Nathan J. McNeese

Curriculum Vitae

Clemson University
Human-Centered Computing
School of Computing
218 McAdams Hall
Clemson, SC 29634

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Research Interests

Human factors, team cognition, human-autonomy teaming, human computer interaction, artificial intelligence, computer supported collaborative work, cognitive science, healthcare, usability research and design, human-centered design, collaborative information seeking, knowledge elicitation

Current Appointments

Primary
Assistant Professor (tenure track), Human-Centered Computing
School of Computing
College of Engineering, Computing and Applied Sciences, Clemson University

Secondary
Director, Team Research Analytics in Computational Environments (TRACE) Research Group, Clemson University
Faculty Scholar, Clemson University's School of Health Research
Associate, Clemson University's Human Factors Institute

Education

The Pennsylvania State University, University Park, PA, USA
PhD, Information Sciences and Technology - (2010-2014)

- Focus on Team Decision-Making and Computer Supported Collaborative Work
- Advisor: Dr. Madhu Reddy
- Dissertation Title: *The Role of Team Cognition in Collaborative Information Seeking During Team Decision-Making*
- Committee: Dr. Madhu Reddy, Dr. Susan Mohammed, Dr. Jim Jansen, and Dr. Shawn Clark

Bachelor of Science, Psychology- (2005-2009)

- Business Option
- Focus on Industrial and Organizational Psychology
- Minor in Security Risk and Analysis

Research Experience

Clemson University, College of Engineering, Computing and Applied Sciences, Human-Centered Computing
Clemson, SC
Assistant Professor (Aug 2017-Present)

- Conducting multiple research studies pertaining to human factors, team cognition, artificial intelligence, and human computer interaction

Arizona State University, The Ira A. Fulton Schools of Engineering, Human Systems Engineering
Mesa, AZ
Postdoctoral Scholar & Research Associate, (Dec 2014-July 2017)

- Worked directly with Dr. Nancy Cooke
- Conducted multiple research studies pertaining to human factors, team cognition, cognitive science, human computer interaction, collaboration, and team decision-making.

Mayo Clinic, Phoenix, AZ
Professional Research Affiliate, (April 2015-Present)

- Conducting work related to teamwork and the development of team cognition during Code Blue resuscitations and palliative care.

Cognitive Engineering Research Institute, Phoenix, AZ
Consultant, (April 2015-Present)

- Consultant on projects relating to human factors, team cognition, and team decision-making.

Penn State College of Information Sciences & Technology, University Park, PA
Research Assistant, (2010-2014)

- Conducted multiple research studies pertaining to team decision-making, team cognition, human computer interaction, computer supported collaborative work, collaborative information seeking, and medical informatics.

Penn State College of Information Sciences & Technology, University Park, PA
Undergraduate Researcher, (2008-2010)

- Conducted research on human-centered data fusion with the Dean of the College of Information Sciences and Technology.

Penn State Department of Psychology, University Park, PA
Head Coordinator of Research, (2007-2010)

- As an undergraduate, developed experimental design examining the effectiveness of distributed cognition in face-to-face, teleconferencing, and virtual worlds communication mediums. Processed information through IRB and conducted experiment with no assistance.

Penn State Department of Psychology, University Park, PA
Undergraduate Research Assistant, (2006-2007)

- Conducted and helped design various experiments pertaining to attitudes based on race and gender. Input and coded data for statistical analysis.

Research Grants

Awarded (Total of $4,055,260):

- Human-Autonomy Teaming in Remotely Piloted Aircraft Systems Operations Under Degraded Conditions. PI: Cooke, Co-PI: **McNeese.** Office of Naval Research. Awarded to Cognitive Engineering Research Institute (CERI). $920,652.00.

- Improving Situation Awareness in Distributed Human-Robot Teams. PI: Cooke, Kambhampati. Co-I: Choui, **McNeese**, Zhang. Consultant: Endsley. AFOSR. $2,014,294.00.

- A Biometric Measurement Suite to Understand the Processes Behind Human Learning and Performance in Complex Settings. PI: Cooke, Co-PIs: Becker, Branaghan, Craig, Gray, **McNeese**, Kula, Roscoe, Wu. ONR DURIP. $286,155.00.

- Collaborative Approaches to Improving Health-related Quality of Life, Fatigue, and Coping Skills of Adolescent and Young Adult Cancer Patients. PI: Shin, Co-PI: Bowers, Fisher, **McNeese**, Whitcomb. Greenville Health System. $18,383.

- Planning Challenges in Human Robot Teaming: An Integrated Exploration of Representations, Algorithms and Human Factors. PI: Kambhampati, Co-PI: Cooke, Senior Personnel: **McNeese** & Zhang. Office of Naval Research. $774,376.00. 6/1/16-5/31/19.

- Using predictive agent based simulation to improve ICU metrics related to interactions between teams, technology, and the health care built environment space. PI: O'Hara, Co-PI: **McNeese.** Clemson University Impact Grant. $41,400.

Under Review as of 7/20/18 (Total of $9,479,298):

Publications

*** Denotes a student advisee**

Dissertation (Approved by Committee)

- [D.1] **McNeese, N.** (2014). The Role of Team Cognition in Collaborative Information Seeking During Team Decision-Making. The Pennsylvania State University. Doctoral Dissertation.

Book (Under Contract)

- [BK.1] **McNeese, N.**, & Cooke, N. Human Factors Methods: Knowledge Elicitation [working title]. (Forthcoming 2018) *Human Factors & Ergonomics Society.*

Journal Articles (Refereed):

- [JA.10] Myers, C. W., Ball, J. T., Cooke, N. J., Freiman, M. D., Caisse, M., Rodgers, S. Demir, M., **McNeese, N.** (Accepted). Autonomous Intelligent Agents for Team Training: Making The Case for Synthetic Teammates. *IEEE Transactions on Intelligent Systems.*

- [JA.9] Demir, M., Likens, A. D., Cooke, N. J., Amazeen, P. G., & **McNeese, N.** (In Press). Team Coordination and Effectiveness in Human-Autonomy Teaming. *IEEE Transactions on Human-Machine Systems.*

- [JA.8] Demir, M., **McNeese, N.**, & Cooke, N. J. (2018). The Impact of a Perceived Autonomous Agent on Dynamic Team Behaviors. *IEEE Transactions on Emerging Topics in Computational Intelligence*, *2*(4).

- [JA.7] **McNeese, N.**, *Demir, M., Cooke, N., & Myers, C. (2018). Teaming with a Synthetic Teammate: Insights into Human Autonomy Teaming. *Human Factors*. *60*(2), 262-273.

- [JA.6] *Demir, M., **McNeese, N.**, & Cooke, N. (2017). Team Situational Awareness within the Context of Human-Autonomy Teaming. *Cognitive Systems Research.* 46, 3-12.

- [JA.5] *Buchanan, V., Lu, Y., **McNeese, N.**, Steptoe, M., Maciejewski, R., & Cooke, N. (2017). The Role of Teamwork in the Analysis of Big Data- A Study of Visual Analytics and Box Office Prediction. *Big Data.* 5 (1), 53-66.

- [JA.4] Gray, R., Cooke, N., **McNeese, N.**, & McNabb, J. (2017). Investigating Team Coordination in Baseball Using a Novel Joint Decision-Making Paradigm. *Frontiers in Psychology*. 8: 907

- [JA.3] **McNeese, N.,** Cooke, N., Branaghan, R., Knobloch, A., & Taylor, A. (2016). Identification of the Emplacement of Improvised Explosive Devices by Experienced Mission Payload Operators. *Applied Ergonomics*, *60*, 43-51.

- [JA.2] **McNeese, N.**, Khera, N., Wordingham, S., Arring, N., Nyquist, S., Gentry, A., Tomlinson, B., Cooke, N., & Sen, A. (2016). Team Cognition As a Means to Improve Care Delivery in Critically Ill Patients With Cancer After Hematopoietic Cell Transplantation. *Journal of Oncology Practice,* JOPR013672.

- [JA.1] **McNeese, N.** & Reddy, M. (2015). The Role of Team Cognition in Collaborative Information Seeking. *Journal of the Association for Information Science and Technology*. doi: 10.1002/asi.23614

Book Chapters (Refereed)

- [B.3] **McNeese. N.**, *Demir, M., & Reddy, M. (2017). "Methodological Techniques and Approaches to Developing Empirical Insights of Cognition During Collaborative

Information Seeking", Chapter in Cognitive Systems Engineering: An Integrative Living Lab Framework. CRC Taylor & Francis.

- [B.2] **McNeese. N.**, Cooke, N., *Fedele, M., & Gray, R. (2016). "Perspectives on Team Cognition and Team Sports", Chapter in Sport and Exercise Psychology Research. European Federation of Sport Psychology.

- [B.1] Hall, D., **McNeese, N.**, & Llinas J. (2010). "H-Space: Humans as Observers", Chapter 3 in Human-Centered Fusion, D. Hall and J. Jordan. pg. 59-84. Artech House.

Conference Full Papers (Refereed):

- [C.34] *Barberis Canonico, L. & **McNeese, N.**, & *Duncan, C. (Accepted). Machine Learning as Grounded Theory: Human-Centered Interfaces for Social Network Research through Artificial Intelligence. *2018 Annual Meeting of Human Factors and Ergonomics Society*. Philadelphia, PA.

- [C.33] *Barberis Canonico, L. & **McNeese, N.** (Accepted). Intelligent and Human-Centered Clinical Checklists: A Voice Interface for Virtualized Clinical Paths. *2018 Annual Meeting of Human Factors and Ergonomics Society*. Philadelphia, PA.

- [C.32] *Barberis Canonico, L., **McNeese, N.**, & Shuffler, M. (Accepted). Stable Teamwork Marriages in Healthcare: Applying Machine Learning to Surgeon-Nurse Patient Matching. *2018 Annual Meeting of Human Factors and Ergonomics Society*. Philadelphia, PA.

- [C.31] Demir, M., **McNeese, N.**, & Cooke, N. J. (Accepted). Effects of Team Interaction and Shared Cognition on Human-Robot Team Performance. *2018 Annual Meeting of Human Factors and Ergonomics Society*. Philadelphia, PA.

- [C.30] O'Hara, S., **McNeese, N.**, Toft Klar, R., Chavira-Razo, L., & Andrade-Romo, Z. (2018). Macrocognition in the Health Care Built Environment: A New Model for Emergency Response Extending Macrocognition Results in the Inpatient Setting to the Mexico 2017 Earthquake Disaster. *2018 Human Factors and Ergonomics in Health Care Symposium*. Boston, MA.

- [C.29] *Demir, M. Amazeen, N., **McNeese, N.**, Cooke, N. Likens, A. (2017). Team Coordination Dynamics in Human-Autonomy Teaming. *2017 Annual Meeting of Human Factors and Ergonomic Society*. Austin, TX.

- [C.28] *Demir, M., **McNeese, N.**, & Cooke, N. (2017). Team Synchrony in Human-Autonomy Teaming. *8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017) and the Affiliated Conferences*. Los Angeles, CA.

- [C.27] **McNeese, N.**, Cooke, N., Shope, S., & *Knobloch, A. (2016). The Extreme Environment of High Altitude Gas Ballooning: Lessons Learned in Assessing

Cognition. *2016 Annual Meeting of Human Factors and Ergonomic Society*. Washington D.C. Human Factors and Ergonomics Society. Sept 19-23, 2016. pp. 1409-1413.

- [C.26] Cooke, N., Shope, S., & **McNeese, N.** (2016). Human Systems Integration: A 28,000 Foot View. *2016 Annual Meeting of Human Factors and Ergonomic Society*. Washington D.C. Human Factors and Ergonomics Society. Sept 19-23, 2016. pp. 1459-1463.

- [C.25] *Demir, M., **McNeese, N.**, Cooke, N., & Myers, C. (2016). The Synthetic Teammate as a Team Player in Command-and-Control Teams. *2016 Annual Meeting of Human Factors and Ergonomic Society*. Washington D.C. Human Factors and Ergonomics Society. Sept 19-23, 2016. pp. 116-116.

- [C.24] McNeese, M., & **McNeese, N.** (2016). Intelligent Teamwork: A History, Framework, and Lessons Learned. *2016 Annual Meeting of Human Factors and Ergonomic Society*. Washington D.C. Human Factors and Ergonomics Society. Sept 19-23, 2016. pp. 153-157.

- [C.23] Myers, C., Ball, J., Cooke, N., *Demir, M., **McNeese, N.**, Caisse, M., Freiman, M., Halverson, T. (2016). Maintaining Team Training Efficacy with Autonomous Synthetic Teammates. *2016 Interservice/Industry Training, Simulation, and Education Conference*. Orlando, FL.

- [C.22] **McNeese, N.**, Cooke, N., Gray, R., & *Fedele, M. (2016). Knowledge Elicitation Methods for Developing Insights into Team Cognition During Team Sports. *7th International Conference on Applied Human Factors and Ergonomics (AHFE 2016) and the Affiliated Conferences*. Orlando, FL. July 27-31, 2016. pp. 3-15.

- [C.21] McNeese, M., **McNeese, N.**, Endsley, T., Reep, J., & Forster, P. (2016). Simulating Team Cognition in Complex Systems: Practical Considerations for Researchers. *7th International Conference on Applied Human Factors and Ergonomics (AHFE 2016) and the Affiliated Conferences*. Orlando, FL. July 27-31, 2016. pp. 255-267.

- [C.20] **McNeese, N**. & Cooke, N. (2016). Team Cognition As A Mechanism For Developing Collaborative and Proactive Decision Support in Unmanned Aerial Systems. *18th International Conference on Human- Computer Interaction*. Toronto, CA. July 17-22, 2016. pp. 198-209.

- [C.19] *Demir, M., **McNeese, N.**, & Cooke, N. (2016). Team Communication Behaviors of The Human-Automation Teaming. *2016 IEEE International Multi-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision Support (COGSIMA)*. San Diego, CA. March 21-25, 2016. pp. 28-34.
  ***Best Paper of 2016 Cogsima Conference**

- [C.18] *Hinski, S., Cooke, N., **McNeese, N.**, Sen, A., & Patel, B. (2016). A Human Factors Approach to Building High-Performance Multi-Professional Cardiac Arrest

Teams: Developing a Code Blue Team Performance Metric. *HFES 2016 International Symposium on Human Factors and Ergonomics in Health Care*. San Diego, CA. pp. 68-71.

- [C.17] Vorm, E., **McNeese, N.** (2016). Proactive Decision Support: Applications and Implications in Military Unmanned Aerial Systems. *18th International Conference on Human- Computer Interaction*. Toronto, CA.

- [C.16] **McNeese, N.**, Cooke, N., & *Buchanan, V. (2015). Human Factors Guidelines for Developing Collaborative Intelligence Analysis Technologies. *2015 Annual Meeting of Human Factors and Ergonomic Society*. Los Angeles, CA. Human Factors and Ergonomics Society. October 26-30, 2015. pp. 821-825.

- [C.15] **McNeese, N.**, *Buchanan, V., & Cooke, N. (2015). The Cognitive Science of Intelligence Analysis. *2015 Annual Meeting of Human Factors and Ergonomic Society*. Los Angeles, CA. Human Factors and Ergonomics Society. October 26-30, 2015. pp. 826-830.

- [C.14] **McNeese, N.**, & Reddy, M. (2015). Concept Mapping as a Methodology to Develop Insights on Cognition During Collaborative Information Seeking. *2015 Annual Meeting of Human Factors and Ergonomic Society*. Los Angeles, CA. Human Factors and Ergonomics Society. October 26-30, 2015. pp. 245-249.

- [C.13] **McNeese, N.**, & Reddy, M. (2015). Articulating and Understanding the Development of a Team Mental Model in a Distributed Medium. *2015 Annual Meeting of Human Factors and Ergonomic Society*. Los Angeles, CA. Human Factors and Ergonomics Society. October 26-30, 2015. pp. 240-44.

- [C.12] *Demir, M., **McNeese, N.**, Cooke, N., Ball, J, Myers, C. (2015). Synthetic Teammate Communication and Coordination with Humans. *2015 Annual Meeting of Human Factors and Ergonomic Society*. Los Angeles, CA. Human Factors and Ergonomics Society. October 26-30, 2015. pp. 951-955.

- [C.11] *Demir, M., & **McNeese, N.** (2015). The Role of Recognition Primed Decision Making in Human Automation Teaming. *International Conference on Naturalistic Decision Making 2015*. McLean, VA.

- [C.10] **McNeese, N.**, Cooke, N., *Fedele, M., & Gray, R. (2015). Theoretical and Methodical Approaches to Studying Team Cognition in Sports. *6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences*. Las Vegas, NV. Applied Human Factors & Ergonomics. July 26-30, 2015. pp. 1211-1218.

- [C.9] McNeese, M., Mancuso, V., **McNeese, N.**, & Glantz, E. (2015). What Went Wrong, What Can Go Right: A Prospectus on Human Factors Practice. *6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the*

Affiliated Conferences. Las Vegas, NV. Applied Human Factors & Ergonomics. July 26-30, 2015. pp. 5222-5229.

- [C.8] **McNeese, N.**, Cooke, N., Hoffman, R., Klein, G., McNeese, M., Patterson, E. (2015) The Human Factors of Intelligence Analysis. *2015 Annual Meeting of Human Factors and Ergonomic Society*. Los Angeles, CA. Human Factors and Ergonomics Society. October 26-30, 2015. pp. 130-134.

- [C.7] **McNeese, N.**, Reddy, M., & *Friedenberg, E. (2014). Team Mental Models within Collaborative Information Seeking. *2014 Annual Meeting of the Human Factors and Ergonomic Society*. Chicago, IL. Human Factors and Ergonomics Society. October 27-31, 2014, pp. 335-339.

- [C.6] McNeese, M., Mancuso, V., **McNeese, N**., Endsley, T. & Forster, P. (2014). An Integrative Simulation to Study Team Cognition in Emergency Crisis Management. *2014 Annual Meeting of the Human Factors and Ergonomic Society*. Chicago, IL. Human Factors and Ergonomics Society. October 27-31, 2014, pp. 285-289.

- [C.5] Murphy, A., Reddy, M., & **McNeese, N.** (2014). Exploring the Perceptions and Use of Electronic Medical Record Systems by Non-Clinicians. *Proc. of ACM Conf. on Designing Interactive System 2014 (DIS 2014)*. Vancouver, Canada. June 21-25, 2014. pp. 429-432.

- [C.4] Johnson, N., Murphy, A., **McNeese, N.**, Reddy, M., & Purao, S. (2013). A Survey on Rural Hospitals' Perspectives on Health Information Technology Outsourcing. *2013 American Medical Informatics Association (AMIA'13)*. Washington, DC. Nov. 16-20, 2013. pp. 732-741.

- [C.3] McNeese, M., Mancuso, V., **McNeese, N.**, Endsley, T., & Forster, P. (2013). Using the Living Laboratory Framework as a Basis for Understanding Next Generation Analyst Work. *2013 SPIE Defense, Security, and Sensing*. Baltimore, MD. pp. 87580F-87580F-12.

- [C.2] Caragea, C., **McNeese, N.**, Jaiswal, A., Traylor, G., Kim, W., Mitra, P., Wu, D., Tapia, A., Giles, L., Jansen, B. J., & Yen, J. (2011). Classifying Text Messages for the Haiti Earthquake. *Proceedings of the 8th international ISCRAM conference*. Lisbon, Portugal.

- [C.1] **McNeese, N.**, Pfaff, M., Santoro, G., & McNeese, M. (2008). Team Performance in Real and Virtual Worlds: The Perceived Value of Second Life. *Proceedings of the 52nd Annual Meeting of the Human Factors and Ergonomic Society*. New York City, NY: Human Factors and Ergonomics Society. pp. 1435-1439.

Technical Reports:

- [TR.1] Cooke, N., Demir, M., **McNeese, N.** (2016) Synthetic Teammates as Team Players: Coordination of Human and Synthetic Teammates. Technical Report for Grant no. N000141110844.

Workshop Papers (Peer Reviewed):

- [WP.1] **McNeese, N.** & Reddy, M. (2013). Studying Team Cognition during Collaborative Information Seeking: A Position Paper. Workshop on Collaborative Information Seeking: Consolidating the Past, Creating the Future. *2013 ACM Conference on Computer Supported Cooperative Work (CSCW'13)*. San Antonio, Tex. Feb. 24, 2013.

Research Posters:

- [P.8] **McNeese, N.**, Barberis Canonico, L., Blando, A., Dejesus, R. (2018). Team Research Analytics in Computational Environments (TRACE) Research Group. *Southeastern Human Factors Applied Research Conference*. April 7, 2018.

- [P.7] *Hinski, S., **McNeese, N.**, Khera, N., Wordingham, S., Arring, N., Nyquist, S., Gentry, A., Tomlinson, B., Cooke, N., & Sen, A. Team Cognition As a Means to Improve Care Delivery in Critically Ill Patients With Cancer After Hematopoietic Cell Transplantation. *HFES 2017 International Symposium on Human Factors and Ergonomics in Health Care*. New Orleans, LA. March 7, 2017.

- [P.6] *Buchanan, V., **McNeese, N.**, Lu, Y., Wang, F., Cooke, N., & Maciejewski, R. (2015). An Empirical Testbed for Human-in-the-Loop Studies of Collaboration with Visualization. *Foresight Partner Meeting*, Arizona State University, Tempe, AZ. February 19, 2015.

- [P.5] **McNeese, N.**, *Fedele, M., *Buchanan, V., & Cooke, N. (2015). Human Factors Guidance for Collaborative Intelligence Analysis. *Foresight Partner Meeting*, Arizona State University, Tempe, AZ. February 19, 2015.

- [P.4] **McNeese, N.**, *Buchanan, V., & Cooke, N. (2015). The Cognitive Science of Intelligence Analysis. *Foresight Partner Meeting*, Arizona State University, Tempe, AZ. February 19, 2015.

- [P.3] **McNeese, N.** (2014). Studying Team Cognition During Collaborative Information Seeking. *The 2014 Pennsylvania State University Graduate Exhibition*, The Pennsylvania State University, University Park, PA. April 6, 2014.

- [P.2] Murphy, A., **McNeese, N.**, & Reddy, M. (2012). "Supporting Multi-Disciplinary Team (MDT) Collaboration through the EMR." Poster Presentation. *NSF CHOT Industry Advisory Board Meeting. Hershey, PA*. September 6-7, 2012.

- [P.1] Murphy, A., **McNeese, N.**, Reddy, M., & DeFlitch, C. (2012). Exploring How Electronic Medical Record (EMR) Systems Support Non-Clinical Users. *The 2012 Center for Health Organization Transformation (CHOT) Advisory Board Meeting*, Hershey, PA, Sep 6, 2012.

Public Relations Coverage

- [PR.5] Frances Parrish. **"**CBSHS, CAFLS, CECAS, Business faculty named new School of Health Research faculty scholars." 3/28/18. http://newsstand.clemson.edu/cbshs-cafls-cecas-business-faculty-named-new-school-of-health-research-faculty-scholars/

- [PR.4] Shannon Keeler. "Two Eagles transoceanic ballon trek has Fulton engineering connection." *Full Circle*. 1/29/15 http://fullcircle.asu.edu/research/two-eagles-transoceanic-balloon-trek-has-fulton-engineering-connection/.

- [PR.3] Amelia Huggins. "ASU, NGA to address national security risks of climate change." *ASU News Science & Tech*. 6/18/14 https://asunews.asu.edu/20140618-asu-nga-address-climate-change.

- [PR.2] Mark Harris. "Second Life beats real life for collaboration" *TechRadar*. 9/28/08 http://www.techradar.com/us/news/internet/second-life-beats-real-life-for-collaboration-471985.

- [PR.1] "IST student, faculty examine problem solving in Second Life" *Penn State News*. 9/22/08 http://news.psu.edu/story/183485/2008/09/22/ist-student-faculty-examine-problem-solving-second-life.

Presentations (Conference & Invited)

- [PRE.28] Collaborative Approaches to Improving Health-related Quality of Life, Fatigue, and Coping Skills of Adolescent and Young Adult Cancer Patients (with Shin). Presented at to Greenville Health System Nursing Research Committee. June 2018.

- [PRE.27] Perspectives and Trajectories on Team Cognition in Human-Machine Teaming. Presented to Duke University Mechanical Engineering & Computer Science. April 2018.

- [PRE.26] The What, Why, and How of Teamwork: New Frontiers in Teaming. Presented to Clemson CPSC 4910. March 2018.

- [PRE. 25] Macrocognition in the Health Care Built Environment: A New Model for Emergency Response Extending Macrocognition Results in the Inpatient Setting to the Mexico 2017 Earthquake Disaster. 2018 Human Factors and Ergonomics in Health Care Symposium. March 2018. Boston, MA.

- [PRE.24] Team Cognition & Collaboration in the Healthcare System. Presented to 2017 Academy of Nursing Excellence in Design Summit. October 2017. Clemson, SC.

- [PRE.23] A Transdisciplinary Approach to Teamwork: Improving Systems through Team Cognition in Multiple Sociotechnical Settings. Presented to The Human Systems Engineering Program. Arizona State University. February 2017. Mesa, AZ.

- [PRE.22] A Transdisciplinary Approach to Teamwork: Improving Sociotechnical Settings through Team Cognition and Human-Centered Collaborative Technology. Presented to The School of Computing. Clemson University. February 2017. Clemson, SC.

- [PRE.21] Improving Healthcare Systems Through Team Cognition and Human-Centered Collaborative Technology. Presented to The Department of Biomedical Informatics. Vanderbilt University. February 2017. Nashville, TN.

- [PRE.20] A Transdisciplinary Approach to Teamwork: Improving Systems through Team Cognition in Multiple Sociotechnical Settings. Presented to The Department of Systems & Industrial Engineering. University of Arizona. February 2017. Tucson, AZ.

- [PRE.19] A Transdisciplinary Approach to Teamwork: Improving Systems through Team Cognition in Multiple Sociotechnical Settings. Presented to The Department of Industrial & Systems Engineering. University of Wisconsin-Madison. January 2017. Madison, WI.

- [PRE.18] Teamwork and Collaboration: Perspectives of Information Science, Human Factors, Human Computer Interaction, and Computer Supported Cooperative Work. Presented at ASU Human Systems Engineering Brown Bag. September 2016. Mesa, AZ.

- [PRE.17] Knowledge Elicitation Methods for Developing Insights into Team Cognition During Team Sports. Presented at the 2016 AHFE Annual Conference, July 2016. Orlando, FL.

- [PRE.16] Team Cognition As A Mechanism For Developing Collaborative and Proactive Decision Support in Unmanned Aerial Systems. Presented at the 2016 HCII Annual Conference, July 2016. Toronto, CA.

- [PRE.15] Improving Cancer Care Coordination Through Team Science. Presented at the Science of Team Science (SciTS) 2016 Conference, May 2016. Phoenix, AZ.

- [PRE.14] Concept Mapping as a Methodology to Develop Insights on Cognition During Collaborative Information Seeking. Presented at 2015 Human Factors an Ergonomics Annual Meeting, October 2015. Los Angeles, CA.

- [PRE.13] Articulating and Understanding the Development of a Team Mental Model in a Distributed Medium. Presented at 2015 Human Factors an Ergonomics Annual Meeting, October 2015. Los Angeles, CA.

- [PRE.12] Methodologies and Theories for Studying Team Cognition In Sports. Presented at the 2015 AHFE Annual Conference, July 2015. Las Vegas, NV.

- [PRE.11] How Do Teams Collaborate? The Importance of Team Cognition During Collaborative Information Seeking. Presented at ASU Research Brown Bag, March 2015.

- [PRE.10] The Role of Team Cognition in Collaborative Information Seeking During Team Decision-Making. Presented at Penn State Dissertation Defense, November 2014. University Park, PA.

- [PRE.9] Towards a Team Mental Model of Collaborative Information Seeking During Team Decision-Making. Presented at 2014 HFES Annual Meeting, October 2014. Chicago, IL.

- [PRE.8] Studying Team Cognition during Collaborative Information Seeking. Presented at 16th Annual CSCW conference, February 2013. San Antonio, TX.

- [PRE.7] The Role and Effect of Experience and Diversity on Collaboration. Presented to IST 541, December 2011. University Park, PA.

- [PRE.6] Health Information Technology: An Overview, Presented to IST 501, December 2011. University Park, PA.

- [PRE.5] Health Informatics Information Challenges. Presented to IST 501, September 2011. University Park, PA.

- [PRE.4] The Development of a Collaborative Space: IST CollabSPACE. Presented to IST 521, April 2011. University Park, PA.

- [PRE.3] The Learning of Database and Web Programming Concepts Through End User Programming. Presented to IST 511, December 2010. University Park, PA.

- [PRE.2] Rural Hospitals Adoption of Health Information Technology. Presented to IST 531, December 2010. University Park, PA.

- [PRE.1] Team Performance in Real and Virtual Worlds: The Perceived Value of Second Life. Presented at the 2008 HFES Annual Meeting, October 2008. New York, NY

Teaching Experience

Clemson University, Clemson, SC

Instructor for HCC 8810: The Science of Teamwork and Technology (Spring 2018) *(new prep)*

- Students' Instructor Evaluation: 4.6/5
- Select student feedback:
    - *"Very good class, very clear and objective explanations, while including the entire class during every session."*
    - *"Dr. McNeese is a great, helpful, and caring professor."*
    - *"I can't think of any weaknesses. The class was very well thought out."*

- *"The class was very good, and I learned a lot."*

Co-Instructor for CPSC 4910: Seminar in Professional Issues II (Fall 2017)

- Students' Instructor Evaluation: N/A

Arizona State University, Mesa, AZ

Instructor for HSE 225: Human Systems Integration (Spring 2017) *(new prep)*

- Students' Instructor Evaluation: 4.81/5
- Select student feedback:
  - *"I really liked how Nathan captured the knowledge of Human Systems Integration. I went into this course not having a clue what I was majoring in and now I have an understanding and a love for what I'm doing."*
  - *"This class inspires me."*
  - *"Professor McNeese is hands down my favorite Professor I have had so far with ASU and I have had some excellent professors."*
  - *"I entered Prof. McNeese's class with, to be perfectly honest, little understanding of what my major was, what type of employment I should be seeking, and most importantly little excitement or enjoyment of education. I have been left completely changed by his class, something that I can honestly say has never happened to me before. He came in and built a base of knowledge that I will be able to utilize for the rest of my career, and the rest of my life. On top of being and outstanding educator, he has taken the time to let every student know that he is available for any concern we may have. He has extended everyone extracurricular opportunities for learning and research that I previously did not know existed. Despite any problems or regrets I may ever have concerning ASU, I will always remember Human Systems Engineering with Nathan McNeese, and realize that it was, in fact, all worth it."*

Instructor for PSY 437: Human Factors (Spring 2016) *(new prep)*

- Students' Instructor Evaluation: 4.85/5
- Select student feedback:
  - *"One of the best instructors that I have had at my time at ASU."*
  - *"Dr. McNeese is amazing. The balance between projects and study was perfect, and he communicated incredibly clearly with us as students. This was quite possibly one of the best courses I have ever taken."*
  - *"He really made me fall in love with studying cognition in a team setting."*
  - *"Favorite class."*

Instructor for PSY 399: Individualized Study on Teamwork (Fall 2015) *(new prep)*

- Students' Instructor Evaluation: N/A

The Pennsylvania State University, University Park, PA (Spring 2010)

Graduate Teaching Assistant for IST 301: Information and Organizations (with Dr. Madhu Reddy & Dr. Carleen Maitland)

<u>Students Supervised and Mentored</u>

As an Assistant Professor at Clemson University:

Carrie Russell- PhD Human-Centered Computing *(Clemson University, Fall 2017- Present)*

Lorenzo Barberis Canonico- PhD Human-Centered Computing *(Clemson University, Fall 2017- Present)*

Alfred Blando- BS Computer Science *(Calhoun Honors College, Clemson University, Fall 2017-Present)*

Rafael Dejesus- BS Computer Science *(Clemson University, Fall 2017-Present)*

As a Postdoctoral Scholar & Research Associate at Arizona State University:

Mustafa Demir- PhD Simulation, Modeling, and Applied Cognitive Science *(Arizona State University, Fall 2014- Summer 2017)*

Saliha Akca-Hobbins- PhD Simulation, Modeling, and Applied Cognitive Science *(Arizona State University, Spring 2015- Fall 2016)*

Sandra Hinski- PhD Simulation, Modeling, and Applied Cognitive Science *(Arizona State University, Spring 2015- Summer 2017)*

Verica Buchanan- PhD Simulation, Modeling, and Applied Cognitive Science *(Arizona State University, Fall 2014- Summer 2017)*

Michael Fedele- MS Human Systems Engineering *(Arizona State University, Spring 2015- Winter 2017)*

Jade Best- MS Human Systems Engineering *(Arizona State University, Fall 2015- 2017)*

Carrie Russell- MS Human Systems Engineering *(Arizona State University, Fall 2016- Summer 2017)*

Cade Bartlett- MS Human Systems Engineering *(Arizona State University, Spring 2015- Summer 2016)*

Kyle Walter- MS Human Systems Engineering *(Arizona State University, Fall 2016)*

Alec Wightman- MS Human Systems Engineering *(Arizona State University, Fall 2016)*

Joe O'Brian- MS Human Systems Engineering *(Arizona State University, Summer 2015)*

Rachel Howes- MS Human Systems Engineering *(Arizona State University, Fall 2015- Spring 2016)*

Bryant Armistead- BS Human Systems Engineering *(Arizona State University, Fall 2016- Summer 2017)*

Hailey Torres- BS Human Systems Engineering *(Arizona State University, Fall 2015- Summer 2017)*

Lais Goncalves de Lima- BS (*University of Pittsburgh, Summer 2016*)

Serena Mata- BS Human Systems Engineering *(Arizona State University, Fall 2015)*

Pamela Coleman- BS Human Systems Engineering *(Arizona State University, Fall 2015)*

As a PhD Student at Pennsylvania State University:

Evan Friedenberg- BS Information Sciences and Technology *(Penn State Schreyer's Honors College, Fall 2011-2014)*

Kelsey Bailey- BS Information Sciences and Technology, Political Science *(Penn State, Spring 2011-2012)*

Michael Cwenar- BS Information Sciences and Technology *(Penn State, Spring 2011)*

Greg Traylor- BS Information Sciences and Technology *(Penn State, Fall -Spring 2011)*

Academic Committee Member

PhD

- Carrie Russell (Chair), Human-Centered Computing- 2017 (Clemson)- Present
- Lorenzo Barberis Canonico (Chair), Human-Centered Computing (Clemson)- 2017-Present
- Mustafa Demir, Simulation, Modeling, and Applied Cognitive Science (ASU)- 2014 – 2017

Masters

- James Dominic, Computer Science (Clemson)- 2018- Present
- Mavi Elena, Mechanical Engineering (Clemson)- 2018- Present
- Michael Fedele, Human Systems Engineering (ASU)- 2014 – 2017

Professional Activities

Memberships

- *Association for Computing Machinery, since 2009*
    - SIGCHI
- *Human Factors and Ergonomics Society, since 2008*
    - Cognitive Engineering and Decision Making
    - Health Care
- *American Psychological Association, since 2009*

Reviewing

Journals

- Human Factors: The Journal of the Human Factors and Ergonomics Society, since 2015
- Journal of the Association for Information Sciences and Technology, since 2015
- International Journal of Human-Computer Studies, since 2017
- Frontiers in Psychology, since 2016

- Theoretical Issues in Ergonomics Science, since 2016
- PLOS One, since 2018
- Studies in Higher Education, since 2018
- Journal of Behaviour & Information Technology, since 2016
- Sport, Exercise, and Performance Psychology, since 2017
- Small Group Research, since 2016

Conferences

- ACM Conference on Human Factors in Computing Systems (CHI), since 2013
- Human Factors and Ergonomics Society Annual Meeting (HFES), since 2013
- ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), since 2015
- ACM Conference on Designing Interactive Systems (DIS), since 2018
- HFES CEDM Best Student Paper, since 2018
- Hawaii International Conference on System Sciences (HICSS), since 2018

Funding Agencies

- NASA, since 2018

Book Proposals

- John Wiley & Sons, Inc.- proposal related to human factors engineering, since 2018

Editorial Boards

- Human Factors: The Journal of the Human Factors and Ergonomics Society, since 2017

Professional Community Service

- HFES CEDM 2017 Mentorship Program (Mentor)
- Invited Panelist for 2017 Nursing Innovation Summit
- Chair of Analyzing Teams Session at HFES 2017
- Chair of Human-Robot Teaming Session at AHFE 2017
- Chair of Teamwork Session at HFES 2016
- Participant in NCI-ASCO Teams in Cancer Care Delivery Workshop (2016)
- Chair of Panel on Intelligence Analysis at HFES 2015
- Invited Participant for the Future of Proactive & Adaptive Decision Support (Future PADS) (ONR) (2015)
- Student Volunteer for 2013 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW)

University Service/Representation

Clemson University

- Invited and Hosted Dr. Nancy Cooke for TIGERS ADVANCE Distinguished Speaker Series (2018)
- Member of HCC Faculty Search Committee (2017-)

- Member of HCC Portfolio Review Committee (2017-)
- Member of HCC Graduate Recruiting Committee (2017-)
- Assisted in meeting with Civil Engineering Faculty Candidates (2018)

Arizona State University

- Fulton Day in the Life Lab Demo (2016)
- Night of the Open Door Lab Demo (2015, 2016)
- Co-Director of the Industrial Advisory Board for Human Systems Engineering (2016-2017)
- Planning Taskforce for Human Systems Engineering (2016-2017)
- Mentor to HFES Student Chapter (2015-2017)
- Faculty Host for Prospective Graduate Students (2015-2017)

The Pennsylvania State University

- Student Host for Prospective Graduate Students (2010-2014)
- Judge for The Graduate Exhibition (2013)

Consulting

- Cognitive Engineering Research Institute (CERI) (2017, 2018)
- Sandia Research Corporation (2017)
- Arizona State University through ASFOSR (2018)

Honors & Awards

Clemson University

- CUSHR Faculty Scholar

Arizona State University

- AZ Computing Postdoc Best Practice Fellow (NSF Sponsored)
- ASU institutional endorsement for MacArthur Foundation 100&Change proposal (McNeese PI)
- 2016 Cogsima Conference Best Paper Award
- Selected to participate in NCI-ASCO Teams in Cancer Care Delivery Project (over 200 teams applied)

The Pennsylvania State University

- Center for Integrative Healthcare Delivery Scholar
- College of IST Night of Honors- Acknowledgement for Outstanding Research Assistant
- Graduate Research Assistantship, Spring 2010-Fall 2014
- Psi Chi Honor Society Member
- Multiple Dean's List as Undergrad