

## CURRICULUM VITAE

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*Professor of Industrial and Systems Engineering and Human Factors Engineering*

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### Education:

<u>Institution</u>	<u>Concentration</u>	<u>Degree/Date</u>
Virginia Polytechnic Institute and State University, Blacksburg, VA	Industrial Engineering & Operations Research Human Factors Engineering	Ph.D., 1989
California State University, Northridge	Psychology, Applied Experimental	M.A., 1985
California State University, Northridge	Psychology	B.A., 1983

### Professional Experience:

<u>Institution</u>	<u>Position</u>	<u>Dates</u>
Wright State University	Professor	Sept 2000 – Present
HumanWise, Inc.	President	Feb 2000 – Present
Private Pilot		Licensed June 2002
Wright State University, Dayton	Associate Professor	Sept 1994 – Oct 2000
Wright State University, Dayton	Assistant Professor	Sept 1989 – Oct 1994
Virginia Polytechnic Institute and State University	Graduate Research Assistant	Sept 1985 – Sept 1989
TRW, Redondo Beach	Member of Technical Staff	July 1984 – Aug 1985

### Professional Awards and Recognition

<u>Title of Award or Recognition</u>	<u>Organization</u>	<u>Date</u>
Research Excellence Award	Wright State University	2002
Nominated Brage Golding Distinguished Prof of Research	Wright State University	2002
Honor Society Member	Tau Beta Pi	2002
Best Paper Award, Simulation & Modeling	AIAA Modeling and Simulation	2001
Award Honoring Innovative use Of Instructional Technology	Center for Teaching & Learning, WSU	2001
Channel 7 News Broadcast	Channel 7 News	2000
Dayton Daily News Article	Dayton Daily News	2000
Profile in WSU Community Magazine	WSU	2000
Nominated Arnold D. Tuttle Award	Aerospace Medical Assoc	1999
Outstanding service award	Department BIE, WSU	1997
Honor Society Member	Alpha Pi Mu	1991
Honor Society Member	Psi Chi	1988

## Scholarship/Publications

### Journals

1. Roberts, W.K. and Gallimore, J.J.(In Review). A Cybersickness State Estimation Model For Human Virtual Environment Interaction: A Neural Network Approach. *IEEE Transactions on Information Technology in Biomedicine*.
2. Prabhala, S., Gallimore, J.J, and Lucas, J.R. (In Review) Evaluating Human Interaction with Automation in a Complex UCAV Control Station Simulation Using Multiple Performance Metrics. *Behavioral and Informational Technology*.
3. Liggett, K.K. and Gallimore, J.J. (2002). The effects of frame of reference and HMD symbology on control reversal errors. *Aviation, Space, and Environmental Medicine*;73:102-111.
4. Gallimore, J.J. and Stouffer J. (2001) Developing an Algorithm for Automatic Control of Luminance in Cockpits. *International Journal of Aviation Psychology*, 11(2):149-168.
5. Gerace, J. and Gallimore, J.J. (2001) Evaluation of Visual Display Techniques for Assembly Sequence Planning. *Human Factors and Ergonomics in Manufacturing* 11(3):213-231.
6. Gallimore, J.J., Patterson, F.R., Brannon, N.G., and Nalepka, J.P. (2000). The opto-kinetic cervical reflex during formation flight. *Aviation, Space and Environmental Medicine* 2000;71:812-821
7. Gallimore J. J., Brannon, N. G., Patterson, F.R., and Nalepka, J.P. (1999). Effects of FOV and aircraft bank on pilot head movement and reversal errors during simulated flight. *Aviation, Space and Environmental Medicine*, 70(12):1152-60.
8. Stanney, K.M., Salvendy, G., Deisigner, J., DiZio, P., Ellis, S., Ellison, E., Fogleman, G., Gallimore, J., Hettinger, L., Kennedy, R., Lackner, J., Lawson, B., Maida, J., Mead, A., Mon-Williams, M., Newman, D., Piantanida, T., Reeves, L., Riedel, O., Singer, M., Stoffregen, T., Wann, J., Welch, R., Wilson, J., Witmer, B. (1998). Aftereffects and sense of presence in virtual environments: Formulation of a research and development agenda. Report sponsored by the Life Sciences Division at NASA Headquarters. *International Journal of Human-Computer Interaction*, 10(2), 135-187.
9. Patterson F. R., Cacioppo, A. J., Gallimore, J.J., Hinman, G.E., and Nalepka, J.P. (1997). Aviation spatial orientation in relationship to head position and attitude interpretation. *Aviation, Space and Environmental Medicine*, 68(6), 463-471.
10. Brown, M.E. and Gallimore, J.J. (1995). Visualizing of 3-D Structures During Computer-Aided Design. *International Journal of Human-Computer Interaction*, 7, 37-56.
11. Philips C.A., Gallimore, J. J., and Hendershot, D. M. (1995). Walking while utilizing a sensory feedback system with an electrical muscle stimulation gait orthosis. *Medical Engineering and Physics*, 17, 507-513.
12. Gallimore, J. J. and Brown M.E. (1993) Visualization of 3-D Computer-Aided Design Objects. *International Journal of Human-Computer Interaction*, 5, 361-382.
13. Gallimore, J.J. and Brown, M.E. (1993) Effectiveness of the C-Sharp: Reducing Ergonomic Problems at VDT Workstations. *Applied Ergonomics*, 24, 327-336.
14. Gallimore, J. J., Farley, W.W., and Snyder, H.L. (1991). Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity. *Displays*, 12, 147 - 155.

### Full Conference Proceedings

1. Tidball, B.E., Prabhala, S. and Gallimore, J., (Accepted) Making Faces: Exploring Perceptions of Personality Based on Emotional Expressions. Submitted to Human Factors and Ergonomics Conference, 50<sup>th</sup> Annual Meeting. San Francisco, 16-20 October, 2006.
2. Gallimore, J.J., and Prabhala, S. (Accepted). Creating Collaborative Agents with Personality for Supervisory Control of Multiple UCAVs. Human Factors and Medicine Panel Symposium on Human Factors of Uninhabited Military Vehicles as Force Multipliers. Biarritz, France, 9-11 October, 2006.
3. Gallimore, J.J., Quill, L., Cagle, R., Gruenke, J., Hosman, C., Matthews, E., Faas, P., Seyba, J. and Young, I. (2006). User Feedback on RFID and Integrated Flightline Data for Maintenance Decisions. Proceedings of the Institute of Industrial Engineers Annual Conference. May, 2006 Orlando. CDROM
4. Ganapathy. S., Prabhala, S., Narayanan, S., Hill, R.R., and Gallimore, J.J. (2006). Generation of Alternatives Using Interactive Optimization Techniques for Supervisory Control of Unmanned Aerial Vehicles System. Proceedings of the Institute of Industrial Engineers Annual Conference. Orlando, Florida, 20-24 May, 2006 CDROM.

5. Roberts, W.K, and Gallimore, J.J. (2005). Progress towards a Physiological Model of Cybersickness during Virtual Environment Interaction. *Proceedings of the Human Factors and Ergonomics Society 49<sup>th</sup> Annual Meeting*. September 26-30. Orlando, FL. pp 2230-2234.
6. Prabhala, S. and Gallimore, J.J. (2005). Perceptions of Personality in Computer Agents: Effects of Culture and Gender. *Proceedings of the Human Factors and Ergonomics Society 49<sup>th</sup> Annual Meeting*. September 26-30, Orlando, FL, 2005. pp 716-720
7. Prabhala, S., Gallimore, J.J., and Lucas, J. (2005). Effects of Automation on Command and Control of Multiple UCAVs. *Proceedings of the Wright State University Engineering Graduate Student Symposium*, Dayton, OH, CD-ROM Publication.
8. Prabhala, S. and Gallimore, J.J. (2005). Developing Computer Agents with Personalities. *Proceedings of the 11<sup>th</sup> International Conference in Human Computer Interaction, AUGCOG Conference July 22-27, Las Vegas, NV 2005* CD Rom publication and to be published in a book proceedings.
9. Prabhala, S., Ganapathy, S., Gallimore, J.J., S. Narayanan, and Hill, R.R. (2005). Interactive Optimization for Unmanned Aerial Vehicle Routing. *Proceedings of the Summer Computer Simulation Conference*. July 23-28. Philadelphia, PA, 2005, pp. 90-95.
10. Gallimore, J.J., Maki A., Faas, P., Seyba, J., Quill, L., and Matthews, E. (2005). The Need For A Human-in-the Loop Simulation Testbed for Logistics Decision Support Research. *Summer Simulation Conference*, 2005, pp. 84-89.
11. Prabhala, S. and Gallimore, J. (2005) Can Humans Perceive Computer Agent's Personalities? *Proceedings of the Institute of Industrial Engineers Annual Conference*. May 14-18, Atlanta, Paper 317.
12. Prabhala, S. and Gallimore J.J. (2004) Investigation of Error Rates When Controlling Multiple Uninhabited Combat Aerial Vehicles. *Proceedings of the Winter Simulation Conference*, pp. 1026-1031.
13. Stephens, M., Gallimore, J., and Alberty, W. (2003). Spectral Analysis of Electroencephalographic Response to Spatial Disorientation. *Proceedings of the International Symposium on Aviation Psychology* (pp. 1131-1136).
14. Wesler, M, Marshak W., and Gallimore, J. (2003) Mobile-computing display type: Situation awareness and performance issues. *Proceedings of the Interservice/Industry Training, Simulation, Education Conference, NTSA/NDIA: Orlando, FL, December 2003*, (pp. 1174-1184).
15. Prabhala, S., Gallimore, J., and Narayanan, S. (2003). Human Effectiveness Issues in Simulated Uninhabited Combat Aerial Vehicles. *Proceedings of the 2003 Winter Simulation Conference*, New Orleans (pp. 1304-1038).
16. Narayanan, S., Dave, R., Ganapathy, S., Narakesari, S., Hill, R. Gallimore, J. (2003). Case Studies on Object-Oriented Models And Simulations For Analyzing Complex Systems. *Proceedings of the 32<sup>nd</sup> International Conference on Computers and Industrial Engineering*, Vol. 2, pp. 827 – 832.
17. Liggett, K. and Gallimore, J.J. (2001) The OKCR and Pilot Performance During Transitions Between Meteorological Conditions Using HMD Attitude Symbology. In *Proceedings of the Human Factors and Ergonomics Society 45<sup>th</sup> Annual Meeting*, (pp. 115-119) Santa Monica. CA HFES
18. Stephens, M., Gallimore, J., and Alberty, W. (2002) Spectral Analysis of Electroencephalographic Response to Spatial Disorientation. *Proceedings of the 12<sup>th</sup> International Symposium on Aviation Psychology: Dayton OH*. (pp. 1131-1136).
19. Wesler, M, Marshak W., and Gallimore, J. (2002) Mobile-computing display type: Situation awareness and performance issues. *Proceedings of the Interservice/Industry Training, Simulation, Education Conference, NTSA/NDIA: Orlando, FL, December 2003*, (pp. 1174-1184)
20. Liggett K K. and Gallimore, J.J. (2002). The effects of frame of reference and HMD symbology on control reversal errors. *Aviation, Space and Environmental Medicine*;73:102-111.
21. Lucas, J. R. Gallimore, J.J. and Prabhala, S. (2001). Using Decision Structures to Analyze Complex Semi-Autonomous Systems. *Proceedings of the International Conference on Computer-Aided Ergonomics and Safety*, July 30-Aug 1, 2001, Maui, Hawaii
22. Gallimore, J.J., Lucas, J.R. and Narayanan, S. (2001). Human Operator Issues for Uninhabited Aerial Vehicles. *Proceedings of the American Institute of Aeronautics and Astronautics Modeling and Simulation Technologies Conference and Exhibit*, Aug 6-9, 2001, Montreal, Canada, Paper No: 2001-4192: pp 1-6.
23. Gallimore, J.J., Liggett, K.K. and Patterson, F.R. (2001). The Opto-Kinetic Cervical Reflex in Flight Simulation. *Proceedings of the American Institute of Aeronautics and Astronautics Modeling and Simulation Conference and Exhibit*, Aug 6-9, 2001, Montreal, Canada, Paper No: 2001-4191: pp 1-7. \* Best Paper.
24. Lucas, J.R. and Gallimore, J.J. (2000). Evaluation of human performance in a simulated UCAV control station. In *Proceedings of the Summer Computer Simulation Conference (SCSC)*, July 17 - July21, 2000. pp 672-677.
25. Wesler, M., Lucas, J., Gallimore, J.J., and Marshak, W.P. (1999). Managing Uninhabited Aerial Vehicle (UAV) Information Employing a Reduced Area / Depth Separated Display. *Proceedings of the Human Factors*

- and Ergonomics Society 43rd Annual Meeting, (pp. 91-95) Santa Monica, CA: Human Factors and Ergonomics Society.
26. Gallimore, J.J., Brannon, N.G., and Patterson F.R. (1998). The Effects of Field-of-View on Pilot Head Movement During Low Level Flight. In *Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting*, Chicago, IL (pp. 6-10).
  27. Gallimore, J.J., Stouffer, J.M., Brannon, N.G., and McCracken J. (1998). Developing Automatic Luminance Controls for Liquid Crystal Displays in Military Cockpits. In *Proceedings of the Ninth International Symposium on Aviation Psychology*, Columbus OH. pp. 294-297.
  28. Gallimore, J.J., McCracken, J.R., and Gerace, J. (1995). Hardware and human factors issues for military automatic brightness controls. In *Proceedings of the Human Factors and Ergonomics Society 39th Annual Meeting*, San Diego, CA. (pp. 89-93).
  29. Brown, M.E., and Gallimore, J. J. (1994) Visualization of CAD objects using a stereoscopic display. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, (pp. 1295-1299) Santa Monica, CA: Human Factors and Ergonomics Society.
  30. Gallimore, J.J., Mitta, D. and Gerace, J. (1994). Recognizing the need for human factors in advanced manufacturing. In *Proceedings of the 3rd Industrial Engineering Research Conference*, May 18-19, 1994, Atlanta, GA, (pp. 360 - 365).
  31. Gallimore, J. J. (1994). Human factors considerations in the design of an assembly planning system. In *Proceedings of the 12th Triennial Congress of the International Ergonomic Association*, August 15-19, Toronto, Canada. Vol 4, (pp 83-85).
  32. Gallimore, J.J., and Crabtree, J. (1994). Automatic generation of assembly plans: human factors considerations. In *Human Performance in Automated Systems: Current Research and Trends* (M. Mouloua and R. Parasuraman Eds). pp. 282-286. New Jersey: Lawrence Erlbaum Associates, Publishers.
  33. Snyder, H.L., Decker, J.J. Lloyd, C.J.C., and Dye, C. (1990) Effect of image polarity on VDT task performance. In *Proceedings of the Human Factors Society 34th Annual Meeting* (pp. 1447-1451). Santa Monica, CA: Human Factors Society.
  34. Snyder, H.L., Decker, J.J. Lloyd, C.J.C., and Dye, C. (1990) Effect of image polarity on VDT task performance. In *Proceedings of the Human Factors Society 34th Annual Meeting* (pp. 1447-1451). Santa Monica, CA: Human Factors Society.
  35. Decker, J. J., Dye, C. J., Kurokawa, K., and Lloyd, C. J. C. (1988). Effects of display failures and symbol rotation on visual search using dot-matrix symbols. In *Proceedings of the Human Factors Society 32nd Annual Meeting* (pp. 1386-1390). Santa Monica, CA: Human Factors Society.

### Book Chapters

1. Prabhala, S., Ganapathy, S., S. Narayanan, Gallimore, J.J., and Hill, R.R. (Abstract Accepted; Chapter in review). Model-Based Simulation to Examine Command and Control Issues with Remotely Operated Vehicles. In *Simulation and Modeling: Current Technologies and Applications*, edited by A.A. El-Sheikh, A. Al-Ajeeli, and E. M. Abu-Taieh.
2. Narakesari, S., Narayanan, S., Gallimore, S. and Draper, M. (2003). Multimodal Interfaces for Supervisory Command and Control. In *Human Centered Computing: Cognitive, Social, and Ergonomic Aspects*, D. Harris, V. Duffy, M. Smith, & C. Stephanidis (Eds.), Vol. 3, pp. 300 – 304.
3. Gallimore, J.J., Chen J., and Chen, C.L.P. (1996) Computer-based aiding for Assembly Planning. In *Manufacturing Agility and Hybrid Automation -I.*, (R. Koubek and W. Karwowski Eds) p 628-631. Louisville, KY: IEA Press.
4. Narayanan, S, and Gallimore, J.J. (1996). Computer-based aiding for pruning search space in manufacturing planning. In *Manufacturing Agility and Hybrid Automation -I.*, (R. Koubek and W. Karwowski Eds) p 632-635. Louisville, KY: IEA Press.

### Grants & Contracts

- Meta-Information Visualization for Preparation and Prediction: Holistic Analysis, Visualization & Characterization Assessment Tool (HAVCAT). Phase I STTR AF06-T031, with 21<sup>st</sup> Century Systems, Inc. Dr. Gallimore WSU P.I. September 2006 – May 2006.
- Patient Safety and the Primary Care testing Process. Mentored Clinical Scientist Development Awards (K08) NIH: Nancy Elder, M.D. University of Cincinnati Prime. Dr. Gallimore, CO-I, 2005-2009.
- A systems Approach for the Development and Evaluation of Three-Dimensional Displays. WSU Research Challenge Grant, Co-PI with D. Young, and R. Srinivasan. June 04 – May 05.
- Visual illusions during formation flight. SDS International, Inc. June 04 – May 05 (SBIR for NAVAIR on Spatial disorientation)

- Development of specifications for an interactive aircraft accident data collection and analysis system. FAA, June 04 – June 06
- Ohio Board of Regents, 2002 Hayes Investment Fund Program, Ohio Research in advanced internet Utilization, simulation, and telerobotics Co-Investigator (Dr. Gilkey, PI) July 02-04 (equipment grant)
- Pilot Spatial Orientation. Gallimore, Principle Investigator, S. Mohler, Co-I. AFRL/DAGSI Research Program. Joint proposal with Dr. Spenny & Dr. Liebst, Air Force Institute of Technology. July 01 –Sept 03.
- Command and Control of Remotely Operator Vehicles. AFRL/DAGSI Grant (State of Ohio). Joint Principal Investigator with Dr. S. Narayanan, Co-P.I. Dr. C. Spenny (AFIT). July 00 – June 02.
- Investigation of visual cues for flight, IPA, Navy Aeromedical Research Lab (NAMRL). Principal Investigator, 7/1/99– 6/30/99.
- Research Challenge Award. Applications in Virtual Environments. Wright State University. Principal Investigator. 6/20/97 – 6/19/98.
- Investigation of field-of-view on the opto-kinetic cervical reflex (OKCR) and its relation to spatial disorientation. Navy Aeromedical Research Lab (NAMRL). Principal Investigator, \$44,323 2/1/97 – 9/30/97; 4/15/98 – 8/31/98.
- Cognitive workload in a complex synthetic task environment: The role of functional display and control representations AFSOR. Co-Investigator 5/1/97-4/30/02.
- Virtual Environments, Human Performance, Technology, & Applications, Capital Investment Fund, Ohio Board of Regents, Co-Investigator, Equipment Grant. Three Years. 1995-1998.
- Research Challenge Award: The inside-out display philosophy. Wright State University. Co-Principal Investigator (Co-P.I. Pamela Tsang). 12/1/94 – 11/30/95.
- Three-dimensional visualizations and interactions for the design of large-scale manufactured objects. University Research Initiative, Office of Naval Research. Principal Investigator (Co-Principal Investigator, P. Chen), 10/1/92 – 9/30/95.
- Automatic Brightness Control for the cockpit, Phase I. Wright Patterson Air Force Base and MTL Systems: Principal Investigator. 9/92 – 3/93.
- Evaluation of a new glare shield and vision device for Visual Display Workstation Terminals. PK Vision Enterprises. Principal Investigator. 5/91 – 11/91.
- Three-dimensional Computer-Aided Design (CAD) Models Using Stereoscopic and Monocular Coding Techniques. NSF Grant, Research Initiation Award. Principal Investigator, 9/90 – 8/92.
- Research Challenge Award: Effects of Attention Switching between Stereoscopic and Monocular Displays on Operator Performance and Perception. Wright State University. Principal Investigator, 1/90 – 9/91.

### **Professional Consulting Activities**

- Subcontractor to Northrup Grumman. Research Scientist at AFRL/HEAL to support research on user-interface design and collaboration. June 2006 – August 2006
- Subcontractor to MacAuley Brown, Research and Development of Smart Systems Logistics Command and Control for AFRL, Wright Patterson Air Force Base. Jan 2005 - Jan 2007. Lead Research Scientist providing human factors research support for SSLC2 program.
- Workshop on Human Computer Interface Design and Usability Engineering For Booz Allen Hamilton, 2004
- Phase I SBIR with Protobox LLC: A Closed-Loop System for Effective Spatial Disorientation Training. Human Factors Engineering support including providing information on SD research, design of simulation training program.
- Phase II SBIR with SDS International Inc.: Helmet Mounted Display (HMD) Interface Design for Head-Up Display (HUD) Replacement. Human Factors Engineering support including symbology design, design of experimentation for testing, and data analysis.
- Phase I SBIR with Protobox, LLC: An Embedded Simulator Test Evaluation Monitor (ESTEEM) to Improve Distributed Mission Training. Human factors engineering support including literature review, interface design, design of experimentation and data analysis.
- Wallace-Kettering Neuroscience Institute. An Initial Human Factors Analysis of an Acute Stroke Care Process in a Hospital Setting. Human factors engineering analysis of the stroke care process at Kettering Medical

Center to pinpoint possible areas for process improvement in order to reduce the time to treat patients so that MRI techniques may be studied.

- Wright Patterson Air Force Base Hospital. Human factors support for the analysis of patient handoff between departments to reduce medical errors and enhance patient safety.
- Good Samaritan Hospital . Human factors engineering analysis of medication delivery in the ICU to reduce medication errors and enhance patient safety.
- Phase I and Phase II SBIR with MTL Systems, Inc. Automatic Brightness Controls for Military Cockpits. Lead human factors engineer to support for the development of an automatic brightness control including literature reviews, display measurement, experimental design, setup, procedures, runs, and data analysis, written documentation of results and development of the automatic control algorithm.
- Yellow Springs Instrument Co, Inc. Provide user centered design support and training to engineers toward the development of new product user interfaces.

### Teaching

- \*Engineering Health Systems (\* Courses are also offered as Distance)
- \*Supervisory Control of Remotely Operated Vehicles
- \*Human Factors in Engineering Design
- \*Human Factors Engineering of Visual Displays
- \*Human Factors in Computer System Design
- Systems Performance Modeling
- \*Advanced topics in Human Computer Interaction
- Human Factors in Virtual Reality
- Human Factors Engineering Workload Analysis
- Human Factors Engineering Advances in Visual Display Design
- Experimental Research and Evaluation in Human Factors Engineering
- Human Factors in Rehabilitation
- Industrial Ergonomics
- Engineering Design I
- Engineering Design II
- Engineering Design III

<u>Association</u>	<u>Status</u>	<u>Dates</u>
Human Factors and Ergonomics Society (HFES)	Member	1981 – present
Association for Computing Machinery	Member	1985 – 1992, 2006 -
Society for Information Display (SID)	Member	1989 – 1997
Society Professional and Instrumentation Engineers (SPIE)	Member	1989 – 1992
Aerospace Medical Association (AsMA)	Member	1999 – present
Aerospace Human Factors Association	Member	1999 – present
Institute of Industrial Engineering (IIE)	Member	1999, 2001,2004 – present