STEPHANIE JANE LACKEY

Senior Research Associate
University of Central Florida
Institute for Simulation and Training
Applied Cognition and Training in Immersive Virtual Environments Laboratory
3100 Technology Parkway
Orlando, Florida 32826
407-882-2427 (office)
slackey@ist.ucf.edu
lackeysj@yahoo.com

EDUCATION

Ph.D. Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL, December 2006
Dissertation: Prediction and Allocation of Live-to-Virtual Communication Bridging Resources

M.S. Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL, August 2001

B.S. Mathematics, Methodist University, Fayetteville, NC, December 1994

RESEARCH SPECIALIZATION

Live, Virtual, Constructive training methods; Live and Virtual Communication Systems; Radio Trunking

PROFESSIONAL EXPERIENCE

RESEARCH EXPERIENCE

Senior Research Associate, Applied Cognition and Training in Immersive Environments (ACTIVE) Laboratory, Institute for Simulation and Training Jun 08 - Present
University of Central Florida, Orlando, FL

Manage operations of an advanced technology research and development laboratory focused on interface integration, robotics, Human Systems Integration, operational neurosensing, and efficient learning. Improve operational processes through the application of industrial systems engineering principles. Contribute to the scientific advancement of ACTIVE topic areas by conducting research and publication.

Deputy Director, Concept Development and Integration Laboratory Sep 04 – June 08
Naval Air Warfare Center Training Systems Division, Orlando, FL

Manage daily operations of a U.S. Navy research and development laboratory comprised of approximately 25 team members. Allocate resources across 15 projects sponsored by various military customers (e.g. NAVAIR, PMTRASYS, PEOSTRI, JFCOM). Plan, track, and report financial and schedule progress to senior managers, program managers, program sponsors. Perform liaison function vertically between senior management and engineering teams, and horizontally with other Government competencies and industry partners. Coordinate efforts of multiple interdisciplinary teams in order to provide state-of-the-art methodologies and technologies directly to U.S. military services and the downstream acquisition enterprise. Create process improvements by applying Lean and Six Sigma principles to work acceptance, work performance, and project visibility processes.

Lead small (3-7 people) teams to research and develop Live, Virtual, Constructive (LVC) methods, technologies, and prototypes. Conduct research in the areas of LVC training simulation, live-to-virtual communication systems, interoperability, and resource optimization. Supervise, mentor, and develop junior team members to facilitate individual growth and productivity.

Computer Engineer, Human Behavior Representation/Computer Generated Forces Laboratory Dec 01 – Sep 04
Naval Air Warfare Center Training Systems Division, Orlando, FL

Responsible for research in the fields of simulation and training, human behavior representation (HBR), computer generated forces (CGF), and intelligent tutoring systems (ITS). Tested and evaluated artificial intelligence architectures, methods, and tools. Operated and maintained two computer test beds supporting demonstrations and human-in-the-loop experimentations. Aided in the evaluation of proposals and selection of contractors and conducted onsite visits.

Research Engineer May 01 – Dec 01
University of Central Florida, Orlando, FL

Support contractor for the Human Behavior Representation/Computer Generated Forces Laboratory at the Naval Air Warfare Center Training Systems Division, Orlando, FL. Conducted research in the area of cognitive modeling. Established physical, logical, and network layers for computer test beds, and supported software installation, upgrades, and maintenance. Generated test bed user manual, maintenance, and trouble-shooting documentation.

Research Assistant May 00 – Aug 00
University of Central Florida, Orlando, FL

Conducted risk assessment research related to National Aeronautics and Space Administration (NASA) Shuttle launch process as part of an interdisciplinary team. Performed literature searches, research Shuttle launch decision processes, and contributed to the development of an improved risk assessment process.

CURRENTLY FUNDED RESEARCH (FY08)
"Live-to-Virtual Radio Trunking (LVRT)". Joint Forces Command. Principal Investigator. **Lackey**. $395,000.00 (awarded Dec 07).

"Tactical Audio Capture System (TACS)". Marine Corps Program Manager Training Systems, Range Modernization/Transformation Program. Principal Investigator. **Lackey**. $250,000 (awarded Oct 07), FY07 100,000.00.

"Joint Terminal Control Training and Rehearsal System (JTC TRS)". U.S. Army Program Executive Office Simulation Training and Instrumentation. Co-Principal Investigator. Kotick, Legan, **Lackey**. $36,000 (awarded Oct 07).

COMPLETED FUNDED RESEARCH

"Combined Arms Command and Control Training Upgrade System (CACCTUS)". U.S. Marine Corps Program Manager Training Systems. Co-Principal Investigator. Kotick & **Lackey**. FY05 $650,000.00, FY06 $804,000.00 , FY07 $770,000.00 . Follow on funding provided to Co-Principal Investigators Kotick & Peluso FY08.

"Radio Interface Control (RIC)". Joint Forces Command. Co-Principal Investigator. Kotick, **Lackey**, McCarthy. FY06 $350,000.00 Follow-on funding provided to Principal Investigator McCarthy FY07 and FY08.

"Integrated Live-to-Virtual Communications Server (ILVCS)". Joint Forces Command. Principal Investigator. **Lackey** & Kotick. FY05 $150,000, FY06 $250,000.

"Intelligent Training Support Tools (ITST)". NAVAIR Program Manager Aviation 205. Co-Principal Investigator. **Lackey** & Merket. FY04 $150,000.00.

ACADEMIC EXPERIENCE

Graduate Teaching Assistant May 00 – Aug 00
University of Central Florida, Orlando, FL
Instructor, Industrial Engineering and Management Systems Department
Statistics for Engineers (STA 3032)

Adjunct Professor May 98 – Aug 98
University of Central Florida, Orlando, FL
Instructor, Seizing Opportunities for Achievement and Recognition (SOAR) Program, *Pre-Algebra*

Adjunct Professor Aug 97 – May 99
Valencia Community College, Orlando Florida
Instructor and Lab Manager, Mathematics Department, *Preparatory Mathematics I and II*

Mathematics Teacher
Orange County Public Schools, Orlando, FL Aug 96 – May 01
University High School
Taught *Pre-Calculus IB, Pre-Calculus, Algebra II, Algebra I IB, Algebra I, Pre-Algebra*

St. Lucie County Public Schools, Port St. Lucie, FL Aug 95 – May 96
Port St. Lucie High School
Taught *Algebra I, Business Mathematics*
Junior Class Sponsor

New Hanover County Schools, Wilmington, NC Dec 94 – Jun 95
John T. Hoggard High School
Taught *Algebra I*
Junior Varsity Cheerleading Coach

PATENTS

Lackey, S.J., Kotick, D.M., "Resource Optimized Live to Virtual Communications System for Training", pending.

PUBLICATIONS AND PRESENTATIONS

Book Chapters

Nicholson, D.M., & Lackey, S.J. (2008). Systems Engineering Approach Applied to Science and Technology Programs to Improve Technology Transition. In D. D. Schmorrow, J.V. Cohn, & D.M. Nicholson (Eds.), Handbook of Virtual Environments for Training and Education: Developments, Applications, and Issues for the Military and Beyond. Westport, CT: Praeger Security International.

Schmorrow, D. D., Nicholson, D. M., Lackey, S. J., Cohn, J. V., Allen, R. C., & Norman, K. L. (2008). Virtual Reality in the Training Environment. In D. Vincenzi (Ed.), Human Factors in Simulation and Training. Mahwah, NJ: Lawrence Erlbaum Associates.

Refereed Journal Articles

Stanney, K. M., Samman, S., Reeves, L., Hale, K., Buff, W., Bowers, C., Goldiez, B., Nicholson, D. M., & Lackey, S. J. (2004). A Paradigm Shift in Interactive Computing: Deriving Multimodal Design Principles from Behavioral and Neurological Foundations. International Journal of Human-Computer Interaction, 17(2), 229-257.

Refereed Conference Proceedings

Lackey, S.J., Harris, J.T., Malone, L.C., & Nicholson, D.M., (2007). Blending Systems Engineering Principles and Simulation-Based Design Techniques to Facilitate Military Prototype Development. Proceedings of the 2007 Winter Simulation Conference, December 2007.

Sprague, C.M., Lackey, S.J., & Kotick, D.M., (2007). Real Time Switching for Operational Resource Reduction in Live to Virtual Communications. Proceedings of the Interservice/Industry Training, Simulation, and Education Conference, December 2007.

Lackey, S.J., Sprague, C.M., Kotick, D.M., (2007). Managing Communication Resources in Live, Virtual, and Constructive Training Environments. Proceedings of the 2007 Military Communications Conference, October 2007.

Nicholson, D.M., Lackey, S.J., Arnold, R., & Scott, K., (2005). Augmented Cognition Technologies Applied to Training: A Roadmap for the Future. Presented at the 1st Annual Augmented Cognition International Conference, July 2005.

Stacy, W., Freeman, J., Lackey, S.J., & Merket, D.C., (2004). Enhancing Simulation-Based Training with Performance Measurement Objects. Proceedings of the Interservice/Industry Training, Simulation, and Education Conference, December 2004.

Lackey, S.J., Merket, D.C, Stacy, W., & Freeman, J., (2004). Intelligent Training Support Tools: Technology for the Future. Presented at the American Institute of Aeronautics and Astronautics Modeling and Simulation Technologies Conference 2004, August 2004.

Stottler, R., Lackey, S.J., & Kirby, J.B., (2004). Formalized Behavior Models for MOUT OPFOR Individual Combatant Weapon Firing. Proceedings of the Interservice/Industry Training, Simulation, and Education Conference, December 2004.

Cohn, J.V., Lackey, S.J., Soles, R.W., Nicholson, D.M., Allen, R.C., Schmorrow, D., Stanney, K., & Graeber, D., (2003). Theory-Driven Development of Instructional Agents: An Example from an Operational Training System. Proceedings of the 2003 Behavior Representation in Modeling and Simulation Conference, May 2003.

Soles, R.W. & Lackey, S.J., (2002). Planning the Implementation of Synthetic and Instructional Agents in Virtual Technologies and Environments. Proceedings of the Interservice/Industry Training, Simulation, and Education Conference, December 2002.

Lyons, D.M., Schmorrow, D.D., Cohn, J.V., & Lackey, S.J., (2002). Scenario Based Training with Virtual Technologies and Environments. Proceedings of the Image 2002 Conference, July 2002.

Conference Proceedings, Panels, and Poster Sessions

Raley, C., Schmorrow, D., Nicholson, D.M., Muller, P., Cohn, J.V., Lackey, S.J., Arnold, R., Patrey, J., & Kruse, A., (2004). Technology and Today's Warfighter: From Simulation and Training to Operational Environments. Panel discussion at the Human Performance, Situation Awareness, & Automation Conference, March 2004.

Cohn, J.V., Lilienthal, M., Darken, R., Lackey, S.J., & Shaffer, R., (2004). Simulated Training in the Military: Where Can We Go From Here? Panel discussion at the IEEE Virtual Reality 2004 Conference, March 2004.

Cohn, J.V., Lackey, S.J., Allen, R.C., Stanney, K.M., Muth, E., & Milham, L., (2002). Designing VE Systems that Work: Stacking the Deck in the User's Favor. Panel presentation at the Human Factors and Ergonomics Society 46th Annual Meeting, September 2002.

Schmorrow, D., Lyons, D.M., Stanney K.M., Lackey, S.J., Schaffer, R., & Cavitt, D., (2002). Virtual Technologies & Environments for Expeditionary Warfare Training. Panel presentation at the Institute of Electrical and Electronics Engineers Virtual Reality Conference 2002, March 2002.

Briefings and Invited Talks

Lackey, S.J., (2004). Augmented Cognition and the Future of Training. Presented at the Learning Strategies Consortium 2004 Conference, August 2004.

Lackey, S.J. (2003). Synthetic Cognition for Operational Team Training. Invited lecture, Embry Riddle University, April 2003.

Technology demonstrations to VIPs including:

- Chief of Naval Operations' Strategic Studies Group
- Navy Aviation Simulation Master Plan Performers
- Honorable Ronald M. Dega, Ph. D., Director, Defense Research & Engineering
- Representatives from the Royal Navy
- Interservice/Industry Simulation Education and Technology 2003 Special Event
- Navy/Marine Corps News
- RADM Timothy L. Heely CO NAWCAD; Assistant Commander for Research and Engineering NAVAIR
- Lt. Robert Abbott, Master Chief Marshall Morris, Program Executive Office Surface Strike
- Otronicon Gaming Conference 2005
- Society of Women Engineers Expo, University of Central Florida, 2005

Communication Skills Workshop, Naval Air Warfare Center Training Systems Division, May 04

HONORS AND AWARDS

2004 Innovation Award for Technology/Scientific Achievement: Transition of the Virtual Environments Landing Craft, Air Cushion. RDML J.Wieringa, Commander Naval Air Warfare Center Aircraft Division, $5,000, Mar 05

2007 Modeling and Simulation Technical Excellence Award, Division Head G.R. Fraas, NAWCTSD Advance Simulation, Visual, & Software Systems Division, Jun 07

Area Commanders Award for Advancing the Science of Virtual Communications Technology, CO NAWCAD, May 06

Award of Merit for Group Achievement during Operation Virtual Freedom. Capt. L.S. McCracken, CO NAWCTSD May 04

Letters of Appreciation/Commendation:

- Participation in 2005 Worthy Invention Contest, Capt. L.S. McCracken, CO NAWCTSD, Feb 06
- Support I/ITSEC 2005, Capt. L.S. McCracken, CO NAWCTSD, Jan 06
- Support I/ITSEC 2004, Capt. L.S. McCracken, CO NAWCTSD, Mar 05
- Supporting I/ITSEC Operation Virtual Freedom. Capt. L.S. McCracken, CO NAWCTSD, Apr 04
- Providing Communication Skills Training. D.S. Young, Technical Director, NAWCTSD, Jun 04
- Supporting the Augmented Cognition PI Meeting, 2004. CDR D. Schmorrow, DARPA Program Manager, Jan 04
- Support I/ITSEC 2003, Capt. R.A. Mohler, CO NAWCTSD, Feb 04
- Support I/ITSEC 2002, Capt. R.A. Mohler, CO NAWCTSD, Feb 03
- Support I/ITSEC 2001, Capt. D.R Gagnon, CO NAWCTSD, Feb 02

Sustained Excellence Award:

- Division Head G.R. Fraas, NAWCTSD Advance Simulation, Visual, & Software Systems Division, Jun 08
- Division Head G.R. Fraas, NAWCTSD Advance Simulation, Visual, & Software Systems Division, Jun 07
- Division Head G.R. Fraas, NAWCTSD Advance Simulation, Visual, & Software Systems Division, Jun 06
- Division Head G.R. Fraas, NAWCTSD Advance Simulation, Visual, & Software Systems Division, Jun 05

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

Cisco Certified Network Associate Certification, currently pursuing

Navy Productivity Improvement Awareness AIRSpeed Greenbelt Training, Apr 08

Navy Leadership Development Program, NAVAIR, admitted Dec 07

Advanced System Planning, Research, Development and Engineering Level III Certification, Defense Acquisition University, May 07

Human System Integration Workshop, Georgia Institute of Technology, Aug 07

Navy Productivity Improvement Awareness AIRSpeed Whitebelt Certification, Feb 07

Intermediate System Planning, Research, Development and Engineering Level II Certification, Defense Acquisition University, Aug 04

ACT-R Workshop, Carnegie Mellon University, Aug 02

COGNET Workshop, CHI Systems, May 02

Secret Clearance, 3 Jul 01