

MECHANICAL, INDUSTRIAL, AND MANUFACTURING ENGINEERING

OREGON STATE UNIVERSITY

College of Engineering

FUNK II, Kenneth H.

Associate Professor

BIRTH DATE

January 7, 1953

DEGREES

B.A., Biology, Taylor University, 1975

M.S., Industrial & Systems Engineering, The Ohio State University, 1977

Ph.D., Industrial & Systems Engineering, The Ohio State University, 1980

ACADEMIC POSITIONS

Assistant Professor, Oregon State University, 1980-1998

Associate Professor, Oregon State University, 1998-

ACADEMIC ADMINISTRATIVE POSITIONS

Associate Department Head, Industrial and Manufacturing Engineering, 2003-2005, 2006-2007

Interim Department Head, Industrial and Manufacturing Engineering, 2005-2006

Interim Associate Head, Mechanical, Industrial, and Manufacturing Engineering, 2007-2008

NON-ACADEMIC POSITIONS

ASEE/Navy Summer Faculty Researcher, Navy Personnel Research and Development Center, San Diego, CA, 1981-82

Engineering Research Psychologist, Navy Personnel Research and Development Center, San Diego, CA, Summer and Part Time, 1985-86

FIELDS OF SPECIALIZATION

Human Factors Engineering/Ergonomics

Aviation Human Factors/Psychology

Health Care Human Factors

Systems Engineering

Engineering Ethics/Philosophy of Technology

PROFESSIONAL ACTIVITIES

Professional Societies

Human Factors and Ergonomics Society

Committees, Commissions and Boards

Member, National Research Council Panel on Modeling Human Behavior and Command Decision Making, 1996-1998

Co-chair, Aviation Safety and Human Factors Research Consortium, 1999-Oregon State University

Chair, Covell Hall Safety Committee, 1980-84

Member, Academic Requirements Committee, 1983-85

Member, Faculty Microcomputer Selection Committee, 1984

Chair, Academic Requirements Committee, 1984-85

College of Engineering

Chair, Curriculum Committee, 2004-

Member, Curriculum Committee, 1984-85
 Member, Computer Facilities Advisory Committee, 1985-91
 Member, Research Advisory Committee, 1996-
 Industrial & Manufacturing Engineering
 Member, Graduate Committee, 1980-
 Chair, Graduate Committee, 1998-2001
 Adviser, Alpha Pi Mu, Industrial Engineering Honor Society, 1980-93
 Member, Equipment Committee, 1984-93
 Manager, Computer Labs, 1987-88; 1989-91
 Chair, Faculty Search Committee, 1988-89, 2001
 Member, Undergraduate Curriculum Committee, 1992-1997
 Chair, Undergraduate Curriculum Committee, 1992-93, 1995-1997
 Member, Department Head Search Committee, 2000
 Member, Promotion and Tenure Committee, 2000-2005
 Mechanical, Industrial, and Manufacturing Engineering
 Member, IME Faculty Search Committee, 2008, 2011-2012
 Member, MIME Computer Committee, 2009-2010
 Member, MIME IME Undergraduate Program Committee, 2010-2012
 Member, MIME IME Graduate Program Committee, 2010-2012
 Member, MIME Awards Committee, 2009-2016
 Chair, Industrial and Manufacturing Engineering Undergraduate Program Committee, 2016-
 Member, MIME Peer Teaching Evaluation Committee, 2016-
 Oversight of Academic Integrity processes, 2017-

Panels

Invited panelist, "A Discussion of Human-Centered Technology," at the Human Factors and Ergonomics Society 40th Annual Meeting, Philadelphia, PA, September 2-6, 1996.
 Invited panelist, "Rockwell Collins Human-Computer Interaction Forum," Cedar Rapids, IA, April 6, 1999.

PUBLICATIONS

Books

Pew, R.W. and A.S. Mavor (editors) and National Research Council Panel on Modeling Human Behavior and Command Decision Making (K. Funk, member), *Representing Human Behavior in Military Simulations*, Washington, DC: National Academy Press, 1997.
 Pew, R.W. and A.S. Mavor (editors) and the National Research Council Panel on Modeling Human Behavior and Command Decision Making (K. Funk, member), *Modeling Human and Organizational Behavior: Application to Military Simulations*, Washington, DC: National Academy Press, 1998.

Book Chapters

Funk, K.H., E.A. Lyall, and M.C. Niemczyk, "Flightdeck Automation Problems: Perceptions and Reality," in M. Mouloua and J.M. Koonce, editors, *Human-Automation Interaction: Research and Practice*, Mahwah, NJ: Lawrence Erlbaum Associates, 1997.

Technical Journals

Funk, K.H., "Theories, Models, and Human-Machine Systems," *Mathematical Modelling*, Vol. 4, No. 6, 1983, pp. 567-587.
 Funk, K.H., E.D. McDowell and S.A. Stone, "An Evaluation of Micro PLATO FORTRAN 77 Instruction," *Engineering Education*, Vol. 76, No. 5, February 1986, pp. 293-297.

- Funk, K.H., "A Knowledge-Based System for Tactical Situation Assessment," *Annals of Operations Research*, Vol. 12, 1988, pp. 285-296.
- Funk, K.H., "Cockpit Task Management: Preliminary Definitions, Normative Theory, Error Taxonomy, and Design Recommendations," *The International Journal of Aviation Psychology*, Vol. 1, No. 4, 1991, pp. 271-285.
- Funk, K.H. and J.H. Lind, "Agent-Based Pilot-Vehicle Interfaces: Concept and Prototype," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 22, No. 6, 1992, pp. 1309-1322.
- Chou, C.D., D. Madhavan, and K.H. Funk, "Studies of Cockpit Task Management Errors," *International Journal of Aviation Psychology*, Vol. 6, No. 4, 1996, pp. 307-320.
- Funk, K. and B. Lyall (co-editors), *International Journal of Aviation Psychology*, Vol. 9, No. 2, Special Issue: Aircraft Automation, 1999.
- Funk, K., B. Lyall, J. Wilson, R. Vint, M. Niemczyk, C. Suroteguh, and G. Owen, "Flight Deck Automation Issues," *International Journal of Aviation Psychology*, Vol. 9, No. 2, 1999, pp. 109-123.
- Besco, R.O. and K. Funk, "Conceptual Guidelines to Rediscover Systems Engineering for Automated Flight Decks," *International Journal of Aviation Psychology*, Vol. 9, No. 2, 1999, pp. 189-198.
- Colvin, K., K. Funk, and R. Braune, "Task Prioritization Factors: Two Part-Task Simulator Studies," *International Journal of Aviation Psychology*, Vol. 15, No. 4, pp. 321-338, 2005.
- Shakeri, S. and K. Funk, "A Comparison of Human and Near-Optimal Task Management Behavior," *Human Factors*, Vol. 49, No. 3, 2007, pp. 400 - 416.
- K. Funk, "Thinking Critically and Christianly About Technology" *Perspectives on Science and Christian Faith*, Vol. 59, No. 3, 2007, pp. 201 – 211.
- Funk, K.H., J.D. Bauer, T.L. Doolen, D. Telasha, R.J. Nicolalde, M. Reeber, N. Yodpijit, and M. Long, "The Use of Modeling to Identify Vulnerabilities to Human Error in Laparoscopy," *The Journal of Minimally Invasive Gynecology* Vol. 17, No. 3, 2010, pp. 311-320.
- Feuerbacher, R.L., Funk II, K.H., Spight, D.H., Diggs, B.S., and Hunter, J.G., "Realistic Distractions and Interruptions Impair Simulated Surgical Performance by Novice Surgeons", *Archives of Surgery*, Vol. 147, No. 11, November 2012, pp. 1026-1030.
- Lee, Wei-Tau, Blumenthal, J.A., and Funk, K.H., "A Buddhist Perspective on Industrial Engineering and the Design of Work," *Science and Engineering Ethics*, Vol. 20, Issue 2, June 2014, pp. 551-569.
- Jannat, Mafruhatal, Hurwitz, David, Monsere, and Funk II, Kenneth H., "The role of driver's situational awareness on right-hook bicycle-motor vehicle crashes," *Safety Science*, Vol. 110, Part A, December 2018, pp. 92-101.

Refereed Conference Proceedings

- Funk, K.H. and R.A. Miller, "Towards a Goals/Resources/Tasks Model of Man-Machine Systems," *Proceedings, International Conference on Cybernetics and Society*, IEEE Systems, Man, and Cybernetics Society, 1979.
- Funk, K.H. and E.D. McDowell, "Voice Input/Output in Perspective," *Proceedings of the Human Factors Society - 26th Annual Meeting*, Seattle, WA, October 25-29, 1982.
- Funk, K.H., "Symbolic Structures and the Human Operator," *IEEE 1982 Proceedings of the International Conference on Cybernetics and Society*, Seattle, WA, October 28-30, 1982.
- Funk, K.H. and T.M. West, "Personal Computer Applications in Industrial Engineering," *Proceedings of the 1983 Fall Industrial Engineering Conference*, November 13-16, 1983, pp. 81-86.
- Funk, K.H., "A Prototype Tactical Workstation," *1985 Proceedings of the International Conference on Cybernetics and Society*, November 12-15, 1985.
- Kim, J.H., E.F. Fichter, and K.H. Funk, "Building an Expert System for FMS Scheduling," *Proceedings USA-Japan Symposium on Flexible Automation*, Minneapolis, MN, July 18-20, 1988.

- Funk, K.H., "The IAAS Task Support Subsystem: A Task-Oriented Pilot-Vehicle Interface," *Proceedings of the IJCAI-89 Workshop on Integrated Human-Machine Intelligence in Aerospace Systems*, Detroit, MI, August 21, 1989, pp. 100-111.
- Funk, K.H., "Development of a Task-Oriented Pilot-Vehicle Interface," *Proceedings of the 1989 IEEE International Conference on Systems, Man, and Cybernetics*, Cambridge, MA, November 14-17, 1989, pp. 250-252.
- Chou, C.D. and K.H. Funk, "Development and Validation of a Theory of Human Operator Behavior in a Multitask Environment," *Proceedings of the 1989 IEEE International Conference on Systems, Man, and Cybernetics*, Cambridge, MA, November 14-17, 1989, pp. 1154-1156.
- Kim, S.U. and K.H. Funk, "A Knowledge-Based Expert Systems Approach to Schedule-Based Material Requirements Planning," *Proceedings of the 1990 IEEE International Conference on Systems, Man, and Cybernetics*, Los Angeles, CA, November 4-7, 1990, pp. 98-101.
- Funk, K.H., "Cockpit Task Management," *Proceedings of the 1990 IEEE International Conference on Systems, Man, and Cybernetics*, Los Angeles, CA, November 4-7, 1990, pp. 466-469.
- Chou, C.D. and K.H. Funk, "Management of Multiple Tasks: Cockpit Task Management Errors," *Proceedings of the 1990 IEEE International Conference on Systems, Man, and Cybernetics*, Los Angeles, CA, November 4-7, 1990, pp. 470-474.
- Funk, K.H., "Cockpit Task Management," *Fourth Annual Workshop on Space Operations, Applications, and Research (SOAR '90)* (NASA Conference Publication 3103), Albuquerque, NM, June 26-28, 1990, pp. 508-520.
- Funk, K., "Cockpit Task Management: Preliminary Definitions, Theory, and Design Recommendations," *Proceedings of the Sixth International Symposium on Aviation Psychology*, Columbus, OH, April 29-May 2, 1991, pp. 222-226.
- McCoy, W.E. and K.H. Funk, "Taxonomy of ATC Operator Errors Based on a Model of Human Information Processing," *Proceedings of the Sixth International Symposium on Aviation Psychology*, Columbus, OH, April 29-May 2, 1991, pp. 532-537.
- Funk, K. and W.C. Cha, "Notional Displays for Yarder Cable Tensions," *Proceedings of the International Mountain Logging and Eighth Pacific Northwest Skyline Symposium*, Bellevue, WA, December 14-16, 1992, pp. 87-95.
- Chou, C.D. and K. Funk, "Cockpit Task Management Errors in a Simulated Flight Operation," *Proceedings of the Seventh International Symposium on Aviation Psychology*, Columbus, OH, April 26-29, 1993, pp. 965-969.
- Madhavan, D. and K. Funk, "Cockpit Task Management Errors in Critical In-Flight Incidents," *Proceedings of the Seventh International Symposium on Aviation Psychology*, Columbus, OH, April 26-29, 1993, pp. 970-974.
- Funk, K., B. Lyall, and V. Riley, "Flightdeck Automation Problems," *Proceedings of the Eighth International Symposium on Aviation Psychology*, Columbus, OH, April 27-29, 1995, pp. 265-269.
- Sukhia, C. and K. Funk, "Functional Model of Crew Performance: A Systems Engineering Perspective," *Proceedings of the Eighth International Symposium on Aviation Psychology*, Columbus, OH, April 27-29, 1995, pp. 522-527.
- Kim, J.N. and K. Funk, "An Aid to Facilitate Cockpit Task Management Performance," *Proceedings of the Eighth International Symposium on Aviation Psychology*, Columbus, OH, April 27-29, 1995, pp. 196A-196E.
- Funk, K. and J.N. Kim, "Agent-Based Aids to Facilitate Cockpit Task Management," *Proceedings of the 1995 IEEE Conference on Systems, Man, and Cybernetics*, Vancouver, BC, Canada, October 22-25, 1995, pp. 1521-1526.
- Funk, K. and B. McCoy, "A Functional Model of Flightdeck Agenda Management," *Proceedings of the Human Factors and Ergonomics Society 40th Annual Meeting*, Philadelphia, PA, September 2-6, 1996, pp. 254-258.

- Cha, W.C. and K. Funk, "Recognizing Pilot Goals to Facilitate Agenda Management," *Proceedings of the Ninth International Symposium on Aviation Psychology*, Columbus, OH, April 27-May 1, 1997, pp. 268-273.
- Lyall, B., M. Niemczyk, and K. Funk, "Flightdeck Automation: Evidence for Existing Problems," *Proceedings of the Ninth International Symposium on Aviation Psychology*, Columbus, OH, April 27-May 1, 1997, pp. 848-852.
- Funk, K. and R. Braune, "Expanding the Functionality of Existing Airframe Systems Monitors: The Agenda Manager," *Proceedings of the Ninth International Symposium on Aviation Psychology*, Columbus, OH, April 27-May 1, 1997, pp. 887-892.
- Cha, W.C. and K. Funk, "Communicating Goals to an Intelligent Cockpit Aiding System," *Proceedings of the 1997 IEEE International Conference on Systems, Man, and Cybernetics*, Orlando, FL, October 12-15, 1997, pp. 3114-3119.
- Funk, K., W.C. Cha, R. Wilson, J. Zaspel, and R. Braune, "Development and Evaluation of an Aid to Facilitate Agenda Management," *Proceedings of the 1997 IEEE International Conference on Systems, Man, and Cybernetics*, Orlando, FL, October 12-15, 1997, pp. 3120-3125.
- Wilson, J. and K. Funk, "The Effect of Automation on the Frequency of Task Prioritization Errors on Commercial Aircraft Flight Decks: An ASRS Incident Report Study," *Proceedings of the Second Workshop on Human Error, Safety, and System Development*, Seattle, WA, April 1-2, 1998, pp. 6-16.
- Funk, K., J. Wilson, C. Suroteguh, and B. Lyall, "Flight Deck Automation and Task Management," *Proceedings of the IEEE 1998 International Conference on Systems, Man, and Cybernetics*, San Diego, CA, October 11-14, 1998, pp. 863-868.
- Funk, K. and B. Lyall, "Human Factors Issues of Flight Deck Automation," *Proceedings of the 17th Digital Avionics Systems Conference*, Bellevue, WA, October 31-November 6, 1998.
- Funk, K. and R. Braune, "The AgendaManager: A Knowledge-Based System to Facilitate the Management of Flight Deck Activities," SAE 1999-01-5536, SAE International, Warrendale, PA, presented at 1999 World Aviation Congress, San Francisco, CA, October 19-21, 1999.
- Colvin, K. and K. Funk, "Identification of Factors that Affect Task Prioritization on the Flight Deck," *Proceedings of the Fifth Annual Conference on Human Interaction with Complex Systems*, University of Illinois at Urbana-Champaign, April 30-May 2, 2000.
- Suroteguh, C. and K. Funk, "The Effect of Flight Deck Automation and Automation Proficiency on Cockpit Task Management Performance," *Proceedings of the 11th International Symposium on Aviation Psychology*, Columbus: The Ohio State University, March 5-8, 2001.
- Colvin, K. and K. Funk, "Investigating the Basis for Task Prioritization," *Proceedings of the 11th International Symposium on Aviation Psychology*, Columbus: The Ohio State University, March 5-8, 2001.
- Bishara, S. and K. Funk, "Training Pilots to Prioritize Tasks," *Proceedings of the Human Factors and Ergonomics Society 46th Annual Meeting*, Baltimore, MD, September 30-October 4, 2002, pp. 96-100.
- Doolen, T., Funk, K., Liu, C. and Botney, R., "Operating Room Human-Machine Systems Engineering: OR Modeling," *Proceedings of the Second Society for Health System (SHS) Management Engineering Forum*, San Diego, CA, February 7, 2003.
- Funk, K., Nicolalde, J., and Bishara, S., "Can Concurrent Task Management Be Trained?," *Proceedings of the 12th International Symposium on Aviation Psychology*, Dayton, OH, April 14-17, 2003.
- Chen, J. and Funk, K., "A Fuzzy Model of Human Task Management Performance," *Proceedings of the IIE 2003 Annual Conference*, Portland, OR, May 17-21, 2003.

- Nicolalde, J., Funk, K., and Uttl, B. "How Well Do Cognitive Abilities Predict Concurrent Task Management Performance?" *Proceedings of the IIE 2003 Annual Conference*, Portland, OR, May 17-21, 2003.
- Shakeri, S. and Funk, K., "A Comparison Between Humans and Mathematical Search-Based Solutions in Managing Multiple Concurrent Tasks," *Proceedings of the IIE 2003 Annual Conference*, Portland, OR, May 17-21, 2003.
- Funk, K.H., T.L. Doolen, R. Botney, and J.D. Bauer, "A Functional Model of the Operating Room," *Proceedings of the Human Factors and Ergonomics Society 47th Annual Meeting*, October 13-17, 2003, Denver, CO, pp. 1569-1573.
- Hoover, A. and K. Funk, "Experimental Analysis of Task Prioritization Training for a Group of University Flight Technology Students," *Proceedings of the 2005 International Symposium on Aviation Psychology*, Oklahoma City, OK, April 18-21, 2005, pp. 247-252.
- Funk, K., T. Doolen, J. Nicolalde, J.D. Bauer, D.P. Telasha, M. Reeber, "A Methodology to Identify Systemic Vulnerabilities to Human Error in the Operating Room," *Proceedings of the Human Factors And Ergonomics Society 50th Annual Meeting*, San Francisco, CA, October 16-20, 2006, pp. 999-1003.
- Lee, S, K.H. Funk II, R. Feuerbacher, Y.C. Hsiao, "Development of an Emergency C-Section Facilitator Using a Human-Machine Systems Engineering Approach," *Proceedings of the IIE Annual Conference and Expo 2007*, Nashville, TN, May 19-23 2007, pp. 1630-1635.
- Feuerbacher, R., K.H. Funk II, N. Yodpigit, D. Blatt, "Methodology to Identify Systemic Vulnerabilities to Human Error during General Anesthesia Administration", *Proceedings of the 2008 Industrial Engineering Research Conference*, J. Fowler and S. Mason, eds., Vancouver, BC, May 17-21, 2008, pp. 799 – 804.
- Hastings, M. and K.H. Funk II, "Improving the Navigation and Information Integration of Complex Process Models: A Case Study Using IDEF0," *Proceedings of the 2008 Industrial Engineering Research Conference*, J. Fowler and S. Mason, eds., Vancouver, BC, May 17-21, 2008, pp.1172 – 1177.
- Funk, K., "A Methodology and Tools for the Prospective Identification of NextGen Human Factors Issues," *Proceedings of the 15th International Symposium on Aviation Psychology*, Dayton, OH, April 27 – 30, 2009, pp. 106 – 111.
- Funk, K., R. Mauro, and I. Barshi, "NextGen Flight Deck Human Factors Issues," *Proceedings of the 15th International Symposium on Aviation Psychology*, Dayton, OH, April 27 – 30, 2009, pp. 208 – 213.
- Lee, W., Haapala, K.R., & Funk II, K.H., "Defining the Dimensions of Human Work for Industrial Sustainability Assessment", *2010 CIRP Life Cycle Engineering Conference*, 17, pp. 384 – 389.
- Lee, W-T., Haapala, K.R., Edwards. M.E., and Funk, K.H., "A Framework for the Evaluation and Redesign of Human Work Based on Societal Factors," *Leveraging Technology for a Sustainable World: Proceedings of the 19th CIRP Conference on Life Cycle Engineering*, University of California at Berkeley, Berkeley, USA, May 23 - 25, 2012, pp. 575 – 580.
- Morowsky, K., & Funk II, K.H., "Understanding Differences in Helicopter Mission Sets Prior to Human Error Analysis," *Proceedings of the Human Factors and Ergonomics Society 2016 Annual Meeting*, Washington, DC, September 19-23, 2016, pp. 1439 - 1443.

Reports and Others

- Funk, K.H. and R.A. Miller, "Formal Analytical Structure for Manned Systems Analysis," Columbus, OH: The Ohio State University Research Foundation, 1979.
- Malone, J.S., R.W. Obermayer, E.R.N. Robinson, and K.H. Funk, "Accuracy, Timeliness, and Useability of Experimental Source Data Modules," NPRDC TR 83-1, San Diego, CA: Navy Personnel Research and Development Center, 1982.

- Funk, K.H., F.L. Greitzer, and S.G. Hutchins, "Prototype Intelligent Tactical Assistant (ITA): I. Conceptual Design and Initial Implementation," NPRDC TR 84-38, San Diego, CA: Navy Personnel Research and Development Center, 1984.
- Funk, K.H. and F.L. Greitzer, "Computer-Aided Tactical Situation Assessment: Progress Report and Annotated Bibliography," HFOSL Technical Note 71-86-14, San Diego, CA: Navy Personnel Research and Development Center, 1986.
- Funk, K.H., J.L. Kaiwi, and K. Fernandez, "Development of a Facility for Evaluating the Interface Design of Submarine Combat Systems: A Progress Report," NPRDC Technical Note 88-19, San Diego, CA: Navy Personnel Research and Development Center, 1988.
- Funk, K.H. and J.L. Kaiwi, "Development of a Decision Support System for Submarine Approach Officers: A Progress Report," NPRDC Technical Note 88-56, San Diego, CA: Navy Personnel Research and Development Center, 1988.
- Funk, K.H. and C.D. Chou, *The IAAS Task Support Subsystem: Theory and Implementation*, Corvallis, OR: Oregon State University, Department of Industrial and Manufacturing Engineering, August 18, 1989.
- Funk, K.H., *The IAAS Task Support Subsystem: Theory and Implementation*, NWC TM 6640, China Lake, CA: Naval Weapons Center, September 1989.
- Funk, K., B. Lyall, and V. Riley, *Perceived Human Factors Problems of Flightdeck Automation*, Corvallis, OR: Oregon State University, Department of Industrial and Manufacturing Engineering, December 1995.
- Bauer, J.D., R. Botney, T.L. Doolen, and K.H. Funk, "A Careful Examination," *Industrial Engineer*, November 2003, pp. 47-51.
- Funk, K., *Family of Weapons Sights FWS-CS/S User Interface: Recommended Requirements and Design Concepts*, Corvallis, OR: Oregon State University School of Mechanical, Industrial, and Manufacturing Engineering, 28 January 2016.
- Funk, K., *Targeting Device User Interfaces Volume I: Concept Development, Prototypes, and Recommendations for Laser System Operating Paradigm (LSOP) 2*, Corvallis, OR: Oregon State University School of Mechanical, Industrial, and Manufacturing Engineering, 28 November 2016.

Presentations and Short Courses

- West, T.M. and K.H. Funk, "A Decision Support System for Manufacturing Cost Estimating," ORSA/TIMS Joint National Meeting, November 4-6, 1985.
- Funk, K.H. and J.H. Lind, "IAAS: An Intelligent Interface for Naval Attack Aircraft," DoD Human Factors Technical Group Meeting 19, Oxnard, CA, November 16-19, 1987.
- Funk, K.H., "Agent-Based Pilot-Vehicle Interfaces: Concept and Prototype," TIMS/ORSA Joint National Meeting, Las Vegas, NV, May 7-9, 1990.
- Funk, K., "Aviation Human Factors Projects at Oregon State University," Third Annual Aviation Safety/Automation Program Investigators Meeting, NASA Ames Research Center, 19-21 August 1992.
- Funk, K. and W.C. Cha, "Yarder Cable Tension Displays," Human Factors and Ergonomics Society 37th Annual Meeting, Seattle, WA, October 11-15, 1993.
- Madhavan, D. and K. Funk, "Cockpit Task Management: An ASRS Incident Report Study," Human Factors and Ergonomics Society 37th Annual Meeting, Seattle, WA, October 11-15, 1993.
- Funk, K., "AA Theory and Model of Task Management," (invited presentation), Cognitive Modelling Workshop, NASA Ames Research Center, February 23-25, 1994.
- Funk, K., "Integrative Architectures for Representing the Individual Combatant," Seventh Conference on Computer Generated Forces and Behavioral Representation, Orlando, FL, May 12-14, 1998.
- Funk, K. and R. Braune, First Aviation Human Factors Workshop, Taipei, Taiwan, March 10-11, 1999.

- Funk, K., "Cockpit Task Management in the Context of Free Flight," 5th CNS/ATM Conference, Taipei, Taiwan, March 1-2, 2000.
- Bauer, J.D., K. Funk, H. Hasson, J. Nicolaide, J. Rosser, S. Saha, and R. Vasquez, "New Perspectives in Safety and Surgery Curriculum," Continuing Medical Education course, International College of Surgeons United States Section 66th Annual Surgical Update, Alaska, July 19, 2004.
- Funk, K. and T. Brace, "The Role of Human Error in Accidents", Workshop, 2005 Oregon Governor's Occupational Safety and Health Conference, Portland, Oregon, February 28 – March 3, 2005.
- Funk II, K.H., "Technological Distraction," Joint Meeting of the American Scientific Affiliation and the Canadian Scientific and Christian Affiliation, August 1-4, 2008, Newberg, Oregon.
- Feuerbacher, R.L., Funk II, K.H., Spight, D.H., Diggs, B.S., Hunter, J.G., Realistic Distractions and Interruptions Impair Surgical Performance, Pacific Coast Surgical Association 2012 Annual Meeting, February 17–20, 2012, Silverado Resort, Napa Valley, CA.

RESEARCH

- "Prototype Intelligent Tactical Assistant," U.S. Navy/Battelle Columbus Laboratories, \$13,208/6 months, March 1, 1983 - August 31, 1983. K.H. Funk, PI.
- "Interface for a Tactical Decision Aid," U.S. Navy/Battelle Columbus Laboratories, \$30,143/7 months, April 1, 1984-October 31, 1984. K.H. Funk, PI.
- "Intelligent Air Attack System: Aircrew Interface Module," U.S. Navy/Computer Sciences Corporation, \$39,901/7 months, March 5, 1986-September 30, 1986. K.H. Funk, PI.
- "Intelligent Air Attack System: Aircrew Interface Module Version 2," U.S. Navy/Computer Sciences Corporation, \$70,041/9 months, November 10, 1986-August 9, 1987. K.H. Funk, PI.
- "Intelligent Air Attack System: Pre-Mission Briefing and Information Integration Subsystems," U.S. Navy/Computer Sciences Corporation, \$146,912/24 months, October 1, 1987-September 30, 1989. K.H. Funk, PI.
- "An Expert System-Based Furniture Shop Scheduling System," A-DEC, Inc., \$9,814/9 months, January 1, 1988-September 30, 1988. E.D. McDowell, S.U. Randhawa, and K.H. Funk, Co-PIs.
- "IAAS Task Support Subsystem," U.S. Naval Weapons Center, \$49,507/9 months, January 4, 1988-September 30, 1988. K.H. Funk, PI.
- "Mission Task Management System: Initial Prototype," OSU Research Council, \$1,950/12 months, February 6, 1990-February 5, 1991. K.H. Funk, PI.
- "Yarder Operator Decision Aid," OSU Center For Wood Utilization Research, \$10,000/6 months, February 1, 1992-July 31, 1992. K.H. Funk and E. Olsen, Co-PIs.
- "Northwest Workshop on Occupational Safety and Health in the Engineering Curriculum," NIOSH, \$9,964/9 months, September 25, 1991-June 3, 1992. K.H. Funk, PI.
- "An Agent-Based Cockpit Task Management System," National Aeronautics and Space Administration Ames Research Center, \$446,498/49 months, October 1, 1993-October 31, 1997. K.H. Funk, PI.
- "A Comparative Analysis of Flightdecks with Varying Levels of Automation," Federal Aviation Administration, \$2,197,007/6 years 9 months, July 16, 1993-April 30, 2000. K.H. Funk and E. Lyall (Research Integrations, Inc.), Co-PIs.
- "Training Pilots to Prioritize Tasks," National Aeronautics and Space Administration Ames Research Center, \$236,465/48 months, February 15, 1999-February 14, 2003.
- "RII FAA Certification Job Aid," Research Integrations, Inc., \$321,132/48 months, May 1, 2000-April 15, 2004. K.H. Funk, PI.

“Operating Room Human-Machine Systems Engineering: Modeling the OR,” Samaritan Health Services, Erkkila Grant, \$12,000/12 months, January 1, 2003-December 31, 2003. T.L. Doolen and K.H. Funk, Co-PIs

“RII FAA Certification Job Aid Phase 2,” Research Integrations, Inc., \$140,688/17 months, April 23, 2004-August 31, 2005. K.H. Funk, PI.

“Occupational Safety and Health Training,” National Institute of Occupational Safety and Health, \$64,990/36 months, July 1, 2002-June 30, 2006. J. Woldstad, former PI.

“Development of Vulnerability Analysis Matrix Software for Operating Rooms,” Samaritan Health Services, Erkkila Grant, \$12,000/12 months, January 1, 2005-December 31, 2005. T.L. Doolen and K.H. Funk, Co-PIs.

“Inspection Process Human Error Analysis,” Tektronix, Inc., \$7,131/3 months, June 1, 2008 – August 31, 2008. K.H. Funk, PI.

“Identification of Vulnerabilities to Human Error in the Part Inspection Process,” PCC Structurals / Oregon Metals Initiative, \$54,215/12½ months, August 11, 2009 – August 31, 2010. K.H. Funk, PI.

“Human Factors Issues of ADS-B and Cockpit Displays of Traffic Information,” Oregon NASA Space Grant Consortium, \$59,971 (plus \$62,250 OSU/UO match)/35½ months, June 1, 2008 – May 14, 2011. K.H. Funk, PI.

“Swing Grinder Operator Interface,” PCC Structurals, Inc. and the Oregon Metals Initiative, \$26,146 / 15 months, October 1, 2011 – December 31, 2012. K.H. Funk, PI.

“Improved Stabilization Devices for Precision Targeting Devices (PTDs) Carried By Dismounted Soldiers,” Johns Hopkins Applied Physics Lab / US Army, \$89,883 / 13.5 months, August 30, 2011 – October 17, 2012. K.H. Funk, PI.

“Emergency Cesarean Delivery Facilitator,” Bauer Labs LLC/National Institutes of Health, \$63,457 / 25 months, March 1, 2013 – March 31, 2015. K.H. Funk, PI.

“Provide support to (1) develop technical drawing packages for Precision Targeting Devices (PTD) stabilization devices, (2) develop a rapid prototyping system for PTD Graphical User Interfaces (GUIs), and (3) develop and evaluate one or more novel GUIs,” Johns Hopkins Applied Physics Lab / US Army, \$126,000 / 10 months, November 5, 2014 – August 15, 2014.

“Reducing Visual Inspector Error,” PCC Structurals, Inc. and the Oregon Metals Initiative, \$29,679 / 23 months, October 1, 2011 – June 30, 2015. K.H. Funk, PI.

“Precision Targeting Device Stabilizers and User Interface,” Johns Hopkins University Applied Physics Lab / US Army, \$136,881 / 13 months, September 4, 2012 – September 30, 2013. K.H. Funk and J. Parmigiani, Co-PIs.

“Emergency Cesarean Delivery Facilitator,” Bauer Labs, Inc. / National Institutes of Health, \$63,457 / 13 months, March 1, 2013 – March 31, 2014. K.H. Funk, PI.

“Provide support to (1) develop technical drawing packages for Precision Targeting Devices (PTD) stabilization devices, (2) develop a rapid prototyping system for PTD Graphical User Interfaces (GUIs), and (3) develop and evaluate one or more novel GUIs,” Johns Hopkins University Applied Physics Lab / US Army, \$126,000 / 10 months, November 5, 2013 – September 5, 2014. K.H. Funk and J. Parmigiani, Co-PIs.

“Development of Family of Weapon Sights - Crew Served (FWS-CS) and Sniper (FWS-S) Human Factors Evaluations,” Alion Science and Technology / US Army, \$124,917, 13 months, June 20, 2014 – June 29, 2015. K.H. Funk, PI.

“Provide support for the development of Precision Targeting Device (PTD) User Interface,” Johns Hopkins University Applied Physics Lab / US Army, \$120,000 / 15 months, September 10, 2014 – December 31, 2015. K.H. Funk, PI.

“Provide support for improved operability of digital magnetic compasses (DMCs) in precision targeting devices,” Johns Hopkins University Applied Physics Lab / US Army, \$125,892 / 14 months, January 1, 2017 – February 28, 2018. K.H. Funk, PI.

PATENTS

Bauer, J.D., Funk II, K.H., Flores, R.N., “Intelligent human-machine interface,” US Patent 7,966,269, June 21, 2011.

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