# **ASHLEY M. HUGHES**

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## CAREER OBJECTIVE

To advance knowledge and understanding of human factors interventions to improve patient care.

#### **RESEARCH INTERESTS**

Human factors in healthcare, teamwork, training, training transfer, simulation-based training, performance assessment, patient safety and quality of care.

### SUMMARY OF QUALIFICATIONS

Ashley M. Hughes, PhD has experience conducting experimental and quasi-experimental human factors studies, with specific focus on training, technology, and teamwork in healthcare. Ashley currently serves as an Assistant Professor in the Department of Biomedical and Health Information Sciences at the University of Illinois at Chicago. As a result of her authored, co-authored, and investigator proposal writing, Ashley has contributed to proposals resulting in \$2,726,500 in funding to partner with NASA, Emergency Medical Learning Resource Center (EMLRC), University of Miami, AHRQ, Department of Defense (DoD), Army Research Lab (ARL), and Air Force Research Lab (AFRL). To accomplish these projects, Ashley has directed and supervised teams of 14+ research staff and students for funded and unfunded project completion, resulting in 18 co-authored articles in various stages of the publication process and 50 presentations. This work includes interdisciplinary collaborations to complete projects related to training transfer, healthcare team training, assessment of teamwork, and the impact of technology on teams.

#### **EDUCATION**

Ph.D., Applied Experimental and Human Factors Psychology	2015		
University of Central Florida, Orlando, FL			
Dissertation Advisor: Eduardo Salas, Ph.D.			
Dissertation Title: "A Meta-analytic Integration of What Matters for Transfer of Training"			
M.S., Modeling and Simulation	2013		
University of Central Florida, Orlando, FL			
B.S., Psychology, Honors in the major	2010		
University of Central Florida, Orlando, FL			
Minor: Communications; Magna Cum Laude			
Thesis Advisor: Mustapha Mouloua, Ph.D.			
Honors Thesis: "Trauma as a Predictive Factor for Performance under Stress"			
PROFESSIONAL AND RESEARCH EXPERIENCE			
Hines VA Medical Center, Research Health Science Specialist (Affiliate)	Hines, IL		
Center of Innovation for Complex Chronic Healthcare (CINCCH)	03/2018-present		
University of Illinois at Chicago, Assistant Professor	Chicago, IL		
Department of Biomedical and Health Information Sciences	08/2017-present		
Michael E. DeBakey VA Medical Center, <i>Research Health Science Specialist</i> Baylor College of Medicine Center for Innovations in Quality, Efficiency, and Safety (IQuESt)	Houston, TX 04/2016-07/2017		

Supervisors: Sylvia J. Hysong, Ph.D. and Hardeep Singh, MD, MPH

University of Central Florida, Graduate Research AssistantOrlando, FLDivision for Human-System Integration Research, Institute for Simulation and Training04/2011-12/2015Supervisors: Eduardo Salas, Ph.D. and C. Shawn Burke, Ph.D.04/2011-12/2015

**University of Central Florida**, *Undergraduate Research Assistant* College of Sciences, Department of Psychology Supervisor: Mustapha Mouloua, Ph.D. **Orlando, FL** 08/2009-12/2010

#### PEER-REVIEWED PUBLICATIONS

\*Asterisk denotes student mentee \*\*Double asterisks denote feature or at the forefront article(s)

Smith, M.W., **Hughes, A.M.,** Brown, C.R., Russo, E., Giardina, T.D., & Singh, H. (Accepted). Distributed cognition in primary care teams: An examination of test results in follow up. *Health Care Informatics*.

Looke, T., Sonesh, S.C., **Hughes, A.M.**, Gregory, M.E., Iwig, C., Pepe, J., & Salas, E. (Accepted). Safety checklist implementation: A prospective, pre-post, cohort trial demonstrating improved compliance and proximal outcomes. *Anesthesia & Analgesia*.

Gregory, M.E., Sonesh, S.C., Feitosa, J., Benishek, L.E., **Hughes, A.M.,** & Salas, E. (2017). Decision making on the labor and delivery unity: An investigation of influencing factors. *Human Factors*, *59*(6), 937-955.

**Hughes, A.M.**, Patterson, P.D., Weaver, M., Gregory, M.E., Sonesh, S.C., Landsittel, D., Krackhardt, D., Hostler, D., Lazzara, E.H., Vena, J.E., Salas, E., & Yealy, D. (2017). Teammate familiarity, teamwork, and risk of workplace injury in EMS teams. *Journal of Emergency Nursing*, *43*(4), 339-346.

Marlow, S.L., **Hughes, A.M.,** Sonesh, S.C., Gregory, M.E., Lacerenza, C.N., Benishek, L.E., \*Woods, A.L., \*Hernandez, C., & Salas, E. (2017). A comprehensive review of team training in healthcare: Ten questions. *Journal of the Joint Commission*, *43*(4), 197-204.

**\*\*\*Hughes, A.M.,** Gregory, M.E., Joseph, D.L., Sonesh, S.C., Marlow, S., Lacerenza, C.N., Benishek, L.E., King, H.B., & Salas, E. (2016). Saving lives: A meta-analysis of team training in healthcare. *Journal of Applied Psychology, 101*(6), 1266-1304. *NOTE: Journal of Applied Psychology is a top-tier (5/79) applied psychology journal; Impact factor: 4.79* 

\*Awarded the Schmidt-Hunter Meta-Analysis recognition for Methodological Rigor and Impact in the field

Benishek, L. E., Gregory, M. E., Hodges, K., Newell, M., **Hughes, A. M.**, Marlow, S.L., Rosenfield, S., Salas, E., & Lacerenza, C.N. (2016). Bridging the science of team training to school-based teams. *Psychology at Work in Schools*, *55*(2), 112-119.

Patterson, P.D., Weaver, M.D., Landsittel, D., Krackhardt, D., Hostler, D., Vena, J., **Hughes**, **A.M.**, Salas, E., & Yealy, D.M. (2016). Association between Emergency Medical Services co-worker familiarity and workplace injury. *Journal of Emergency Medicine*, *33*(4), 280-285.

Sonesh, S., Gregory, M.E., **Hughes, A.M.**, Feitosa, J., Benishek, L.E., \*Verhoven, D., Patzer, B., Salazar, M., Gonzalez, L., & Salas, E. (2015). Team training in Obstetrics: A multi-level evaluation. *Journal of Health and Families: Teamwork in Health Care, 33*(S3), 250-261.

\*\*Salas, E., Grossman, R., Hughes, A.M., &. Coultas, C. (2015). Measuring team cohesion: Emergent themes

from the science. Human Factors, 57(3), 365-374.

Lazzara, E.H., Benishek, L.E., Patzer, B., Gregory, M.E., **Hughes, A.M.**, Heyne, K.B., Salas, E., Kuchkarian, F., Marttos, A., & Schulmann, C. (2015). Utilizing telemedicine in the Trauma Intensive Care Unit: Does it impact teamwork? *Journal of Telemedicine and Telehealth*, 21(8), 670-676.

Benishek, L.E., **Hughes, A.M.**, Gregory, M.E., Sonesh, S., Salas, E. & Lazzara, E.H. (2014). Promoting teamwork in translational medical teams: Insights and recommendations from science and practice. *Journal of Translational Medicine & Epidemiology*, 2(2), 1031-1043.

Hughes, A.M. & Salas, E. (2013). Hierarchical medical teams: Leveraging the science of teamwork. *Virtual Mentor*, *15*(6), 529-533.

## **REVISE AND RESUBMIT MANUSCRIPTS**

### UNDER REVIEW MANUSCRIPTS

Hysong, S.J., SoRelle, R., Knox, M.K., Amspoker, A., **Hughes, A.M.**, Haidet, P. & Tran, T. (Under Review 2). *Shared mental models and feedback.* A paper submitted to Implementation Science.

**Hughes, A.M.**, Zajac, S., Spencer, J.M. & Salas, E. (Under Review). *Transfer of training: A checklist*. A paper submitted to the International Journal of Training and Development.

**Hughes, A.M.**, Patterson, D., Weaver, M., Sonesh, S.C., Gregory, M.E., Weaver, M.D., Krackhardt, D., Lazzara, E.H., Salas, E. & Yealy, D. (Under Review). *Measuring teamwork in Emergency Medical Services (EMS): A practical tool*. A paper submitted to BMJ's Journal of Emergency Medicnie.

**Hughes, A.M.**, Marlow, S.L., Hancock, G.M. Oglesby, J.M., Stowers, K. & Salas, E. (Under Review). *Physiological assessment of workload: A meta-analysis.* A paper submitted to the Special issue of Applied Perception and Human Performance in Human Factors.

**Hughes, A.M.**, Zajac, S., Woods, A.L., & Salas, E. (Under Review). *The sustainment of training outcomes: A meta-analysis examining the multi-level role of work environment support*. A paper to be submitted to Human Factors.

### MANUSCRIPTS IN PREPARATION

Gregory, M. E., **Hughes, A. M.**, Benishek, L. E., Sonesh, S. C., Woodward, L., Salas, E., & Lazzara, E. H. (In progress). *In search of the perfect medical team*. A paper to be submitted to the Journal of the Joint Commission.

**Hughes, A.M.,** Yang, Y., & Murphy, D. (In progress). *A sociotechnical systems framework: Toward use of health information technology for teams*. A paper to be submitted to the Journal of Health Informatics.

Hysong, S.J., **Hughes, A.M.**, Tran, T.T., Knox, M. (In progress). *Feedback strategies in the Veteran's Health Affairs: Qualitative analysis.* A paper to be submitted to the Journal of Implementation Science.

## PEER-REVIEWED CONFERENCE PROCEEDING PAPERS

**Hughes, A.M.,** \*Volante, W.G., Stowers, K., Leyva, K., Oglesby, J.M., \*Bisbey, T., Knott, B. & Vidiluch, M.A. (2014). Underpinnings of Cognition in Physiological Measurement. *Proceedings of the 2014 International Meeting of the Human Factors and Ergonomics Society*, *58*(1), 1009-1013.

**Hughes, A.M.,** Sonesh, S., Zajac, S. & Salas, E. (2013). Leveraging the HFACs to understand and prevent medication errors in emergency medical services (EMS): A systematic review. *Proceedings from the 2013 International Annual Meeting of the Human Factors and Ergonomics Society*, 1688-1692.

**Hughes, A.M**., Sonesh, S.C., Gregory, M.E., & Salas, E. (2013). Emergency Detection in Labor and Delivery: A Guide for Simulation Training. *Abstracts of the International Meeting for Simulation in Healthcare*, *7*(6), 392.

### **BOOK CHAPTERS**

**Hughes, A.M.** (Accepted). Human factors in health care simulations: From theory to practice. In J. Paige, S.C. Sonesh, J. Garbee (Eds.), *Interprofessional Education in Simulation*.

Sonesh, S.C., Gregory, M.E., **Hughes, A.M.**, & Salas, E. (In press). Disaster and response - The need for team training in emergency medical systems. In J. Keebler (Ed.), *Ergonomics and Human Factors of Pre-hospital Emergency Care* 

## **TECHNICAL REPORTS AND WHITE PAPERS**

**Hughes, A.M**., Weise, C., Stowers, K., Burke, C.S., & Salas, E. (2016). Best practices for behavioral marker development and implementation for assessment of teamwork in intelligent tutoring systems (ITS). Orlando, FL: Institute for Simulation & Training.

**Hughes, A.M.**, Burke, C.S., & Salas, E. (2016) Team indexing and aggregation: A practical guide. Orlando, FL: Institute for Simulation & Training.

**Hughes, A.M.**, Oglesby, J.M., Marlow, S.M., Bisbey, T., Leyva, K., Dietz, A., Marshall, A., \*Volante, W. & Salas E. (2014). Real-time measurement of cognitive performance: A meta-analysis. Orlando, FL: Institute for Simulation & Training.

Sonesh, S.C., Gregory, M.E., **Hughes, A.M.**, Benishek, L.E., Feitosa, J., & Salas, E. (2014). Strategic Teamwork for Obstetrics Rapid Response Crisis Scenarios. Orlando, FL: Institute for Simulation & Training.

Spencer, J., **Hughes, A.M.**, Coultas, C., & Burke, C.S. (2012). Assessing the State of the Science: The Measurement of Team Process. Orlando, FL: Institute for Simulation & Training.

Sonesh, S. C., Gregory, M. E., **Hughes, A. M.**, Lacerenza, C., Marlow, S., \*Cooper, T., & Salas, E. (2013). An empirical examination of medication error in emergency medical systems (EMS): Towards a comprehensive taxonomy. Orlando, FL: Institute for Simulation & Training.

Lazzara, E.H., Benishek, L.E., Gregory, M.E., Heyne, K., **Hughes, A.M**., Patzer, B., & Salas, E. (2013). Telemedicine, Teams & Decision Making: Empirical Plan & Results. Orlando, FL: Institute for Simulation & Training.

## **CONFERENCE PRESENTATIONS**

#### LOCAL PRESENTATIONS

**Hughes, A.M.** (2017, November) Using technology to enhance collaboration in outpatient settings. Presented at the University of Chicago's Biomedical Informatics Lecture Series. Chicago, IL.

Hughes, A.M. (2017, October). Facilitating teamwork in healthcare informatics. Presented at the monthly

seminar for Clinical Informatics Fellows: College of Medicine. Chicago, IL.

**Hughes, A.M.** (2017, September). Sociotechnical factors in HIT: The role of teams. Presented at the Biomedical and Informatics Data Jam University of Chicago. Chicago, IL.

**Hughes, A.M.** (2017, May). From pilots to pit crews: What health care can learn on teamwork in IPE. A presentation at the Center for Innovations in Quality, Effectiveness, and Safety (IQuESt). Houston, TX.

**Hughes, A.M.,** \*Volante, W.G., Stowers, K., Leyva, K., Oglesby, J.M., \*Bisbey, T., & Salas, E. (2014, April). Underpinnings of Cognition in Physiological Measurement. A paper presented at 2014 *Human Factors and Applied Psychology Student Conference*. Daytona Beach, FL

**Hughes, A.M.,** Mouloua, M., & Hancock, P.A. (2012, March). Trauma and Appraisal Processes in Performance. A poster presented at *University of Central Florida Graduate Research Forum*. Orlando, FL

Leavens, J., **Hughes, A.M.**, Nunez, J., Higgins, N.A., & Hancock, P.A. (2012, April). Designing to Enhance Team Cognition in Extreme Environments. A poster presented at 2012 *Human Factors and Applied Psychology Student Conference*. Daytona Beach, FL.

Leavens, J., **Hughes, A.M**., Nunez, J., Higgins, N.A., & Hancock, P.A. (2012, April). Designing to Enhance Team Cognition in Extreme Environments. A poster presented at *University of Central Florida Graduate Research Forum*. Orlando, FL.

Nunez, J., **Hughes, A.M.,** Leavens, J., Higgins, N.A., & Hancock, P.A. (2012, April). Mitigating the Effects of Error and Stress in Extreme Environments: An Error Recovery Design Approach. A poster presented at 2012 *Human Factors and Applied Psychology Student Conference*. Daytona Beach, FL.

Nunez, J., **Hughes, A.M.**, Leavens, J., Higgins, N.A., & Hancock, P.A. (2012, April). Mitigating the Effects of Error and Stress in Extreme Environments: An Error Recovery Design Approach. A poster presented *at University of Central Florida Graduate Research Forum*. Orlando, FL

Higgins, N.A., Leavens, J. Nunez, J. & **Hughes, A.M.** (2012, April). Interface Design in the Extreme Environment of Industrially Developing Countries: A Micro-Level Approach to Promoting Technology Transfer. A poster presented at 2012 *Human Factors and Applied Psychology Student Conference*. Daytona Beach, FL.

**Hughes, A.M**., Leavens, J., Nunez, J., & Cuevas, H. (2012, April). Training for Emergencies: Recommendations for Error Reduction. A paper presented at 2012 *Human Factors and Applied Psychology Student Conference*. Daytona Beach, FL.

### NATIONAL PRESENTATIONS

Che, X.X., Brown, C.R., Petersen, L.A., **Hughes, A.M.**, Kuebler, M., & Hysong, S.J. (2017, June). A goaldriven approach to aggregating measures of PACT team performance. A poster presented at 2017 HSR&D/QUERI National Conference. Boston, MA. July 2017.

**Hughes, A.M.,** Zajac, S., \*Woods, A.L. & Salas, E. (2017, April). *Sustainment of training: A meta-analytic investigation of work environment support*. A poster presented at the 32<sup>nd</sup> Annual Meeting of the Society of Industrial and Organizational Psychology. Orlando, FL.

Hysong, S.J., SoRelle, R., Tran, T., & Hughes, A.M. (2016, June). Prevalence and effectiveness of evidence-

based audit and feedback strategies for improving clinical quality in primary care settings. Academy Health, Boston, MA.

Marlow, S.L., **Hughes, A.M.**, Gregory, M.E., Joseph, D.L., Sonesh, S.C., Lacerenza, C.N., ...Salas, E. (2016, April). *The progressive model of healthcare team training: The trickle-down effect*. A paper presented at the 31<sup>st</sup> annual meeting of the Society for Industrial Organizational Psychology, Anaheim, CA.

Marlow, S.L., Woods, A.L., **Hughes**, **A.M**., Sonesh, S.C., Gregory, M.E., Lacerenza, C.N., ...Salas, E. (2016, April). *A systematic qualitative review of healthcare team training*. A poster presented at the 31<sup>st</sup> annual meeting of the Society for Industrial Organizational Psychology, Anaheim, CA.

Benishek, L. E., Lacerenza, C., Marlow, S., Gregory, M. E., **Hughes, A. M.**, Newell, M., ... Rosenfiled, S. (2016, April). *Teaching teamwork: Bringing team training science to school-based teams*. Paper presented at the 2016 Annual Meeting of the American Educational Research Association, Washington, DC.

Gregory, M. E., Sonesh, S., **Hughes, A. M.**, \*Cooper, T., Lacerenza, C. N., Marlow, S. L., & Salas, E. (2015, April). *When lives depend on it: Stressors and medication error*. Paper presented at the 30th Annual Conference of the Society for Industrial and Organizational Psychology. Philadelphia, PA.

**Hughes, A.M.,** Oglesby, J.M., Marlow, S.M., Leyva, K., \*Bisbey, T., \*Marshall, A.M., & Salas, E. (2015, January). Real-time measurement of cognitive performance: A meta-analysis. *A poster presented at 2015 NASA Human Research Program Investigators' Workshop*. Galveston, TX.

Oglesby, J.M., Sonesh, S., Stowers, K., Leyva, K., **Hughes, A.M.**, Iwig, C.,... Salas, E. (2015, January). A review and summary of methods for assessing human-automation system safety and performance. *Poster presented at 2015 NASA Human Research Program Investigators' Workshop*, Galveston, TX.

**Hughes, A.M.**, Savage, N.M., Burke, C.S., Salas, E., \*Cooper, T., & \*Bisbey, T. (2015, April). Distributed expertise in healthcare: A new frontier for measurement. In T. Koehler (chair), A.M. Hughes & C.N. Lacerenza (co-chairs) symposium, #VirtualTeamDevelopment: Current Issues in Virtual Team Training, Learning, and Assessment. A symposium presented at the *30<sup>th</sup> Annual Meeting of the Society for Industrial and Organizational Psychologists*. Philadelphia, PA.

Sonesh, S., **Hughes**, A.M., Gregory, M.E., & Salas, E. (2014, May). A Qualitative Investigation of Emergent Leadership in Healthcare. In S. Synnove & C.S. Burke (Chairs), *Team Leadership When Lives Depend on It.* 29th annual meeting of the Society for Industrial Organizational Psychology, Honolulu, HI.

Gregory, M. E., Benishek, L. E., **Hughes, A. M.**, Sonesh, S., Joseph, D. L., King, H. B., & Salas, E. (2014, May). Does healthcare team training work? A review of what matters. In M. Kerry & E. H. Lazzara (Chairs), *A Look at a Paradigmatic Shift in Healthcare Training*. 29<sup>th</sup> Annual Meeting of the Society for Industrial and Organizational Psychology, Honolulu, HI.

Gregory, M. E., **Hughes, A. M.,** Sonesh, S., Benishek, L. E., Joseph, D. L., King, H. B., & Salas, E. (2014, May). Team training in healthcare: A meta-analysis and integration. A poster presented at 29<sup>th</sup> Annual Meeting of the Society for Industrial and Organizational Psychology. Honolulu, HI.

**Hughes, A.M.,** Benishek, L.E., Sonesh, S.C., Gregory, M.E, Joseph, D.L., King, H.B., & Salas, E. (2014, June). The effectiveness of Team Training: A Meta-Analysis. *The National TeamSTEPPS Conference*. Minneapolis, MN.

Gregory, M. E., Lazzara, E. H., **Hughes**, A.M., & Benishek, L.E. (2012, April). The Science of Training in Rapid Response Systems. A poster presented at the *27th Meeting for the Society of Industrial and Organizational Psychology*. San Diego, CA.

Hughes, A.M. (2012, August). Ambiguity Tolerance and Emotion in Mood and Candidate Selection. A poster presented at the *American Psychological Association 120<sup>th</sup> Meeting*. Orlando, FL.

**Hughes, A.M.,** Mouloua, M., Hancock, P.A., Szalma, J.L., & Butler, J. (2011, May). Trauma as a Predictive Factor for Performance under Stress. A poster presented at the *Association of Psychological Sciences: 23rd Annual Convention*. Washington, D.C.

**Hughes, A.M.**, Mouloua, M., Hancock, P.A., Szalma, J.L., & Butler, J. (2011, August). Trauma as a Predictive Factor for Performance under Stress. A poster presented at the *American Psychological Society: 119th Annual Convention*. Washington, D.C.

#### INTERNATIONAL PRESENTATIONS

**Hughes, A.M**., Zajac, S., \*Woods, A.L., & Salas, E. (2017, September). Meta-analysis of training transfer to uncover learning transfer measurement techniques. In C. Quesada-Pallares & A. Gegenfurtner (chairs), *Methods for Understanding Learning Transfer* at the Biennial Conference of the European Association for Research on Learning and Instruction. Tampere, Finland.

**Hughes, A.M.**, Sonesh, S.C., Gregory, M.E., Marlow, S.L., Lacerenza, C.N., & Salas, E. (2015, April). Medication error in Emergency Medical Systems (EMS): Introducing the systems-based approach for EMS medication error diagnosis (SAFE MED). A virtual poster presented at the *HFES 2014 International Symposium in Healthcare*. Baltimore, MD.

**Hughes, A.M.**, Gregory, M.E., Benishek, L.E., Sonesh, S.C., Joseph, D.L., King, H.B. & Salas, E. (2014, March). Strategies for Effective Team Training: A Meta-Analysis. A poster presented at the *HFES 2014 International Symposium on Healthcare on Human Factors and Ergonomics in Healthcare: Leading the Way.* Chicago, IL.

Lazzara, E.H., Patzer, B., Gregory, M.E., Benishek, L.E. **Hughes, A.M.**, Heyne, K. & Salas, E. (2014, March). Investigating the Impact of Telemedicine on Teamwork. A poster presented at the *HFES 2014 International Symposium on Healthcare on Human Factors and Ergonomics in Healthcare: Leading the Way.* Chicago, IL.

**Hughes**, A.M., Lazzara, E.H., Gregory, M.E., Benishek, L.E., Dietz, A., & Salas, E. (2013, March). Don't throw the training out with the bathwater: Identifying signals, facilitators, and barriers in obstetric emergencies for team training in obstetrics. *HFES 2013 International Symposium in Healthcare*. Baltimore, MD

**Hughes,** A.M., Sonesh, S., Zajac, S. & Salas, E. (2013, October). Understanding Medication Errors in Emergency Medical Systems. *A paper presented at the Human Factors and Ergonomics Society 57<sup>th</sup> Annual Meeting*. San Diego, CA.

**Hughes, A.M.,** Sonesh, S., Gregory, M.E., & Salas, E. (2013, January). Emergency Detection in Labor and Delivery: A guide for simulation design. A poster presented at the *International Meeting for Simulation in Healthcare*. Orlando, FL.

Lazzara, E.H., Gregory, M.E., **Hughes, A.M**., & Salas, E. (2013, March). Rapid Response Systems (RRSs): A Qualitative Review of RRS Development, Implementation, and Evaluation. A poster presented at the *HFES 2013 International Symposium in Health Care*. Baltimore, MD.

#### INVITED PRESENTATIONS

Holden, R.J. & Valdez, R. (2018, October). Patient- centered Human Factors and Ergonomics. An alternative session to be presented at the 2018 HFES International Annual Meeting. Philadelphia, PA.

**Hughes, A.M.**, Lenoble, C.A., Kennel, V.L., Tappert, T., DiazGranados, D., Wiper, D. (2018, April). In D. Verhoven & M.L. Shuffler (chairs), *Leadership development in healthcare*. A panel to be presented at the 33rd annual conference of the Society for Industrial and Organizational Psychology. Chicago, IL.

Shuffler, M. L. & Savage, N. (2018). An IGNITEd Research Incubator: How can I/O help "cure" healthcare provider burnout? Alternative session to be presented to the 33rd annual conference for the Society for Industrial and Organizational Psychology, Chicago, IL.

Rice, V., Blickensderfer, E., Endsley, M.R., DeLucia, P., Sethumadhavan, A., & Stronge, A. (2017,October). In **A.M. Hughes** (chair), *On being a female leader in Human Factors and Ergonomics (HF/E)*. A panel discussion presented at the Human Factors and Ergonomics Society Annual Meeting 2017. Austin, TX. *This panel organized women leaders in the field of human factors and ergonomics in academia and industry. Current president and a past president of the society were on this panel*.

**Hughes, A.M.**, McDermott, P., Bowman, H., Palmer, M., & Kotin, S. (2017, October). In A. Crosser (chair), Transitioning from Student to Industry Professional. A panel discussion presented at the Human Factors and Ergonomics Society Annual Meeting 2017. Austin, TX.

**Hughes, A.M.** (2017, May 31). Uniting the great divide: Interprofessional education and why it matters. Keynote address at the First Annual Houston Methodist Interprofessional Education Day Symposium. Houston, TX.

**Hughes, A.M.** (2017, April). Transforming healthcare one team at a time. Presented at the University of Illinois at Chicago. Chicago, IL.

**Hughes, A.M.** (2017, February). A meta-analytic examination of what matters in transfer of training. Presented at SoarTECH. Orlando, FL.

**Hughes, A.M.,** Gregory, M.E., & Marlow, S.L. (2017, March). Enhancing teamwork for increased patient safety: An examination of team training. Presented at the 2017 International Symposium on Human Factors and Ergonomics in Health Care. New Orleans, LA.

**Hughes, A.M.** (2017, March) Team training and patient safety. Presented at the Center for Innovations in Quality, Effectiveness, and Safety (IQuESt). Houston, TX.

**Hughes, A.M.** (2016, December). Team training on the sharp end: Enhancing teamwork when it matters most. Presented at the ZIEL Simulation Institute at Kansas Medical Center.

**Hughes, A.M.** (2016, October) A meta-analysis and systematic review of team training in health care: Five tips for improving teamwork. Presented at the National Center for Human Factors in Healthcare. Washington, DC.

Gregory, M.E. & **Hughes, A.M.** (2016, October 7). Tips for the job hunt. Presented at Rice University. Houston, TX.

Hughes, A.M. (2016, September). An examination of work environment support and training transfer: A meta-

analytic integration. Presented at Aptima. Dayton, OH.

**Hughes, A.M.** (2016, September) Telemedical applications for trauma care and teamwork. Presented at MITRE. Washington, D.C.

**Hughes, A.M.** (2016, September). Trauma, teams, and telemedicine: A trifecta of care. Presented at the Michael E. DeBakey VA Medical Center's Center for Innovations in Quality, Effectiveness, and Safety (IQuESt). Houston, TX.

Sonesh, S.C., Salas, E., Benishek, L. E., Feitosa, J., Gregory, M. E., & **Hughes, A. M**. (2013, November). Strategic teamwork for obstetrics rapid response crisis scenarios (STORRCS): A rapid response team quality improvement initiative and supporting toolkit for improving the safety of obstetric and neo-natal healthcare services. Presented at Shands Medical Center, Jacksonville, FL.

Sonesh, S.C., Salas, E., Benishek, L.E., Feitosa, J., Gregory, M.E., **Hughes, A.M.** (2014, January). Strategic Teamwork for Obstetrics Rapid Response Crisis Scenarios. Presented at the Florida Healthcare Simulation Alliance (FHSA) Conference, Altamonte Springs, FL.

## ESSAYS

Hancock, G.M., **Hughes, A.M.**, Sanders, T., Doutcheva, N., & Blickensderfer, E. (2017, November). HFE WOMAN's Annual Luncheon: Austin 2017.

**Hughes, A.M.,** Blickensderfer, E., Hancock, G.M., Sanders, T., & Doutcheva, N. (2017, September). RSVP for the Women's Mentoring and Networking Lunch. *Human Factors and Ergonomics Society Monthly Bulletin*. Retrieved from https://www.hfes.org/Security/ContentPages/?Id=500#Lunch.

**Hughes, A.M.** & Blickensderfer, E. (2017, August). RSVP for the Women's Organization for Mentoring and Networking Lunch. *Human Factors and Ergonomics Society Monthly Bulletin*. Retrieved from https://www.hfes.org/Security/ContentPages/?Id=340#Women'sLunch.

**Hughes, A.M.** (2017, June). Human Factors and Ergonomics Women Organization for Mentoring and Networking (WOMAN) 2017 Lunch. *Human Factors and Ergonomics Society Monthly Bulletin*. Retrieved from http://www.hfes.org/web/HFESBulletin/June2017Bulletin.html#WOMANLunch.

Hancock, G.M., Blickensderfer, E., & **Hughes, A.M.** (2017, March). Launch of the HFE WOMAN Facebook Group. *Human Factors and Ergonomics Society Monthly Bulletin*.

Hancock, G.M., **Hughes, A.M.**, & Blickensderfer, E. (2016, November). HFES Women's Networking Lunch. *Human Factors and Ergonomics Society Monthly Bulletin.* 

Hughes, A.M. & Gregory, M.E. (2016, November). Benefits of healthcare team training. *Veterans Health Affairs Human Factors and Ergonomics Quarterly Newsletter*.

**Hughes, A.M.** (2016, October). Leveraging the science of teams: Tips from the science. *Health Services Research & Development Monthly Newsletter*.

Blickensderfer, E. & **Hughes, A.M.** (2016, August). Women's Networking Lunch. *Human Factors and Ergonomics Society Monthly Bulletin*. Retrieved from http://www.hfes.org/web/HFESBulletin/August2016NetworkingLunch.html

**Hughes, A.M.** (2016, August). Announcing the publication of a meta-analysis of team training in healthcare. *Human Factors and Ergonomics Society Training Technical Group Quarterly Newsletter*. Retrieved from http://tg.hfes.org/ttg/docs/summer2016.html.

Blickensderfer, E. & **Hughes, A.M.** (2016, May). RSVP for Human Factors/Ergonomics Women's Networking Event. *Human Factors and Ergonomics Society Monthly Bulletin*. Retrieved from http://www.hfes.org/web/HFESBulletin/May2016NetworkingEvent.html.

### **GRANTS, CONTRACTS & AWARDS**

#### PENDING SUPPORT

٠	P.I. Sylvia J. Hysong, PhD	08/2017-03/2021
	Agency for Healthcare Research and Quality	\$1,400,000
	Title: Impact of team configuration and team stability on primary care quality	
	Role: Co-Investigator	
•	P.I. Thomas J. Papadimos, MD, MPH, FCCM	03/2018-09/2018
	United States Air Force	\$100,000
	Title: A Comprehensive Technical Forecasting study to develop a capability visio	on for the United States
	Air force and to address current and emerging national security challenges in the	year 2030 and beyond.
	Role: Co-Investigator	
•	P.I. Charlesnika Evans, PhD, MPH; Katie Suda, PharmD, MS	09/2018-05/2021
	Agency for Healthcare Research and Quality	\$1,400,000
	Title: Implementation and effectiveness of antimicrobial stewardship strategies in	FQHC clinics
	Role: Co-Investigator	
FUND	ED GRANTS	
•	P.I. Ashley M. Hughes, PhD, MS	06/2018-05/2019
	Midwest Roybal Center for Health Promotion and Translation	\$40,000
	Title: Antimicrobial Stewardship Program (ASP) implementation in specialized p	opulation
	Role: Principal Investigator	
•	P.I. Laura Petersen, MD, MPH	10/2017-03/2018
·	Veterans Affairs Health Services Research & Development (HSR&D)	\$10,000
	Title: Sustainment of team huddle-based interventions	÷10,000
	Role: Co-Investigator	
٠	P.I. Laura Petersen, MD, MPH	8/2017-8/2020
	Veterans Affairs Health Services Research & Development (HSR&D)	\$1,100,000
	Title: Improving the measurement of VA facility performance to foster a learning	g healthcare system
	Role: Co-Investigator	
SUBM	NITTED GRANTS	
٠	P.I. Ashley M. Hughes, PhD, MS	06/2018-05/2019
	Center for Clinical and Translational Science (CCTS)	\$50,000

Title: Antimicrobial Stewardship Program (ASP) implementation in spinal cord injury (SCI) patients

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#### **Role:** Principal Investigator

- P.I. Sylvia J. Hysong, PhD Veterans Affairs Health Services Research & Development (HSR&D) Title: Designing audit and feedback report systems for teams Role: Co-Investigator
- P.I. Ashley M. Hughes, PhD • Office Ergonomics Research Committee \$23.963.86 Title: Health information technology: Informing impact and design through meta-analysis **Role:** Principal Investigator

#### **TEACHING & MENTORSHIP** COURSES

## **Topics in Health Informatics (4 credit hours) Co-instructor/Facilitator**

University of Illinois at Chicago

Duties: Directed online group discussion via Blackboard, graded discussions and assignments, led online • review sessions via Blackboard

## **Research Methods in Psychology (5 credit hours)** Instructor

University of Central Florida

Duties: Directed online group discussion via WebCourses, graded lab paperwork and assignments, led • online review sessions via WebCourses

#### THESES MENTORED

## **Toward a Model of Team Decision Making Under Stress** Honors in the Major Undergraduate Thesis

Mentee: Alyssa Marshall

• Duties: Directed student readings to inform thesis development, provided periodic feedback and monitored progress toward goal.

Exploring Tacit Knowledge in Organizations	
Honors in the Major Undergraduate Thesis	
Marte a Arida a Diana	

*Mentee: Andrea Plazas* 

• Duties: Directed student readings to inform thesis development, provided periodic feedback and monitored progress toward goal.

#### **GUEST LECTURES**

Hughes, A.M. (2018, March). Informatics for teams. Presented at the University of Illinois at Chicago's doctorate of Health Informatics Human Factors in Biomedical Informatics Course. Chicago, IL.

Hughes, A.M. (2018, February). Designing simulation: A practical guide. Presented at the University of Illinois at Chicago's Virtual Reality for BVIS students course. Chicago, IL.

Hughes, A.M. & Stowers, K. (2013, March). Team cognition and safety in complex systems: Lessons learned from NASA and healthcare. Presented at University of Central Florida Social Psychology Course, Orlando, FL.

Hughes, A.M. (2013, January) Human factors: Bridging the gap between humans and technology. A

08/2017-08/2020 \$1,100,000

01/2017-01/2018

**Orlando**, FL **Summer 2010** 

Chicago, IL Spring 2018

**Orlando**, FL 2013

**Orlando**, FL 2014

presentation performed as a function of outreach to undergraduate students as an officer of the Human Factors and Ergonomics Student Chapter.

## ACADEMIC HONORS AND AWARDS

Award title	Status	Year(s)
<ul> <li>Schmidt-Hunter Meta-Analysis Award</li> </ul>	Awarded	2018
•S. Rains Wallace Dissertation Research Award	Nominated	2017
<ul> <li>UCF Travel Fellowship*</li> </ul>	Recipient	2013-2014
•Magna Cum Laude	Graduate	2010

\*UCF Travel Fellowship indicates UCF's support for first author student travel to a National Conference.

#### **PROFESSIONAL MEMBERSHIP**

Association	Member type	Membership established
Chicago Simulation Consortium	Member	2017
American Medical Informatics Association	Member	2017
Human Factors and Ergonomics Society	Full member	2010
<ul> <li>Society for Industrial and Organizational Psychology</li> </ul>	Full member	2012
Society for Simulation in Healthcare	Member	2012

#### **PROFESSIONAL AND ACADEMIC SERVICE**

Organization/Entity	Service type	Year(s) served
British Medical Journal	Reviewer	2018 - current
• Human Factors in Health Care Symposium,	Session Chair	2018
Patient Safety		
• Human Factors in Health Care Symposium,	Session Chair	2018
Clinical and Consumer Healthcare IT		
<ul> <li>Department of Biomedical and Health</li> </ul>	Committee Member	2017-current
Information Sciences, PhD Academic Affairs		
• College of Applied Health Sciences 1 <sup>st</sup>	Faculty Judge	2018
Health Tech Jam		
Health Care Technical Group Division of	TG Chair	2018
Human Factors and Ergonomics Society		
<ul> <li>Human Factors and Ergonomics Society</li> </ul>	Panel chair	2017
"On being a female leader in HF/E" panel		
Diagnosis	Invited Reviewer	2017
Group and Organizations Journal- Special	Invited Reviewer	2016
Issue on teamwork in healthcare		
Human Factors and Ergonomics Society		
Augmented Cognition technical group panel	Panel chair	2016
IQuESt Center Grant Review	Reviewer	2016-2017
<ul> <li>Human Factors and Ergonomics Society</li> </ul>	Reviewer	2016-2017
Healthcare technical group		
• The Journal of Human Factors	Ad-hoc reviewer	2016-2017
• The Journal of Emergency Nursing	Ad-hoc reviewer	2016-2017
<ul> <li>HFES Women's Networking Group</li> </ul>	Co-founder & taskforce officer	2016-2017

## WORKSHOPS ORGANIZED AND ATTENDED

- Ariel Andrea, M.S., "Improving your workflow: Intermediate/Advanced Endnote", February 25, 2016
- Barbara Bowers, RN, PhD, "Fundamentals of grant writing", February 10, 2016 [recorded September 22, 2008].
- Eric Main, M.A., "Preparing tomorrow's faculty," January 21st-April 15, 2015
- Wendy Cartier, Ph.D., "Formatting a Thesis/Dissertation using Microsoft word's hidden tools," September 17, 2014.
- Dana Joseph, Ph.D., "Social network analysis," June 28, 2012
- Dana Joseph, Ph.D., "Meta-analysis," May 24, 2012
- Joseph Keebler, Ph.D., "Preparing for the job market," March 27, 2012
- Wendy Bedwell, M.Ed., Elizabeth Lazzara, M.A., Rebecca Lyons, B.S., & Marissa Shuffler, M.S., "Project management," February 21, 2012
- Marissa Shuffler, M.S. & Kyle Heyne, M.S., "Lessons from research in the field," August 17, 2011
- Amanda Thayer & Elizabeth Lazzara, M.A., "Managing research assistants effectively," August 10, 2011
- Eduardo Salas, Ph.D., "Reviewing manuscripts," July 27, 2011
- Maritza Salazar, Ph.D., "Qualitative methods," July 6, 2011
- Nathan Carter, Ph.D., "Research method seminar: Meta-analysis," July 6, 2011
- Rebecca Lyons, B.S., "Applying I/O insights across domains," June 29, 2011

## STATISTICAL AND COMPUTER SKILLS

- Competent in basic and advanced data analysis in SPSS, SAS, LISREL, R, Microsoft Excel and AMOS.
- Proficient with use of Word, Power Point, Lucid Chart, Dedoose, HyperResearch, Atlas.ti, and Excel.
- Expert use of meta-analytic techniques and multi-level evaluations.

## SELECTED PRESS

- Agency for Healthcare Research and Quality (2017, March 24). A systematic review of team training in health care: Ten questions. *Patient Safety Network*. Retrieved from <a href="https://psnet.ahrq.gov/resources/resource/30907/a-systematic-review-of-team-training-in-health-care-ten-questions">https://psnet.ahrq.gov/resources/resource/30907/a-systematic-review-of-team-training-in-health-care-ten-questions</a>.
- Agency for Healthcare Research and Quality (2016, August 3). Saving lives: A meta-analysis of team training in healthcare. *Patient Safety Network*. Retrieved from <a href="https://psnet.ahrq.gov/resources/resource/30014/saving-lives-a-meta-analysis-of-team-training-in-healthcare">https://psnet.ahrq.gov/resources/resource/30014/saving-lives-a-meta-analysis-of-team-training-in-healthcare</a>.
- Rice University. (2016, July 14). Team-trained health care staff can reduce patient deaths by 15 percent. *ScienceDaily*. Retrieved July 17, 2016 from www.sciencedaily.com/releases/2016/07/160714110914.htm.
- Rice University. (2016, July 14). Team-trained health care staff can reduce patient deaths by 15 percent. *Futurity*. Retrieved July 17, 2016 from <u>http://www.futurity.org/health-care-team-training-1204252/</u>.
- Rice University. (2016, July 14). Team-trained health care staff can reduce patient deaths by 15 percent. Rice University News & Media. Retrieved July 17, 2016 from <a href="http://news.rice.edu/2016/07/14/team-training-in-health-care-can-save-lives/">http://news.rice.edu/2016/07/14/team-training-in-health-care-can-save-lives/</a>.
- Salas, E. (2015). Can team training save lives?. Critical Connections: Clinical spotlight, 14.
- Sonesh, S.C. & Salas, E. (2014, October). Team training and patient outcomes. Washington, DC: Institute of

Medicine. <u>https://www.nationalacademies.org/hmd/~/media/Files/Activity%20Files/Global/Measuringth</u> eImpactofInterprofessionalEducation/2014-OCT-07/4-Sonesh-TO%20POST%20ONLINE.pdf

## REFERENCES

References available upon request.