as assigned.
 - Functioned as medic in charge of EMS runs as assigned.

Additional Teaching Positions:

- Aug 2014-Dec. 2014 Graduate Teaching Assistant. Bachelor Program in Industrial Systems Engineering. ISE 5740 Automation and Human Design. The Ohio State University, Columbus, Ohio.
- Supervisor Dr. David Woods.
 - Responsible for coordination with other GRAs on course material, grading and student evaluation.
 - Covering classes when Dr. Woods was unavailable.
- Sept 2009-Mar 2012 Graduate Teaching Assistant. Master of Science Program in Human Factors and System Safety. The Leonardo da Vinci Laboratory for Complexity and Systems thinking. Lund University, Lund Sweden.
- Supervisor Dr. Sidney Dekker.
 - Academic supervisor for all year one tutors.
 - Responsible for assisting Dr. Dekker with all Masters Students (including reviewing and grading assignments, thesis review).
- May 2004-Oct 2008 Instructor: ALPA accident investigation course.
- Course is required for all new ALPA accident investigators.
 - Modules taught were human factors and survival factors.
- Nov 1997-Feb 1999 Instructor: Hazardous Materials. First Responder Awareness & Operations level. HAZ/MAT DQE. Carmel, Indiana.
- Provided hazardous material victim training and management to emergency room staff throughout United States
- Nov 1997-Feb 1999 Instructor: Weapons of mass destruction. Disaster Planning International (DPI). TriMed Inc. Washington D.C.
- Provided weapons of mass destruction training for EMS personnel throughout United States.
 - My primary teaching focus and assignments were related to management of chemical weapons of mass destruction.
 - This was a military trained program as part of a Congressional Act to prepare the first responders for managing a large scale weapons of mass destruction event.
- Oct 1996-Feb 1999 Flight Instructor, Airnet Systems. KCMH Columbus, Ohio.
- FAR Part 141 Multi-engine Commercial program.
 - Conducted both flight and ground instruction.
 - Primary aircraft was BE-58. Known icing, Argus 5000 moving map, weather radar.
 - FAA Gold Seal Instructor.

- Oct 1996- Feb 1999 Flight Instructor, Academy for instrument ratings. KCMH Columbus Ohio
 - FAR Part 91 Single-engine training.
 - Conducted both flight and ground instruction.
 - Aircraft utilized were C-152, PA-28-181, PA-28R-180.
 - FAA Gold Seal Instructor.

- Apr1990-Apr 1996 Clinical Instructor. Grant Medical Center LifeFlight Paramedic Program. Columbus, Ohio.
 - Taught all course work in the fields of pharmacology and toxicology to new paramedic students.

- Jun 1992-Nov 1995 Instructor: American Red Cross. Columbus, Ohio.
 - Taught CPR and first aid to general public.

- Jun 1992-Feb 1999 Course Creator Coordinator/Instructor: Toxitricks Program. Children's Hospital. Columbus, Ohio.
 - Toxitricks is a practical “hands-on” program designed to assist pre-hospital and hospital personnel with common pediatric toxicological emergencies.

- Mar1991-Nov 1995 Instructor: Pediatrics Program, Children's Hospital. Columbus, Ohio.
 - Pediatrics is a practical “hands-on” program designed to assist pre- hospital and hospital personnel with common pediatric medical emergencies.
 - Specialization was cardiac emergencies

Certificate and Training Programs:

- May 2012 FEMA Hospital Incident Command Training Course. Course 100, 200 and 700.

- Sept 2007 Learning Laboratory for Human Factors Investigators. Dr. Sidney Dekker. Lund University. Lund, Sweden.

- Mar 2006 Human Factors in Aviation Safety Course. University of Southern California (USC). Viterbi School of Engineering. Los Angeles, California.

- Apr 2005-Dec 2007 National Transportation Safety Board Academy, Ashburn, VA
 - Courses taken:
 - Advanced Cognitive Interviewing for Accident Investigators
 - Survival Factors in Aviation Accidents
 - Biomechanics of High-Impact Injuries
 - Cognitive Interviewing for Accident Investigators
 - Investigating Human Fatigue Factors

- Aug 1989-Mar 2000 Provider American Heart Association
 - Trained in Advanced Cardiac Life Support (ACLS).
 - Trained in Pediatric Advanced Life Support (PALS).

- Oct 2001-Feb 2005 Air Line Pilots Association (ALPA). Herndon, VA
- Courses taken
 - Basic Safety Course
 - Bloodborne Pathogen Training
 - Safety-Two School
 - Basic Accident Investigation
 - Advanced Accident Investigation
 - Aircraft Survival Factors Training

Licensure:

- Jul1991-Present Certified Specialist in Poison Information. American Association of Poison Control Centers.
- Jul 1990-Jul 2000 Emergency Medical Technician – Paramedic. The Ohio Department of Public Safety. Division of EMS. Columbus, Ohio.
- Jul 1989-Present Pharmacist. Ohio State Board of Pharmacy. Licensure #03-2-17688.

Aviation Certificates:

- Airline Transport Pilot: Airplane Multi-Engine Land
- Type rating CL-65 turbojet
- Commercial pilot: Airplane Single-Engine Land
- Flight Instructor: Airplane Single-Engine & Multi-Engine Land, Instrument
- Ground Instructor: Basic, Instrument, Advanced

Flight Time Accumulated:

Total	4300	Turbojet PIC	974
PIC	1940	Instrument	320
SIC	2029	Simulator	200
Turbojet	2928	Flight Instructor	618

Other Professional Activities:

Flight Test Work:

Jan. & June 2017 – In Cessna 172. Flight test profiles to generate data for estimation of flap position by post-processing G1000 flight data records. Extensive flight test work to validate algorithms for flap displacement.

May 2016 – In simulator, derived Angle-of-Attack (AOA) algorithm validation. Developed inflight validation for non-linear flight regimes prior to in-flight installation and flight test development.

August 2013 – Oversight of Angle-of-Attack (AOA) installation on PA-28-200R aircraft (2) including in-flight calibration and troubleshooting for FAA funded project by the small aircraft directorate via PEGASAS.

Industry Work:

September 2017 Present GAJSC Working Group – CFIT. Member representing the PEGASAS consortium. Federal Aviation Administration, Washington D.C.

August 2016 to June 2017 GAJSC Working Group 2.0 – Safety Enhancement (SE-33) Safety Culture. Federal Aviation Administration, Washington D.C.

Oct 2001-Oct 2008 Air Line Pilots Association (ALPA) Activities & responsibilities.

Air Transport Association’s Data Communications Task Force Human Factors Subgroup. Washington D.C.

Member: May 2008 to October 2008

FAA’s Performance Based Aviation Rulemaking Committee (PARC) Subcommittee Pilot Controller Procedures and Systems Integration Working Group, Washington D.C.

Co-Chairman: September 2006 to August 2008

Member: May 2005 – September 2006

National Human Factors Working Group

Director May 2005 – October 2008

Member February 2004 – May 2005

Master Executive Council-Central Air Safety Comm. Council 37

Chief Accident Investigator October 2007 – October 2008

November 2004 – December 2005

Vice-Chairman June 2007 – October 2008

Assistant Chief Accident Investigator June 2003 – October 2004

Member October 2001 – June 2003

Master Executive Council - Aviation Safety Action Program(ASAP)

ASAP Coordinator/ERC January 2008 – August 2008

ASAP ERC Member August 2006 – January 2008

Other Major activities and responsibilities.

Mar1990-Apr1993 Member: Education Committee. The Central Ohio Poison Center. Columbus, Ohio.

Sept 1986-May 1989 Member: Drug Abuse Education Committee. The Ohio State University. College of Pharmacy. Columbus, Ohio.

Student Supervision:**Ohio State University, Columbus Ohio:**

Supervision for graduate students on various FAA awarded PEGASAS projects;

Eun Sun Ryu – College of Civil Engineering

Una Blanus – College of Civil Engineering

Josh Schimmel – College of Engineering

Yanimi Gowda - College of Civil Engineering.

Marshall Pomeroy - College of Civil Engineering.

Natchi Despande - College of Engineering.

Supervision for undergraduate graduate students on various FAA awarded PEGASAS projects;

Hannah Gleckler - College of Engineering

Justin Abrams - College of Engineering, Honor Student

Kierra Mercure - College of Engineering

Phillip Wilson - College of Engineering

Wilson Flores - College of Engineering

Brandon Lundeer - College of Engineering

Aubrey O’Connell - College of Engineering

Lund University, Lund Sweden:

Supervision for graduate students on their thesis activities and course work;

Patrik Nyström. College of Engineering.

Participation in Aviation Accident Investigations:

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| August 2007 | Pinnacle Airlines (d.b.a. Northwest Airlink) Flight 4712 non-fatal accident, CRJ-200. April 15, 2007. Human Factors analysis for the ALPA investigation team in conjunction with the National Transportation Safety Board’s investigation (NTSB) DCA07FA037. |
| August 2006 | Comair Airlines (d.b.a. Delta Connection) Flight 5191 fatal accident (49), CRJ-100. August 27, 2006. Member of the Operations/Human Factors working group. Also one of three persons that provided management of the total investigative effort. Investigator in support of the National Transportation Safety Board’s investigation (NTSB) DCA06MA064. |
| December 2004 | Pinnacle Airlines (d.b.a. Northwest Airlink) Flight 3701 fatal accident (2), CRJ-100. October 14, 2004. Human Factors support for the ALPA investigation team in conjunction with the National Transportation Safety Board’s investigation (NTSB) DCA05MA003. |

- July 2004 Comair Airlines (d.b.a. Delta Connection) Flight 5445 non-fatal accident, CRJ-100. Severely injured flight attendant during a TCAS maneuver near Snow Hill, Virginia on July 21, 2004. Accident investigator for ALPA working in conjunction with the National Transportation Safety Board's investigation (NTSB) NYC04LA174.
- May 2004 Air Transat Flight 236 non-fatal accident, Airbus A330-243 All Engine-Out Landing Occurrence at Lajes, Azores 24, August 2001. Member of the committee that prepared the "Human Factors Assessment of Flight Crew Performance" for ALPA at Air Transat.

Participation in Lawsuits as Expert Witness:

- January 2016 State of Illinois Circuit Court of the 17th Judicial Circuit, Winnebago County in the matter of *Slaven vs. Swedish American Hospital/ Dr. Eric John Hess MD*. Wrongful death suit. Testified for the defense on outcome and hindsight bias and how these affect investigator reliability in determining causation. David Faulkner lead council.

Publications (Peer-reviewed):

Manuscripts

McCall, J. & **Pruchnicki, S.** (2017). Just Culture: A Case Study of Accountability Relationship Boundaries Influence on Safety in High-Consequence Industries. *Safety Science*. 94 (2).

Smith, P., Johnson, D., **Pruchnicki, S.**, Schimmel, J., & Spencer, A. (2017). Cognitive Engineering Considerations in the Development of an Information Retrieval System: Avoiding Fixation on Technological Substitutes. *The Journal of Cognitive Engineering and Decision Making*. (10) 2.

Burns, G., Spiller, H., **Pruchnicki, S.**, Siegel, E. & Casavant, MJ. (2016) Acute Renal Failure and Death after Misuse of Concentrated Anhydrous Caffeine as A Pre-Work Out Supplement By Athletes. *J Clinical Case Stu* 1(3): doi <http://dx.doi.org/10.16966/2471-4925.114>

Christopher, B., **Pruchnicki, S.**, Burian, B., Cotton, S. Enhancing NextGen RNAV Capabilities: Human performance Evaluation of NRS Waypoint Nomenclatures. *The International Journal of Aviation Psychology*. 24 (3), 155-17. 2014.

Dekker, S., **Pruchnicki, S.** "Drifting into failure: Theorizing the dynamics of disaster incubation". *Theoretical Issues in Ergonomic Science*. Nov. 2013. DOI: 10.1080/1463922X.2013.856495

Pruchnicki, S., Wu, L, Belenky, G. An Exploration of the Utility of Mathematical Modeling Predicting Fatigue from Sleep/Wake History and Circadian Phase Applied in Accident Analysis and Prevention: The Crash of Comair Flight 5191. *Accident Analysis and Prevention* 43: 1056-1061. 2011.

Pruchnicki, S. The Serpent and the Responder; Treating Snakebites. *Journal of Emergency Medical Services* 18: (4) 43-42, 1993.

Pruchnicki, S. Just Say Know; Recognizing the Dangers of Commonplace drugs. *Journal of Emergency Medical Services* 16: (2) 26–38, 1991.

Conference Proceedings

Valasek, J., Harris, J., **Pruchnicki, S.**, & McCrink, M, Gregory, J. & Sizoo, D. “Characterization of Derived Angle-of-Attack and Side Slip Angle Algorithms Using Monte Carlo and Pilot Simulation”. *Proceedings from The American Institute of Aeronautics and Astronautics*. June 2017. Denver, Colorado.

Dillman, B., Wilt, D., **Pruchnicki, S.**, & Hall, T. “Effect of Angle of Attack Displays on Approach Stability”. *Proceedings from The American Institute of Aeronautics and Astronautics*. June 2017. Denver, Colorado.

McCrink, M., Gregory, J., & **Pruchnicki, S.**, “Derived Angle of Attack Algorithm Characterization through Flight Test of UASs”. *Proceedings from The American Institute of Aeronautics and Astronautics*. June 2017. Denver, Colorado.

Rao, A., **Pruchnicki, S.**, & Young, S. “A Survey to Understand the Use of In-flight Weather Information Products and Services”. *Proceedings from The American Institute of Aeronautics and Astronautics*. June 2017. Denver, Colorado.

Pruchnicki, S. “The Perfect Storm” Lexington, KY & Comair Flight 5191.” *Proceedings from the International Symposium on Aviation Psychology*. May 2017. Dayton, Ohio.

Pruchnicki, S. “Exploring Facilitation Debriefing Techniques Using a Diary Study.” *Proceedings from the International Symposium on Aviation Psychology*. May 2017. Dayton, Ohio.

Schimmel, J., **Pruchnicki, S.**, Smith, P. & Young, S. “SAGA – Safety Analysis in General Aviation – Leveraging Digital Flight Data Towards the Development of a Flight Performance Database Tool to Improve General Aviation Safety” *Proceedings from the 7th International Conference in Air Transportation*. June, 2016. Philadelphia, PA.

Lundeen, B., **Pruchnicki, S.**, & Young, S. “Weather Technology in the Cockpit: Analysis of Pilot Decision Making” *Proceedings from the 7th International Conference in Air Transportation*. June, 2016. Philadelphia, PA.

Blanusa, U., Young, S., **Pruchnicki, S.**, & Strzempkowski, B. “An Evaluation of Linear Length LED Centerline Taxiway Exit Light Systems” *Proceedings from the 7th International Conference in Air Transportation*. June, 2016. Philadelphia, PA.

Dillman, B., Wilt, D., **Pruchnicki, S.**, Rudari, L., Ball, M., & Pomeroy, M. “Flight Operational Quality Assurance (FOQA) – Do Exceedances Tell the Story? *Proceedings from the 18th International Symposium on Aviation Psychology*. May, 2015. Dayton, Ohio.

Pruchnicki, S., Woods, D. “Surprise on the Flight Deck – A Full Motion Simulator Study” *Proceedings from the 67th International Safety Summit (IASS) Flight Safety Foundation*. 2014. Abu Dhabi, United Arab Emirates.

Pruchnicki S. and Woods, D. D. (2013). Cognitive Demands of Staying in Control on Highly Automated Aircraft When Faced with Surprise. In *Proceedings Fifth Symposium on Resilience Engineering: Managing trade-offs*, 24-27, June 2013, Soesterberg, Netherlands. Download from Knowledge Bank at OSU <http://hdl.handle.net/1811/60454> or search at <http://kb.osu.edu>

Burian, B., **Pruchnicki, S.**, Christopher, B., Silverman, E., Hackworth, C., Rogers, J., Williams, K., Drechsler, G., Runnels, B., Mead, A. Single Pilot Workload Management During Cruise in Entry Level Jets. *Proceedings from the 17th International Symposium on Aviation Psychology*. May, 2013. Dayton, Ohio.

Pruchnicki, S., Burian, B., Christopher, B. Designing Realistic Full-Mission Human-in-the-loop Aviation Simulation Studies: Lessons Learned. *Proceedings from the 55th Annual Human Factors and Ergonomics Society (HFES)*. September, 2011. Las Vegas, Nevada.

Pruchnicki, S., Christopher, B., Burian, B. Human Factors Issues of Navigation Reference System (NRS) Waypoints. *Proceedings from the 16th International Symposium on Aviation Psychology*. May, 2011. Dayton, Ohio.

Fennell, K., **Pruchnicki, S.**, McKenney, D., Reidemar, H., Comstock, K. Aviation Automation Design and Implementation –The Need for Human Factors Considerations. *Proceedings from the 15th International Symposium on Aviation Psychology*. April, 2009. Dayton, Ohio.

Hollnagel, E., **Pruchnicki, S.**, Woltjer, R., Etcher, S. A Functional Resonance Accident Analysis of Comair 5191. *Proceedings from the 8th International Symposium of the Australian Aviation Psychology Association*. April, 2008. Sydney, Australia.

Abstracts/Posters

Pruchnicki, S. & Rao, A. Resilience in the Face of Unexpected Flight Deck Events. The 7th REA Symposium. Poised to adapt: Enacting Resilience Potential Through Design, Governance and Organizations. Liege, Belgium. June, 2017

Rao, A. & **Pruchnicki, S.** Resilience in the Face of Unexpected Flight Deck Events. The International Symposium on Aviation Psychology. Dayton, Ohio. May, 2017

Pruchnicki, S. Complexity Science and the Investigation Community. Chartered Institute of Ergonomics & Human Factors. Human Factors in Aviation Safety. East Midlands, England. November, 2015.

Abrams, J., **Pruchnicki, S.**, Pomeroy, M., Young, S. Angle of Attack Equipment in General Aviation Aircraft. Presented at the 1st AIR Embry-Riddle Conference. Phoenix, Arizona, January 2014.

Rogers, J., Williams, K., Hackworth, C., Burian, B., **Pruchnicki, S.**, Christopher, B., Drechsler, G., Silverman, E., Runnels, B., Mead, A. Single-Pilot Workload Management. Presentation at the 84th Aerospace Medical Association Annual Meeting. Chicago, Illinois, May 2013.

Pruchnicki, S., Does Postmortem Toxicological Analyses of Tetrahydrocannabinol (THC) in Aviation Accidents Accurately Identify Its Physiological Impairment at the Time of Accident. *Journal of Toxicology; Clinical Toxicology* 2009 47: (7) 738. Poster presentation at the North American Congress of Clinical Toxicology Annual Meeting. San Antonio, Texas, September 2009.

Pruchnicki, S., Baker, S.D. The Use of Modern Photographic Technology for Animal Identification. *Journal of Toxicology; Clinical Toxicology* 2009 47: (7) 709. Poster presentation at the North American Congress of Clinical Toxicology Annual Meeting. San Antonio, Texas, September 2009.

Pruchnicki, S., Good TF, Walson PD. Severe Hydroxychloroquine Poisoning Reversed With Diazepam. *Journal of Toxicology; Clinical Toxicology* 1996 34: (5) 582. Poster presentation: North American Congress of Clinical Toxicology Annual Meeting, Portland, Oregon, September 1996.

Haley, K., Greene, S., **Pruchnicki, S.**, Poison Center Training of Emergency Medical Services Personnel. *Proceedings of the AAPCC/AACT/ABMT annual meeting. October 1990, Tucson, Arizona.* Poster presentation. North American Congress of Clinical Toxicology Annual Meeting. Tucson, Arizona. Oct 1990.

NASA & FAA Technical Memorandums/Reports

Valasek, J., Harris, J., Young, S., **Pruchnicki, S.**, McCrink, M., and Gregory, J. Characterization of Derived Angle-of-Attack and Flight Path Angle Algorithms. William J. Hughes Technical Center Research Division DOT/FAA/AR-XXX (In press). Atlantic City, NJ. December 2016.

Fanyjoy, R., Dillman, B., Johnson, M., Podhipak, N., Winter, S., Rice, S., Rosser, T., Maharaj, I., **Pruchnicki, S.** Acquisition Distance of LED-based Runway Closure Lighting. The Federal Aviation Administration Aviation - William J. Hughes Technical Center Research Division DOT/FAA/AR-XXX (In press). Atlantic City, NJ. May 2016.

Dillman, B., **Pruchnicki, S.**, Wilt, D., Pomeroy, M., Johnson, M., Abrams, J., Fanjoy, R., Rudari, L., Ball, M., Young, S. Angle of attack equipment in general aviation operations. The Federal Aviation Administration Aviation - William J. Hughes Technical Center Research Division DOT/FAA/AR-XXX (In press). Atlantic City, NJ. December 2014.

Williams, K., Christopher, B., Drechsler, G., **Pruchnicki, S.**, Rogers, J., Silverman, E., Gildea, K., Burian, B. K., Cotton, S. Aviation human-in-the-loop simulation studies: Experimental Planning, Design and Data management. FAA Office of Aerospace Medicine DOT/FAA/AM-14/1. Washington DC, January, 2014.

Burian, B., **Pruchnicki, S.**, Rogers, J., Christopher, B., Williams, K., Silverman, E., Drechsler, G., Mead, A., Hackworth, C., Runnels, B. Single pilot workload management in entry level jets. NASA Technical Memorandum TM-2013-216557 & FAA Office of Aerospace Medicine DOT/FAA/AM-13/17. NASA study 09-AJP61FGI-0048 and funded through FAA ANG-C1. Pp. 1-135. Aug. 2013

Burian, B., Christopher, B., Fry, D., **Pruchnicki, S.** Silverman, E. Single jet pilot simulation Study Scenarios Overviews: Task analysis and concurrent task maps. NASA Technical Memorandum TM-2013-216608. NASA study 09-AJP61FGI-0048 and funded through FAA ANG-C1. Pp. 1-164. Oct. 2013.

Burian, B., **Pruchnicki, S.**, Fry, D. Entry-level jet single-pilot human-in-the-loop simulation research: Study scripts and radio background chatter dialogue. NASA Technical Memorandum TM-2013-216575. NASA study 09-AJP61FGI-0048 and funded through FAA ANG-C1. Pp. 1-135. Aug. 2013.

Book Chapters

Pruchnicki, S. & Dekker, S. (2017). *Resilience Engineering in EMS*. In “The Human Factors & Ergonomics of Prehospital Medicine”. CRC Press.

Other Professional Papers

McCrink, M., Gregory, J., **Pruchnicki, S.**, Strzempkowski, B. & Young, S. “Derived Angle of Attack (AoA) Flight Testing”. Unpublished white paper for FAA PEGASAS COE. Pp. 1-3. June, 2016.

Tekaucic, K. & **Pruchnicki, S.** “An Electronic Survey and Subsequent Analysis of a Pilot Population Concerning Class 1 EFB Deployment. Embry Riddle Aeronautical University Scholar Commons for AIR Con 2016, Phoenix, AZ. January 2016.

Wierzbanski, J., Slifer, D., Smith, R., **Pruchnicki, S.**, Meir, N., Young, S. “Unmanned Aircraft Systems in the National Airspace System Pathfinder Program Proposal”. Air Force Research Laboratory. Wright-Patterson Air Force Base, Dayton, Ohio. August, 2015.

Berman, B., Kochan, J., Burian, B., **Pruchnicki, S.**, Silverman, E., & Christopher, B. Alerts and Cues for Specific Conditions: Analysis and Application in Training FAA funded project through ANG-C1. Pp. 1-372. March, 2015.

Pruchnicki, S., Young, S., Green, J., & Wagner, C. “A Call For Supporting a Next Generation Airspace System for the State of Ohio.” Distributed via numerous outlets and supplied to state legislators. The John Glenn School of Public Affairs. The Ohio State University, Columbus, Ohio. November 13, 2014.

Berman, B., Kochan, J., Burian, B., **Pruchnicki, S.**, Silverman, E., & Christopher, B. Flight deck alerting: Functions, Characteristics, and implications for NextGen. FAA funded project through ANG-C1. Pp. 1-120. November, 2014.

Pruchnicki, S., Woods, D.D., Deshpande, N. Managing Surprise: Resilience and Control on the Flight Deck. A simulator observation study for NetJets final report. Internal paper only. Columbus, Ohio. March 1st, 2014.

Pruchnicki, S. Plane crash probes should cast a wider net. A special opinion article in relation to the release of Sole Survivor film on CNN.com. January 9, 2014.

<http://www.cnn.com/2014/01/09/opinion/sole-survivor-shawn-pruchnicki/index.html#cnn-discus-area>

Pruchnicki, S., Williams, K., Christopher, B., Gildea, K., Rogers, J., Cotton, S., Drechsler, G., Mead, A., Runnels, B., Burian, B., Hackworth, C. Energy management, and stabilized approach and landing performance of single pilots flying entry level jets: Study design and method. NASA study 09-AJP61FGI-0048 and funded through FAA ANG-C1. Pp. 1-135. March, 2012.

Burian, B., Christopher, B., **Pruchnicki, S.**, Cotton, S., Human factors evaluation of the implementation of the navigation reference system (NRS) Phase 2 report. NASA study 09-AJP61FGI-0101 and funded through FAA AJP-61. Pp. 1-155. August, 2011.

Burian, B., **Pruchnicki, S.**, Christopher, B., Human factors evaluation of the implementation of the navigation reference system (NRS) Phase 1 report. NASA study 09-AJP61FGI-0101 and funded through FAA AJP-61. Pp. 1-57. March, 2010.

Fennel, K., **Pruchnicki, S.**, McKenney, Reidemar, H. Comstock, K. Human Factors in Aviation Automation. ALPA statement of position white paper. Unpublished. Pp. 1-21. October, 2008.

Pruchnicki, S. Master's Degree Program Graduate Research Project. Does postmortem toxicological drug analysis accurately identify a medication's pharmacological influence at the time of accident? Unpublished paper. Pp.1-98. April 2006. Embry-Riddle Aeronautical University. Daytona Beach, Florida.

Pruchnicki, S., LaRoche G., Corrie, S. The use of color in aircraft flight deck displays: ALPA statement of position white paper. Unpublished. Pp. 1-31. December, 2005.

Magazine

Pruchnicki, S. Understanding human error - How to develop a just culture at your fire department. *Fire Rescue Magazine* 2017. 140 (1) 26-36.

Pruchnicki, S. NRS Waypoint Structure. *Professional Pilot Magazine* 2010. 44 (7) 102-105.

Pruchnicki, S. Anatomy of a System Failure. *Flight Safety Foundation Aero Safety World*. April, 2010 26-29.

Pruchnicki, S. Remembering to Remember. *Professional Pilot Magazine* 2008. 42 (12) 120.

Dean, A., **Pruchnicki, S.** Deadly Omissions. Featured cover article. *Flight Safety Foundation Aero Safety World*. December, 2008. 10-16.

Pruchnicki, S. Raising Awareness for All. *Professional Pilot Magazine* 2008. 42 (4) 72-74

Presentations:

International Forums

- May 2017 Accepted presentation: “The Perfect Storm” Lexington, KY & Comair Flight 5191”. International Symposium on Aviation Psychology. Dayton, Ohio.
- May 2017 Accepted presentation: “Exploring Facilitation Debriefing Techniques Using a Diary Study.” International Symposium on Aviation Psychology. Dayton, Ohio.
- April 2017 Accepted presentation: “Understanding human error - How to develop a just culture at your fire department. An investigator’s perspective. FDIC International Conference. Indianapolis, Indiana.
- April 2016 Accepted presentation: “Understanding human error - How to develop a just culture at your fire department. An investigator’s perspective. FDIC International Conference. Indianapolis, Indiana.
- November 2015 Accepted presentation: “Resilience Engineering as a Perspective in Understanding Accident Causation.” Chartered Institute of Ergonomics & Human Factors. Human Factors in Aviation Safety. East Midlands, England.
- May 2015 Accepted presentation: “Top Ten Ways to Destroy Your Safety Culture.” International Symposium on Aviation Psychology. Dayton, Ohio.
- May 2015 Accepted presentation: “Effects of Angle of Attack Displays on Approach Stability” International Symposium on Aviation Psychology. Dayton, Ohio.
- November 2014 Accepted presentation: “Surprise on the Flight Deck – A Full Motion Simulator Study. Flight Safety Foundation – IASS. Abu Dhabi, United Arab Emirates.
- Aug 2014 Invited Keynote Presentation: “Just Culture – Operations Beyond the Text Book”. Also panel member with Dr. Sidney Dekker and Clark Lin Director of CAA. China Airlines Just Culture conference. Taipei, Taiwan.

- Aug 2014 Accepted presentation: “The Perfect Storm” Lexington & Comair 5191. 2014 FAA Worldwide Airport Technology Transfer Conference. Galloway, NJ.
- Aug 2014 Accepted presentation: Wrong Runway Departures – How are we doing? 2014 FAA Worldwide Airport Technology Transfer Conference. Galloway, NJ.
- June 2013 Accepted presentation: “Cognitive Demands of Staying in Control on Highly Automated Aircraft When Faced with Surprise” The 5th Resilience Engineering Association (REA) Symposium. Soesterberg, Netherlands.
- June 2012 Invited speaker: “Second Victims: One Accident Investigator’s Experience”. Presented at the Learning Laboratory for Human Factors Investigators. Master’s Program. Lund University. Lund, Sweden.
- Sept 2011 Accepted presentation: “Designing Realistic Full-Mission Human-in-the-loop Aviation Simulation Studies: Lessons Learned.” Human Factors and Ergonomics Society (HFES) Annual meeting. Las Vegas, Nevada.
- May 2011 Accepted presentation: “Human Factors Issues of Navigation Reference System Waypoints” International Symposium on Aviation Psychology. Dayton, Ohio.
- November 2010 Invited speaker. “The Lexington air disaster - analyzing an air accident, step by step”. Risky Business Conference. London, England.
- Mar 2006 Invited speaker. “The Use of Color in Aircraft Flight Deck Displays” Human Factors in Aviation Safety Course. Instructors Captain Robert Sumwalt and Dr. Najmedin Meshkati. University of Southern California (USC). Viterbi School of Engineering. Los Angeles, CA.
- Aug 1991 Invited speaker. “Pre-Hospital Emergency Pharmacology.” Presented at International Fire and Rescue Conference annual meeting. Columbus, Ohio.

National Forums

- October 2016 Accepted presentation: Illuminating Engineering Society of North America – Aviation Lighting Committee. “Linear Airfield Lighting Evaluations: From the Laboratory to the Field.” San Diego, CA.
- July 2016 Invited Speaker. EAA AirVenture, “General Aviation Research Update.” Oshkosh, Wisconsin.

- July 2016 Invited panelist. National Fallen Firefighters Foundation Annual Technology conference. Panel “Human Performance Factors Related to the use of Technology”. Oakland, CA.
- January 2016 Accepted presentation: “Increasing General Aviation Safety through Data Analysis”. Presented at ERAU AirCon³, Phoenix, AZ.
- January 2016 Accepted presentation: “Surprise on the Flight Deck A Full Motion Simulator Study”. Presented at ERAU AirCon³, Phoenix, AZ.
- September 2012 Invited speaker. “Automation Problems and the Need for a New Design Paradigm”. Presented at the Human Factors and Wings Seminar. Pensacola, Florida.
- March 2011 Invited speaker. “Building a Positive Safety Culture in Your Organization”. Presented at the 2011 Air Charter Safety Symposium. Washington, DC.
- September 2010 Invited panelist. “Safety Culture – It’s Not Just an Accident”. At the 62th Annual National Business Aviation Association (NBAA) convention. Presented at the Safety Town Hall Meeting. Atlanta, GA .
- June 2010 Accepted presentation: “Human Factors Considerations for Incident Investigations”. Presented at FAA Aviation Shared Vision conference. San Diego, CA.
- March 2010 Invited speaker. “Creating a Just Culture in Your Organization”. Presented at the Human Factors and Wings Seminar. Dallas, Texas
- January 2010 Invited speaker. “System Safety and Crew Resource Management”. Presented at the Boeing Executive Flight Operations Safety meeting. Palm Springs, California.
- March 2009 Invited speaker. National Transportation Safety Board’s Human Error, Just Culture and Resilience Meeting. Presented case report of Libyan Arab Airlines Flight 114 with Sidney Dekker. Washington, D.C.

Regional/Local Forum

- September 2016 Invited speaker: Cognitive Engineering – An Overview. Local IISE chapter at The Ohio State University, Columbus, Ohio.
- September 2016 Invited speaker: US Airways 1549 - The Role of CRM & Human Factors in a successful accident. Local HFES chapter at The Ohio State University, Columbus, Ohio.

February 2016 Invited speaker: The Comair 5191, Lexington Accident – An Investigator’s Perspective. EAA Chapter 9, held at The Ohio State University airport, Columbus, Ohio.

December 2014 Invited Speaker: CRM and the Making of a Resilient Health Care Team. Nationwide Children’s Hospital – Education Day, Hospital staff. Nationwide Children’s Hospital. Columbus, Ohio.

April 2014 Invited panelist: Battelle Center Tech Talks – International Aviation, Technology and Policy in the 21st Century. John Glenn School. Ohio State University, Columbus Ohio.

February 2014 Invited speaker: The Role of Human Factors in Flight Safety and Accident Investigation. Local HFES chapter at The Ohio State University, Columbus, Ohio.

July 2012 Invited speaker: CRM and the Making of a Resilient Health Care Team. “Grand Rounds” Trauma Team. Nationwide Children’s Hospital. Columbus, Ohio.

July 2012 Invited speaker: OTC Medications and Decision Making Traps. The Scioto Valley Chapter of the Women’s Ninety-Nines. Columbus, Ohio.

March 2012 Invited speaker: CRM and the Making of a Resilient Health Care Team. “Grand Rounds” The Ohio State University College of Medicine. Wexner Medical Center. Columbus, Ohio.

January 2011 Invited speaker: Human Error and a Viable Safety Culture in Health Care. Pharmacy 850: Seminar for MS in Health Systems. The Ohio State University College of Pharmacy. Columbus, Ohio.

February 2008 Invited speaker: “Comair 5191, Situational awareness and lessons Learned”. Professional Pilot’s Association of Central Ohio. Columbus, Ohio.

November 2006 Invited speaker: “Human Factors”. Pharmacy 816: Medication Use System Management. Dr. Phil Schneider. Graduate Program in Pharmaceutical Administration. The Ohio State University College of Pharmacy. Columbus, Ohio.

October 2004 Invited speaker. “Toxicology: Clinical Management of the Overdosed Patient” Pharmacy 779D: Advanced Pharmacotherapeutics. The Nontraditional Doctor of Pharmacy Program: The Ohio State University College of Pharmacy. Columbus, Ohio.

August 1996 Invited speaker. “Management of the Overdose Victim”. Fairfield- Licking-Perry County Fire School. Lancaster, Ohio.

October 1994 Invited speaker. “Toxicology Update.” Presented at the Ohio Association of Emergency Medical Services Annual State Meeting. Columbus, Ohio.

July 1993 Invited speaker. “Revenge of the Toxic Toddler.” Presented at the Ohio Association of Emergency Medical Services Annual State Meeting. Columbus, Ohio.

Workshops and Courses

June 2017 Invited Speaker: Sacramento Fire Department. Serious Accident Review Team Training Course. Workshop with 3 local metro fire departments including investigators and upper rank fire officers. Sacramento, CA.

May 2017 Invited Speaker: Safe Passage Inc. & Lund University Workshop. *Current trends in Resilience Engineering*. Workshop with Chris Nemeth, John Allspaw, Anthony Smoker & Kathy Fox. Lund University Learning Lab, Lund University held in Tarrytown, NY.

April 2016 Invited presentation: “Understanding human error - How to develop a just culture at your fire department. An investigator’s perspective. FDIC International Conference. Indianapolis, Indiana.

August 2015 Invited Speaker: Theory of flight and airport operations. Presented at the Port Columbus Regional Airport Authority – Fear of flying course for the public. Port Columbus Airport. Columbus, Ohio.

Sept – Nov 2013 Invited speaker. In theater, post-film question and answer sessions with audience. Topics range from investigative methodologies to film production interests. Chicago, Ill & Napa, CA.

Sept 2009 & Sept 2007 Invited speaker: “The New View and Comair 5191”. Presented at the Learning Laboratory for Human Factors Investigators. Master’s Program. Dr. Sidney Dekker. Lund University. Lund, Sweden.

May 2008 to October 2004 Instructor. “Human Factors in Accident Investigation”. The ALPA Basic Accident Investigation Course. Presented twice a year in several locations. Herndon, VA, San Diego, CA, & San Antonio, TX.

March 2006 Instructor. “Survival Factors In Aircraft Accidents”. The ALPA Basic Accident Investigation Course. Presented in San Antonio, Texas.

March 2005 Invited Facilitator for on-line workshop. “Toxicology: Clinical Management of the Overdosed Patient” Pharmacy 779D: Advanced Pharmacotherapeutics. The Nontraditional Doctor of Pharmacy Program: The Ohio State University College of Pharmacy. Columbus, Ohio.

October 1998	Instructor. “Weapons of Mass Destruction, Chemical Terrorism” Disaster Planning International. Domestic Preparedness Training. Tucson, Arizona.
November 1997	Instructor. “Hazardous Material Operations”. HAZ/MAT DQE. Good Sheppard Hospital. Barrington, Illinois.
September 1997 to February 1996	Invited speaker. “Hazardous Materials in the Emergency Department” Presented to seven different emergency departments throughout Ohio.
June 1996	Course Coordinator & Instructor. “Hazardous Materials Operations and the Poison Center Staff”. A four part lecture series. Central Ohio Poison Center, Children’s Hospital. Columbus, Ohio.
January 1995	Instructor. “Pediatrixs.” Presented for the Children’s Hospital Emergency Department staff. Columbus, Ohio.
July 1993	Course Coordinator & Instructor. “Toxitricks”, Presented for Guernsey Memorial Hospital staff. Cambridge, Ohio.
July 1993	Course Coordinator & Instructor. “Toxitricks.” Presented at Emergency Nurses Association Annual Conference. San Antonio, Texas.
January 1992	Instructor. “Pediatrixs.” Presented at Emergency Nurses Association Annual Conference. Austin, Texas.
September 1991	Instructor. “Pediatrixs.” Presented for the Ohio State University Emergency Department staff. Columbus, Ohio.

Media

Film/Movie Work

December 2015	Movie – “ <i>Aftermath</i> ” – Technical advisor for all aviation scenes. Starring Arnold Schwarzenegger. Specifically reviewing Mr. Schwarzenegger’s lines for authenticity plus set and costume designs. Both pre-production and on scene. (Currently in post-production). Fictional film. Director Elliot Lester. To be release in April 2017. Los Angeles, CA.
December 2015	Movie – “ <i>Aftermath</i> ” – Extra (back ground) role on memorial scene with Arnold Schwarzenegger. (Currently in production). To be release in April 2017. Los Angeles, CA.
December 2014	Taped Discussion – For NetJets as SME on the cognitive surprise research that was completed last year. To be shown to all recurrent ground school classes starting in July, 2015.

- May 2014 Movie - “*The Tank*” Subject matter expert for actor playing role of professional pilot including mannerisms and supplying wardrobe choices. Fictional film. Director Kellie Madison. Released in US 6/1/2014. Los Angeles, CA.
- February 2012 Movie - “*Sole Survivor*” On camera subject matter expert and post-production assistant for documentary film “*Sole Survivor*”. Director Ky Dickens, Produced by Aurinko, S & McIntyre, A. Release date Fall 2013. Yellow Wing Productions. Chicago, Illinois.
- February 2012 Movie – “*Sole Survivor*” Associate Producer - documentary film “*Sole Survivor*”. Director Ky Dickens, produced by Aurinko, S & McIntyre, A. Film purchased by CNN Films and released in Jan. 2014 to television and iTunes. Yellow Wing Productions. Chicago, IL.

Television Newscast

- January 2017 On-air expert – Cessna Citation accident at Burke Lakefront.
 ➤ ABC/Fox 28. Columbus, Ohio. Reporter Rob Wells (1/3)
 ➤ NBC Channel 4 – Columbus, Ohio. Reporter Harrison Hove (1/4)
- August 2016 Live on-air expert – Automation and self-driving cars.
 ➤ Fox News KTVU Oakland CA - Anchors: Ken Wayne & Ted Rowlands (8/22)
- May 2016 Live on-air expert – Loss of Egypt Air Flight 804
 ➤ CNN – On panel with Brooke Baldwin as anchor (5/19)(5/19)
- November 2015 Live on-air expert – Loss of Metrojet 9268.
 ➤ Al Jazeera America - Anchor: Del Walters (11/5)
- October 2015 Live on-air expert – Aircraft and no-fly considerations.
 ➤ Channel News Asia – Singapore
 • Live interview with two anchors. (10/13)
- Sept. 2015 On-air expert – British Airways Flight 2276 fire on takeoff at Las Vegas.
 ➤ CNN Situation room and Headline News – via satellite
 • Anchors Wolf Blitzer and Racheal Mead
- July/Aug 2015 Live on-air expert – The disappearance of Malaysian Flight 370, possible finding.
 ➤ CNN Headline News – via satellite live
 • Anchors Brooke Baldwin, Richard Quest & Mary Schiavo. (8/5)
 ➤ CNN Headline News – via satellite live
 • Anchors Brooke Baldwin & Richard Quest. (7/30)
 ➤ Canadian Broadcasting Corporation CBC
 • Anchor Ian Hanomansing (7/30)

- July 2015 Interview regarding aircraft diversion to Port Columbus after security scare.
- ABC/Fox 28. Columbus, Ohio
 - Reporter Rob Wells
- May 2015 Live on-air expert – Aircraft in-flight hacking claims from FBI report.
- Channel News Asia – Singapore
 - Live interview with two anchors. (5/17)
- May 2015 Live on-air expert – Summer travel safety
- WBNS 10TV –
 - Reporter Brittany Begley (5/13)
- Mar/Apr 2015 Live on-air expert – Loss of Germanwings Flight 9525
- CNN Headline News –
 - Anchor Brooke Baldwin (4/3)
 - ABC/Fox 28. Columbus, Ohio
 - Reporter Rob Wells (3/30)
 - Fox Business News. New York
 - Anchor - Maria Bartiromo (3/27)
 - NBC4. Columbus, Ohio.
 - Reporter David Mazza (3/27)
- March 2015 On-air expert interview – Blackhawk military accident off the coast of Florida.
- NBC Channel 4 – Columbus, Ohio
 - Anchor – Harrison Hove
- March 2015 Live on-air expert – One year anniversary of the disappearance of Malaysian Flight 370
- Canadian Broadcasting Corporation CBC
 - Anchor Reshmi Nair (3/7)
- February 2015 Live on-air expert - Loss of Trans Asia Flight 235
- CNN Headline News –
 - Anchors: Wolf Blitzer (2/4), Brooke Baldwin (2/4)
- Dec/Jan 2014 Live on-air expert – Loss of Air Asia Flight 8501.
- Al Jazeera America
 - Anchors: Del Walters (1/14), Richelle Carey (1/8), Morgan Radford (1/2)
 - NBC Channel 4 – Columbus, Ohio
 - Anchor – David Mazza (1/30), (12/30)
 - CNN Headline News & New Day Show –
 - Anchors: Kristy Paul & Victor Blackwell (1/3), Ana Cabrera (1/2)(1/2), Michaela Pereira & John Berman (12/29), Carol Costello (12/29)

- Channel News Asia – Singapore
 - Live interview. (12/28)
 - Canadian Broadcasting Corporation CBC
 - Anchor Christine Birak (12/28)
- October 2014 Fatal accident for Virgin Galactic spacecraft.
- ABC6/FOX28 –
 - Reporter Ben Garbarek Interview for later news broadcast at 10/11PM shows (10/31)
- July/Aug 2014 Live on-air expert – Shoot-down and crash of Malaysian Flight 17 in the Ukraine.
- Channel News Asia – Singapore
 - Live interview with three anchors. (8/4)
 - ABC6/FOX28 –
 - Reporter Tara Morgan Interview for later news broadcast (7/17)
 - Anchors Carolyn Bruck & Pete Scalia Good Morning Columbus – Live interview (7/18)
 - Canadian Broadcasting Corporation CBC
 - Anchors: Reshmi Nair (7/17), Christine Murak (7/19)
 - WBNS 10TV – Interview for later news broadcast.
 - Reporter Kevin Landers (7/17)
- July 2014 Live on-air expert – Near-miss aircraft collisions and released FAA report.
- Fox Business News –
 - Anchor Neil Cavuto (7/23)
- July 2014 Live on-air expert – FAA restriction on Tel Aviv US based flights.
- CNN Headline News –
 - Anchor Carol Costello (7/23)
- May 2014 Live on-air expert – Story on near mid-air airline collisions in Houston and Newark.
- Canadian Broadcasting Corporation CBC
 - Anchor Carol MacNeil (5/23)
- March 2014 Live on-air expert – The disappearance of Malaysian Flight 370.
- CNN Headline News – in Studio, New York City
 - Anchors Chris Cuomo & Kate Bolduan – New Day Show (4/29)(4/29)(4/29)

- CNN Headline News – via satellite live on 20 occasions.
 - Anchors: Christie Paul (5/2)(5/2), Pamela Brown (5/1), Brianna Keilar (4/7)(4/7), Brooke Baldwin (3/26)(4/1)(4/1)(4/23), Chris Cuomo and Kate Bolduan – New Day Show (3/25) (3/26) (4/8) (4/17)(4/17)(4/22)(4/28)(4/28), Anderson Cooper (3/24), Fredricka Whitfield (3/16), Don Lemom. (3/13) (Two hour special on 3/23)
- Fox News. The Kelly Files
 - Anchor Megyn Kelly (One hour show taped - 3/20) - Aired from 3/21-3/23.
- Canadian Broadcasting Corporation CBC
 - Anchors: Reshmi Nair (3/28), Andrew Nichols (3/25, 3/26)
- Canadian TV
 - Anchor Dan Mathenson (3/28)
- NBC4. Columbus, Ohio.
 - Reporter David Mazza (3/24)

- January 2014 Live on-air expert - Aircraft accident victim's recovery in conjunction with the release of CNN's Sole Survivor film.
- CNN Headline News – via satellite live.
 - Anchor Brooke Baldwin (1/9)
- November 2013 Taped interview - Buckeye TV regarding the new FAA policy for electronic devices while flying. The Ohio State University, Columbus, Ohio.
- July 2013 Press briefing (Pre-film showing) - Sole Survivor premiere in Lexington, Ky. Kentucky Theater. Shown on 11PM evening news July 18 and next day newscasts. Lexington, KY.
- September 2009 Background interview - WBNS 10 TV for a story aired on the evening 5:30PM newscast, (9/15). Consulted as aviation expert regarding laser incident with a commercial aircraft at Port Columbus International Airport. WBNS studios, Columbus, Ohio.
- January 2009 Live on-air expert - WBNS 10 TV Evening 5:30PM newscast, January 16. Discussion regarding the US Airways Flight 1549 ditching in New York. WBNS studios, Columbus, Ohio.

Radio

- February 2017 Live on-air expert – Twin Engine Crash in Riverside California
- CBS Radio Los Angeles
 - Anchor – Chris Sedens (2/28)

- September 2016 Live on-air expert for the Peggy Smedley Show. *Next generation air traffic system*. WSradio.com. Anchor – Peggy Smedley. (9/13)
- August 2016 Live on-air expert for Fire Engineering broadcasts 2 hr. show. “*How to think differently about human error and how it can help or hinder a Just Culture*”. Anchors – Capt. Mike Dugan and Capt. Mike Gagliano. (8/17)
- May 2016 Live on-air expert – Loss of Egypt Air Flight 804
 ➤ CBS Radio Los Angeles
 - Anchor - Linda Nunez (5/25)
 - Anchor – Chris Sedens & Bob Brill (5/19)
- July 2015 Live on-air expert – The disappearance of Malaysian Flight 370, possible finding.
 ➤ CBS Radio Los Angeles
 - Anchor – Dick Halton & Jan Stevens (7/30)
- May 2015 Live on-air expert – Aircraft in-flight hacking claims from FBI report.
 ➤ CBS Radio Los Angeles
 - Anchor – Dick Halton & Vivki Moore (5/18)
- April 2015 Live on-air expert – American Airlines iPad failure and delayed flights
 ➤ CBS Radio Los Angeles
 - Anchor – Dick Halton & Vivki Moore (4/29)
- March 2015 Live on-air expert - Loss of Germanwings Flight 9525
 ➤ CBS Radio Los Angeles
 - Anchor – Dick Halton & Vivki Moore (3/27)
 ➤ Sirius XM. North America
 - The Arlene Bynon Show – Canada Talks (3/27)
- December 2014 Live on-air expert – Loss of Air Asia Flight 8501.
 ➤ Radio New Zealand's Morning News Report – Wellington, NZ
 - Host Ian Telfer (12/30)
 ➤ BBC News – London, England
 - Hosts George Riley (12/28)
- July 2014 Live on-air expert – Shoot-down of Malaysian Flight 17 (Ukraine).
 ➤ BBC News – London, England
 - Hosts Steven Knowland (7/18)
- March 2014 Live on-air expert – The disappearance of Malaysian Flight 370.
 ➤ Radio New Zealand's Morning News Report – Wellington, NZ
 - Host Goyon Espiner (3/29)
 ➤ BBC News – London, England
 - Hosts Tony Livesey & Samantha Walker (3/26)
 ➤ WWL First News. AM/FM. New Orleans.

- Host Tom Tucker (3/19)
- Sirius XM. North America
 - The Arlene Bynon Show - Canada Talks (3/17)
- 610WTVN Columbus, Ohio
 - The John Corby Radio Show (3/14)

Newsprint/Internet/Magazine

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| May 2017 | Fortune Magazine <ul style="list-style-type: none"> ➤ Interview on the recent spike in forced removals from airline cabins. Reporter – Eric Jenkins – (5/5) |
| March 2017 | The Dayton Daily News <ul style="list-style-type: none"> ➤ Interview on Spirit Airlines pilot found at home with wife both dead from possible heroin overdose/fentanyl contamination. Reporter Will Garbe - (3/17)(4/6) |
| December 2016 | www.theverge.com <ul style="list-style-type: none"> ➤ Interview on Facebook's drone Aquila at the end of its inaugural test flight. Reporter Casey Newton Senior Editor – (12/16) |
| August 2016 | The Atlantic Magazine. <ul style="list-style-type: none"> ➤ Interview on near-miss reporting and how the airlines can better leverage this for a more proactive safety culture. Reporter Richard Korman – (8/4) |
| July 2016 | Big Ten Network. <ul style="list-style-type: none"> ➤ Interview on NextGen and how it is transforming the aviation infrastructure. Reporter John Tolley – (7/20) |
| July 2016 | Wall Street Journal – Front page <ul style="list-style-type: none"> ➤ Interview for article on automation and Tesla fatal accident. Reporter Daniel Michaels - (7/14) |
| May 2016 | Pravda Newspaper - Deputy Head of Foreign Desk. Slovakia <ul style="list-style-type: none"> ➤ Interview for article on the loss of Egypt Air Flight 804. Reporter – Andrej Matisak (5/22) |
| April 2016 | Cleveland Plain Dealer <ul style="list-style-type: none"> ➤ Interview for article on business jet crash in Akron last fall. Release of CVR. Reporter Adam Ferrise (4/16)((11/15) |
| July 2015 | Toronto Star <ul style="list-style-type: none"> ➤ Interview for article on runway incursion event at Toronto City airport after aircraft damage on runway. Reporter Laurent Bastien Corbeil (7/14) |

- July 2015 Wall Street Journal – Front page
 ➤ Interview for article on voluntary safety reporting programs in the United States. Reporter Daniel Stacey- (5/7)
- March 2015 Pravda Newspaper - Deputy Head of Foreign Desk. Slovakia
 ➤ Interview for article on the loss of Germanwings Flight 9525. Reporter – Andrej Matisak (3/25)
- December 2014 The Bend Bulletin
 ➤ Interview for article on EMS Aeromedical Flight Safety & Culture. Reporter - Markian Hawryluk (12/8)
- November 2014 Wall Street Journal
 ➤ Interview for article on air safety and emergency procedures Reporter - Andy Pasztor (11/13)
- August 2014 Cleveland.com and The Plain Dealer
 ➤ Interview for article on fatal GA crash (4) in Willoughby, Ohio. Reporter - John Harper (8/26)
- July 2014 Pravda Newspaper - Deputy Head of Foreign Desk. Slovakia
 ➤ Interview for article on shoot-down and crash of Malaysian Flight 17 in the Ukraine. Reporter - Andrej Matisak (7/19)
- April 2014 www.defenseone.com
 ➤ Interview for article on DARPA automation design and adaptive technologies related to pilot workload management. Technology Editor - Patrick Tucker.
- March 2014 Interviews in relation to the disappearance of Malaysian Flight 370.
 • CNBC.com. Nia Hamm. (3/28)
 • Newsmax Media. David Patten (3/27)
 • USA Today. Front page, above the fold. Gary Strauss. (3/24)
 • OSU Lantern. Chahinaz Seghiri. (3/21, 3/25)
 • Columbus Dispatch. Dean Narciso. (3/19)
 • Bloomberg International News. Kyle O'Donnell (3/17)
 • Travel Pulse.com. Rich Thomselli. (3/14)
- July 2013 The Courier-Journal (Louisville) newspaper
 ➤ Interview on the movie Sole Survivor and the investigation of the Comair 5191 accident in Lexington KY.

Other Committee Work:

March 2012 College of Engineering Graduate Student member of selection committee for the following two faculty awards:

- Harrison Faculty Award for Excellence
- Clara M. and Peter L. Scott Faculty Award

Grants: Total - \$ 3,331,616

June 2016 to Technical Lead (OSU): PEGASAS - Problem Solving/Decision Making
May 2018 and Procedures for Unexpected Events. \$295,000 research grant.

June 2016 to Technical Assistant (OSU): PEGASAS – Aviation Safety Database
December 2016 Collaboration with Iowa State University and Florida Institute of
Technology. \$193,000 research grant.

January 2016 to Technical Lead (OSU): PEGASAS Acquisition Distance of LED-based
June 2016 Runway Closure Lighting. Collaboration with Purdue University and
Florida Institute of Technology. \$95,000 research grant.

September 2015 to Technical Lead (OSU): PEGASAS Angle-of-Attack study (Derived) II.
April 2016 Collaboration with Purdue University & Florida Institute of Technology.
\$20,000 research grant.

July 2015 to Technical Assistant (OSU): PEGASAS LED Hot/Cold Research.
June 2017 Collaboration with Iowa State University and Texas A&M University.
\$259,616 research grant.

April 2015 to Technical Lead (OSU): PEGASAS National General Aviation Information
April 2016 Database. (NGAFID) II. Collaboration Georgia Tech and Purdue
University. \$163,000 research grant.

February 2015 to Technical Lead (OSU): PEGASAS Weather in the Cockpit Study II.
June 2016 Collaboration with Southern Illinois University, Kent State University,
Purdue University. \$257,000 research grant.

August 2014 to Technical Lead (OSU): PEGASAS Airport SMS Software Analysis.
September 2016 Collaboration with Southern Illinois University & Florida Institute of
Technology. \$330,000 research grant.

August 2014 to Technical Lead (OSU): PEGASAS Linear LED Lighting. Collaboration
June 2016 with Purdue University. \$512,000 research grant.

May 2014 to Technical Assistant (OSU): PEGASAS Centerline Deviation Study.
June 2016 Collaboration with Southern Illinois University, Kent State University.
\$600,000 research grant.

January 2014 to December 2014	Technical Lead (OSU): PEGASAS Weather in the Cockpit Study I. Collaboration with Southern Illinois University, Kent State University. \$257,000 research grant.
January 2014 to December 2014	Technical Lead (OSU): PEGASAS National General Aviation Information Database. (NGAFID). Collaboration with Purdue University, University of North Dakota and Georgia Tech. \$163,000 research grant.
September 2013 to December 2014	Technical Lead (OSU): PEGASAS Angle-of-Attack study. Collaboration with Purdue University & Florida Institute of Technology. \$141,000 research grant.
November 2012 to September 2013	Principle Investigator: Center for Aviation Studies at Ohio State and NetJets Seed Grant Program. NextGen Implementation and Industry Participation. \$10,000 Research Grant.
February 1996 to February 1997	Co-Investigator: Pruchnicki, S, Laubacher, M. Conrail Inc. Regional Professional Education Program. The Central Ohio Poison Center. \$36,000 Hazardous Materials Research & Education Grant.

Editorial Responsibilities:

June 2017 to Current	Invited Referee for <i>Journal of Cognitive Engineering and Decision Making</i> . One review completed.
August 2016	Reviewed book proposal for Routledge Publishing. London, U.K.
July 2016 to Current	Invited Referee for <i>Safety Science</i> . Two reviews completed.
July 2016 to Current	Invited Editorial Board Member for International Journal of Aeronautical Science & Aerospace Research (IJASAR). Have either supervised or completed three reviews thus far.
July 2015	Reviewed book proposal for Ashgate Publishing Company. London, U.K.
January 2015 to Current	Invited Referee for <i>Process Safety and Environmental Protection</i> . The official journal of the European Federation of Chemical Engineering. The Netherlands.
December 2013	Reviewed ISCRR grant proposal for use of technology in traumatic brain injury patients. Monash University, Queensland, Australia.

- April 2012 Reviewed book proposal for Ashgate Publishing. London, U.K.
- Oct 2009 Reviewed book proposal for Ashgate Publishing. London, U.K.
- Oct 1993-Feb 1999 Creator and Senior Editor- *The Antidote*. The Central Ohio Poison Control Center's Educational Newsletter. Children's Hospital. Columbus, Ohio.
- Mar1991-Mar 1992 Review Editor. *Pre-hospital Drug Therapy*. Text book project. Gonsoulin SH, Raynovich, Mosby Lifeline Publishing. New York.
- Sept 1990-Sept 1996 Review Editor. Journal of Emergency Medical Services (JEMS). EMS Journal. Pharmacology and Toxicology related chapters.

Professional Organizations:

- May 2016 Associate Member – Society of Experimental Test Pilots
- June 2015 Associate Member – The Charter Institute for Ergonomics and Human Factors
- February 2015 Member - Royal Aeronautical Society
- July 2013 Member - The Honor Society
- March 2013 Member - Resilience Engineering Association
- September 2012 Member - Phi Kappa Phi Honor Society
- December 2011 Member - Institute of Electrical and Electronic Engineers (IEEE)
- August 2008 Associate Member - Human Factors and Ergonomics Society
- May 2003 Member - Association for Aviation Psychology (AAP).
- June 2003 Associate Member - International Society of Air Safety Investigators (ISASI).

Honors:

- 2013 Invited member of the Honor Society based on grade point average.
- 2012 Invited member of Phi Kappa Phi Honor Society. Grade point in top 10% of graduate students at Ohio State.
- 2006 Graduated with distinction. GPA 4.0. Master of Science; Master of Aeronautical Science – Human Factors. Embry-Riddle Aeronautical University. Daytona Beach, Florida.
- 1990 Honor Graduate. Paramedic class of 1990. Highest GPA. Grant Medical Center Paramedic Program.
- 1989 Pfizer Award for excellence in community Pharmacy practice.

Community Work:

- 2015 – Present Instructor at the Port Columbus Regional Airport Authority “Fear of Flying” course for the general public. In conjunction with OSU Department of Psychology.
- 2008 - 2015 Church volunteer, crosswalk guard and concession work at events.
- 2007 - 2014 Local community sports coach for 5/6-year-old sports. Basketball, baseball and soccer.
- 2006 - 2007 GRE tutoring. Helped prospective GRE students with math and reading skills.

References:

Capt. (Ret.) Shawn Etcher – Operations Factors Air Safety Investigator, National Transportation Safety Board (NTSB). (202) 527-4610

Dr. Barbara K. Burian - Research Psychologist. Human Systems Integration Division NASA Ames Research Center. (706) 348-1617

Capt. (Ret.) Mitch Serber – Chief Safety Officer, Boeing Executive Flight Operations. (703) 983-1629

Capt. (Ret.) Alan Dean – Safety Officer, Boeing Aircraft. (219) 669-1737

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