JACKIE S. CHA

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University of Wisconsin – Madison
Department of Industrial & Systems Engineering

EDUCATION

Purdue University, West Lafayette, IN
Ph.D. Industrial Engineering (2020)

University of Michigan, Ann Arbor, MI
M.S.E. Biomedical Engineering (2016)
B.S.E. Biomedical Engineering (2015)

PROFESSIONAL APPOINTMENTS/ EMPLOYMENT HISTORY

University of Wisconsin – Madison, Madison, WI
8/2025-Present *Patricia Flatley Brennan Assistant Professor*, Department of Industrial & Systems Engineering
3/2026-Present *Affiliate Faculty*, Department of Biomedical Engineering

Clemson University, Clemson, SC
1/2021-8/2025 Assistant Professor, Department of Industrial Engineering
1/2023-8/2025 *Core Faculty,* Biomedical Data Science and Informatics Program
1/2023-8/2023 *Faculty Fellow,* Clemson University School of Health Research
5/2021-8/2025 *Faculty Scholar,* Clemson University School of Health Research
5/2021-8/2025 *Affiliated Faculty,* AI Research Institute for Science and Engineering (AIRISE)

Food and Drug Administration (FDA), Silver Spring, MD
7/2020-3/2021 *Biomedical Engineer,* CDRH/Robotic Assisted Surgery Devices Team

Purdue University, West Lafayette, IN
2016-2020 *Graduate Research Assistant,* Advisor: Dr. Denny Yu
2017 *Graduate Teaching Assistant,* IE 386 Work Analysis and Design I

Army Research Laboratory, Orlando, FL
2017 *Graduate Research Intern,* Advisor: Dr. Jessie Chen

University of Michigan, Ann Arbor, MI
2013-2016 *Research Assistant,* Center for Ergonomics, Advisor: Dr. Thomas Armstrong
2011-2017 *Student Intern,* CoE Associate Deans of Research and Graduate Education

PUBLICATIONS

* denotes mentored student

Peer-Reviewed Journal Articles

1. **Cha, J. S.**, Tucker, E., Lauer, K., Smith, B. Who Picks Up the Slack? The Impact of Interprofessional Role Ambiguity on Resident Education, Team Function, and Patient Care. *Journal of the American College of Surgeons. Just accepted.*

2. Fuller, P.*, Duffie, H.*, Li, D., Carbonell, A., Perkins, N., & **Cha, J. S.** (2025). Cybersecurity Risks and Vulnerabilities in Robotic-Assisted Surgery. *Human Factors*, https://doi.org/10.1177/00187208251401735.
3. Ball, M.*, Khademi, A., Carbonell, A., **Cha, J. S.** Application of an Information Gain Model in a Motor Learning Laparoscopic Surgery Task. *IEEE Transactions on Human-Machine Systems*. https://doi.org/10.1109/THMS.2025.3620237
4. Ball, M.*, Fuller, P.*, Goodwin, C., Anton, N., Athanasiadis, D. I., Hernandez, E., Stefanidis D., Yu D., & **Cha, J. S.** (2025). Objective and Subjective Evaluation of Non-Technical Skills and Technical Leadership Skills During Simulated Critical Care Scenarios. *IISE Transactions on Occupational Ergonomics and Human Factors*, 1-14. https://doi.org/10.1080/24725838.2025.2551536
5. Chen X., Wang T.N., Sarin A., Patel A., Ali A., Samreen S., **Cha J**, & Stefanidis D. (2025). Robotic vs. laparoscopic surgery at the operational level: an investigation of surgeons' perspectives. *Surgical Endoscopy*, 1-8.
6. **Cha, J. S.**, Fuller, P.*, Ball, M.*, Samreen, S., Sylla, P., Stefanidis, D., & SAGES Robotic Committee. (2025). SAGES tool for assessing robotic surgery systems (STARSS). *Surgical Endoscopy*, 1-13.
7. Liu, H., Luo, Q., Carbonell, A. M., Love, W., & **Cha, J.** (2025). Treatment effect estimation via optimization in robotic-assisted surgery: Insights from the Southeastern US. *IISE Transactions on Healthcare Systems Engineering*, 1-16.
8. Kennedy, S., Fuller, P.*, **Cha, J. S.**, Carbonell, A. M., Luo, Q., & Joseph, A. (2025). Exploring the Impact of the Physical Environment on Robotic-Assisted Surgery Outcomes and Processes: A Scoping Review. *Human factors*, 00187208251333907.
9. West, J., Singh, C.*, **Cha, J.**, & Li, D. (2025). s-DResNet: an adversarial domain residual adaptation network for mental workload detection in robotic assisted surgeries. *IISE Transactions on Healthcare Systems Engineering*, 1-11. https://doi-org/10.1080/24725579.2025.2492555
10. Lim, C., Obuseh, M., **Cha, J.**, Steward, J., Sundaram, C., & Yu, D. (2025). Neural insights on expert surgeons' mental workload during live robotic surgeries. *Scientific Reports*, *15*(1), 12073.
11. Ball, M.*, Fuller, P.*, & **Cha, J. S.** (2025). Identification of surgical human-robot interactions and measures during robotic-assisted surgery: A scoping review. *Applied Ergonomics, 125*, 104478. https://doi.org/10.1016/j.apergo.2025.104478
12. Barbieri, D. F., Srinivasan, D., Ulrich, J., Ranganathan, S., Chang, C., Gerac, J. A., & **Cha, J. S**. (2025). Systems-based Framework for Clinical Decision-Support System Integration for Patient Sepsis Management: A Theoretical Application of the SEIPS Model. *Human Factors in Healthcare*, 100098.
13. Gonzales, A.*, Jackson, C., & **Cha, J.** (2025). Extended reality as a modality to train non-technical skills in healthcare: A scoping review. *Applied Ergonomics*, *125*, 104463.
14. Fuller, P.*, Gainey, M. *, Ball, M. *, Kennedy, S., Duffie, H. *, Luo, Q., Joseph, A., Carbonell, A., & **Cha, J. S.** (2025). Understanding the challenges of robotic-assisted surgery adoption: Perspectives from stakeholders and the general population on human-interaction, built environment, and training. *Applied Ergonomics*, *122*, 104403.
15. Gonzales, A.*, Lin, J. H., & **Cha, J. S.** (2024). A year-long case study of multicomponent interventions to promote physical activity in office workers: A randomized control trial. *Applied Ergonomics*, *120*, 104333. https://doi.org/10.1016/j.apergo.2024.104333
16. Mihandoust, S., Joseph, A., Browning, M. H., **Cha, J. S.**, Gonzales, A.*, & Markowitz, J. (2024). Can pre-visit exposure to virtual tours of healthcare facilities help reduce child and parent anxiety during outpatient surgical procedures?. *Applied Ergonomics*, *119*, 104308. https://doi.org/10.1016/j.apergo.2024.104308
17. **Cha, J. S.**, Athanasiadis, D. I., Asadi, H., Stefanidis, D., Nussbaum, M. A., & Yu, D. (2024). Evaluation of a passive arm-support exoskeleton for surgical team members: Results from live surgeries. *Journal of Safety Research.* https://doi.org/10.1016/j.jsr.2024.02.003

18. Gonzales, A.*, Barbieri, D. F., Carbonell, A. M., Joseph, A., Srinivasan, D., & **Cha, J.** (2024). The compatibility of exoskeletons in perioperative environments and workflows: an analysis of surgical team members' perspectives and workflow simulation. *Ergonomics, 67*(5), 674-694. https://doi.org/10.1080/00140139.2023.2240045
19. **Cha, J. S.,** Athanasiadis, D. I., Peng, Y., Wu, D., Anton, N. E., Stefanidis, D., & Yu, D. (2024). Objective nontechnical skills measurement using sensor-based behavior metrics in surgical teams. *Human Factors*, 66(3), 729-743. https://doi.org/10.1177/00187208221101292
20. Dong, M., Lee, Y. Y., **Cha, J. S.**, & Huang, G. (2024). Drinking and driving: A systematic review of the impacts of alcohol consumption on manual and automated driving performance. *Journal of Safety Research*. https://doi.org/10.1016/j.jsr.2024.01.006
21. Raghuraman, R. N., Upasani, S., Gonzales, A.*, Aviles, J., **Cha, J.**, & Srinivasan, D. (2023). Manufacturing Industry Stakeholder Perspectives on Occupational Exoskeletons: Changes after a Brief Exposure to Exoskeletons. *IISE Transactions on Occupational Ergonomics and Human Factors, 11*(3-4), 71-80. https://doi.org/10.1080/24725838.2023.2262480
22. Anton, N. E., **Cha, J. S.**, Hernandez, E., Athanasiadis, D. I., Yang, J., Zhou, G., Stefanidis, D., & Yu, D. (2023). Utilizing eye tracking to assess medical student non-technical performance during scenario-based simulation: results of a pilot study. *Global Surgical Education-Journal of the Association for Surgical Education*, *2*(1), 1-6. https://doi.org/10.1007/s44186-023-00127-3
23. **Cha, J. S.**, Ausri, F., Mudge, L., & Yu, D. (2022). Effectiveness of smart wrist wearables for distinguishing physical and cognitive demands. *IISE Transactions on Healthcare Systems Engineering*, 1-11. https://doi.org/10.1080/24725579.2022.2142867
24. Gonzales, A.*, Lin, J. H., & **Cha, J. S.** (2022). Physical activity changes among office workers during the COVID-19 pandemic lockdown and the agreement between objective and subjective physical activity metrics. *Applied Ergonomics*, *105*, 103845. https://doi.org/10.1016/j.apergo.2022.103845
25. **Cha, J. S.**, & Yu, D. (2022). Objective Measures of Surgeon Non-Technical Skills in Surgery: A Scoping Review. *Human Factors*, *64*(1), 42-73. https://doi.org/10.1177/0018720821995319
26. **Cha, J. S.**, Athanasiadis, D., Anton, N. E., Stefanidis, D., & Yu, D. (2021). Measurement of Nontechnical Skills During Robotic-Assisted Surgery Using Sensor-Based Communication and Proximity Metrics. *JAMA Network Open*, *4*(11), e2132209-e2132209. doi:10.1001/jamanetworkopen.2021.32209
27. Anton, N.E., Huffman, E.M., Ahmed, R.A., Cooper, D.D., Athanasiadis, D.I., **Cha, J.**, Stefanidis, D. and Lee, N.K. (2021). Stress and resident interdisciplinary team performance: Results of a pilot trauma simulation program. Surgery, 170(4), pp.1074-1079. (2021). Stress and resident interdisciplinary team performance: Results of a pilot trauma simulation program. *Surgery*, *170*(4), 1074-1079. https://doi.org/10.1016/j.surg.2021.03.010
28. Anton, N. E., Whiteside, J. A., **Cha, J.**, Perkins, L. A., Martin, M., & Stefanidis, D. (2021). Characterizing robotic surgical expertise: An exploratory study of neural activation during mental imagery of robotic suturing. *The American Journal of Surgery*, *222*(6), 1131-1138. https://doi.org/10.1016/j.amjsurg.2021.02.002
29. Anton, N. E., Athanasiadis, D. I., Karipidis, T., Keen, A. Y., Karim, A., **Cha, J.**, Walke, N., & Stefanidis, D. (2021). Surgeon stress negatively affects their non-technical skills in the operating room. *The American Journal of Surgery*, *222*(6), 1154-1157. https://doi.org/10.1016/j.amjsurg.2021.01.035
30. Wu, C., **Cha, J.**, Sulek, J., Sundaram, C. P., Wachs, J., Proctor, R. W., & Yu, D. (2021). Sensor-based indicators of performance changes between sessions during robotic surgery training. *Applied Ergonomics*, *90*, 103251. https://doi.org/10.1016/j.apergo.2020.103251
31. **Cha, J. S.**, Monfared, S., Stefanidis, D., Nussbaum, M. A., & Yu, D. (2020). Supporting surgical teams: Identifying needs and barriers for exoskeleton implementation in the operating room. *Human Factors*, *62*(3), 377-390. https://doi.org/10.1177/0018720819879271

32. Wu, C., **Cha, J.**, Sulek, J., Zhou, T., Sundaram, C. P., Wachs, J., & Yu, D. (2020). Eye-tracking metrics predict perceived workload in robotic surgical skills training. *Human Factors*, *62*(8), 1365-1386. https://doi.org/10.1177/0018720819874544
33. Zhou, T., **Cha, J. S.**, Gonzalez, G., Wachs, J. P., Sundaram, C. P., & Yu, D. (2020). Multimodal physiological signals for workload prediction in robot-assisted surgery. *ACM Transactions on Human-Robot Interaction (THRI)*, *9*(2), 1-26. https://doi.org/10.1145/3368589
34. Peng, Y., Anton, N. E., **Cha, J.**, Mizota, T., Hennings, J. M., Stambro, R., Rendina, M., Stanton-Maxey, K., Stefanidis, D., & Yu, D. (2019). Objective measures of communication behavior predict clinical performance. *Journal of Surgical Education*, *76*(5), 1337-1347. https://doi.org/10.1016/j.jsurg.2019.03.017
35. **Cha, J. S.**, Anton, N. E., Mizota, T., Hennings, J. M., Rendina, M. A., Stanton-Maxey, K., Ritter, H., Stefanidis, D., & Yu, D. (2019). Use of non-technical skills can predict medical student performance in acute care simulated scenarios. *The American Journal of Surgery*, *217*(2), 323-328. https://doi.org/10.1016/j.amjsurg.2018.09.028
36. Yu, D., **Cha, J. S.**, Kasten, S. J., Green, C., & Armstrong, T. J. (2015). Design of low-cost ergonomic microsurgery equipment: comparison of microscope and 3D video displays on task performance. *Journal of Medical Devices*, *9*(2). https://doi.org/10.1115/1.4030130

Peer-Reviewed Conference Proceedings

1. Hildebrandt, M., Deb, S., Yin, X., **Cha, J.**, & Jeong, H. (2025). Augmented Cognition Meets AI: Enhancing Human Performance with Real-Time, Adaptive, and Trustworthy Intelligence. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (p. 10711813251367751). Sage CA: Los Angeles, CA: SAGE Publications.
2. Duffie, H.*, Barbieri, D., Fuller, P.*, Lin, J., **Cha, J. S.** (2023) Workers Standing Times with Use of Sit-Stand Desks and Social Influences: An Investigation of Two Months of Office Workers' Sit-Stand Desks Utilization. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Washington D.C.
3. Ball, M.*, Cha, J. S., Anton, N., Athanasiadis, D. I., Hernandez, E., Stefanidis, D., Yu, D. (2023) Evaluating Nontechnical Skills and Leadership Skills During Simulated Critical Care Scenarios. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Washington D.C.
4. Stribling, H.*, Gonzales, A.*, **Cha, J. S.** (2022) Systematic Review and Comparison of Physical Activity Variations Among Global Worker Populations. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
5. Gonzales, A.*, Lin, J., **Cha, J. S.** (2022) Promoting Healthier Office Environments: Evaluation of Mindfulness and Gym Interventions. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
6. Narasimhan Raghuraman, R., Gupta, G., Upasani, S., Aviles, J., **Cha, J. S.**, Srinivasan, D. (2022) Manufacturing Industry Stakeholder Perspectives on Occupational Exoskeletons: Changes Before and After Exposure to Exoskeletons. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
7. Dong, M., Lee, Y., **Cha, J. S.**, Huang, G. (2022) Effects of Alcohol Consumption on Driving: A Systematic Review. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
8. Narasimha, S., Agnisarman, S., **Cha, J.**, Ponathil, A., Rogers, H. (2022). Graduate to Professional: Career Conversations by Early Career Professionals to Support HFE Students. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
9. **Cha, J. S.**, Yang, J., Wachs, J., Sundaram, C., Yu, D. (2021) Measuring Cognitive Load from EEG during Motor Control Calibration in Robotic-Assisted Surgery. *Proceedings of Human Factors and Ergonomics Society Annual Meeting*, Baltimore, MD.

10. **Cha, J. S.**, Ausri, F., Mudge, L., & Yu, D. (2020, December). Sensitivity of Wrist-Wearables to Changes in Physical and Mental Demands. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 64, No. 1, pp. 970-970). Sage CA: Los Angeles, CA: SAGE Publications.
11. Zhou, T., **Cha, J. S.**, Gonzalez, G. T., Sundaram, C. P., Wachs, J. P., & Yu, D. (2019, November). JISAP: Joint Inference for Surgeon Attributes Prediction during Robot-Assisted Surgery. In *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* (pp. 2246-2251). IEEE.
12. **Cha, J. S.**, Monfared, S., Ecker, K., Lee, D., Stefanidis, D., Nussbaum, M. A., & Yu, D. (2019, November). Identifying barriers and facilitators of exoskeleton implementation in the operating room. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting. Human Factors and Ergonomics Society. Annual meeting* (Vol. 63, No. 1, pp. 1113-1113).
13. Wu, C., **Cha, J. S.**, Sulek, J., Zhou, T., Sundaram, C. P., & Yu, D. (2019, November). Analysis of Eye Behavior: Mental Workload Assessment in Robotic Surgery Training. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 63, No. 1, pp. 1920-1921). Sage CA: Los Angeles, CA: SAGE Publications.
14. Stowers, K., Hancock, G. M., Neigel, A., **Cha, J.**, Chong, I., Durso, F. T., Peres, C., Stone, N., & Summers, B. (2019, November). HeForShe in HFE: Strategies for Enhancing Equality in Leadership for All Allies. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 63, No. 1, pp. 622-624). Sage CA: Los Angeles, CA: SAGE Publications.
15. Chong, I., **Cha, J.**, Peng, F., & Yu, D. (2019, September). Usability of a Home-Use Blood Pressure Monitor System: An Evaluation of the Device and Instructional Materials. In *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care* (Vol. 8, No. 1, pp. 147-151). Sage CA: Los Angeles, CA: SAGE Publications.
16. Peng, Y., Anton, N. E., **Cha, J.**, Mizota, T., Hennings, J. M., Stambro, R., Rendina, M., Stanton-Maxey, K., Stefanidis, D., & Yu, D. (2018, September). Do Objective Measures of Communication Predict Clinical Performance?–Application in Acute Care Trauma Simulation. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 62, No. 1, pp. 588-592). Sage CA: Los Angeles, CA: SAGE Publications.
17. Zhou, T., **Cha, J. S.**, Gonzalez, G. T., Wachs, J. P., Sundaram, C., & Yu, D. (2018, March). Joint surgeon attributes estimation in robot-assisted surgery. In *Companion of the 2018 ACM/IEEE International Conference on Human-Robot Interaction* (pp. 285-286).
18. Yu, D., **Cha, J. S.**, Kasten, S. J., & Armstrong, T. J. (2014, September). Gaze and viewing patterns in microsurgery: Task analysis in the operating room. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 58, No. 1, pp. 639-643). Sage CA: Los Angeles, CA: SAGE Publications.

Technical Reports and Professional Publications

1. **Cha, J. S.**, Barnes, M., & Chen, J. Y. (2019). *Visualization Techniques for Transparent Human-Agent Interface Designs* (No. ARL-TR-8674). US Combat Capabilities Development Command Army Research Laboratory Aberdeen Proving Ground United States.

OTHER SCHOLARLY ACTIVITY

Invited Lectures, Seminars, and Panels

1. HFES Health Care Robotics Summit, New York, NY. *SAGES tool for assessing robotic surgery systems (STARSS)*. March 22, 2026.
2. HFES Health Care Technical Group Webinar: *Connecting Human Factors/Ergonomics Theory with Applications in Health Care: Physical Ergonomics and Exoskeletons in Surgery.* November 21, 2025.

3. Johnson & Johson OTTAVA Connect Research Series, *SAGES tool for assessing robotic surgery systems (STARSS)*. November 6, 2025.
4. 2025 International Symposium on Human Factors and Ergonomics in Health Care Robotics Summit Panelist, Chicago, IL. *Ergonomics at the Intersection of Human-Robot Interaction in Healthcare – Physical and Cognitive Considerations for Safety.* March 30, 2025.
5. Arizona State University, Human Systems Engineering Brownbag. *Healthcare Human Factors & Ergonomics: Considering teams, technology, and training*. March 11, 2025.
6. Clemson University, Biomedical Data Science and Informatics Program, Clemson, SC. *Healthcare Human Factors and Data Analytics: What kind of problems can we solve?.* March 3, 2025.
7. Georgia Tech, School of Industrial and Systems Engineering, Atlanta, GA. *Surgical Human-Robot Collaborations: Transforming Training, Skills, and Safety*. January 7, 2025.
8. University of Wisconsin – Madison, Department of Industrial and Systems Engineering, Madison, WI. *Robotics to Improve Clinician Healthspan: Considering teams, technology, and training*. December 11, 2024.
9. Society of Surgical Ergonomics 3rd Annual Symposium, Virtual. *Physical Ergonomics Panel: Cures Overcoming Muscular and PH(f)ysical Operating Room Troubles (COMPHORT)* Panelist. November 1, 2024.
10. HFES Virginia Tech Student Chapter, Virtual. *Healthcare Human Factors & Ergonomics: Considering teams, technology, and training.* October 30, 2024.
11. 22nd Triennial Congress of the International Ergonomics Association (IEA). Jeju, Republic of Korea. *Applications of Emerging Technologies in Addressing Musculoskeletal Disorders (MSDs)* Co-chair and Panelist. August 25, 2024.
12. Hanyang University – ERICA Campus, Department of Human-Computer Interaction. *Exploring Robotic Wearables, Systems, and Sensing in Healthcare Ergonomics.* August 16, 2024.
13. Yonsei University, Department of Industrial Engineering. *Healthcare Human Factors & Ergonomics: Considering technology, training, and workers* August 14, 2024.
14. 2024 International Symposium on Human Factors and Ergonomics in Health Care Robotics Summit Panelist, Chicago, IL. *What We Talk About When We Talk About Robots.* March 23, 2024.
15. University of Michigan, Occupational Health and Safety 2024 Seminar Series, Ann Arbor, MI. *Healthcare Ergonomics and Robotics: Insights into Equipment, Exoskeletons, and the Environment*. March 22, 2024.
16. University of Massachusetts - Lowell, Special Topics in Human-Robot Interaction, Lowell, MA. *Applications of Data Analytics in Healthcare Human Factors – Enhancing Human-Robot Interaction for Surgeon Training and Performance*. March 19, 2024.
17. Clemson University, Biomedical Data Science and Informatics Program, Clemson, SC. *Applications of Data Analytics in Healthcare Human Factors – Enhancing Human-Robot Interaction for Surgeon Training and Performance.* March 6, 2024.
18. Society of Surgical Ergonomics 2nd Annual Symposium. *Misadventure 1: Surgical Retractors* Panelist. September 8, 2023.
19. Clemson University 7th Annual Research Symposium. *Human Factors in Healthcare*. May 10, 2023.
20. Kennesaw State University, Department of Industrial and Systems Engineering, Kennesaw, GA. *Human Factors Engineering in Device Design & Analysis– Applications in Surgery*. February 28, 2023.
21. HFES 2022 Annual Meeting, Graduate to Professional: Career Conversations by Early Career Professionals to Support HFE Students Panelist. October 14, 2022.
22. NSF REU Students, Center for Workforce Development, Clemson University, *Human Factors in Device Design and Wearable Technology.* June 20, 2022.
23. Auburn University, Department of Industrial and Systems Engineering, Auburn, AL. *Assessing wearable technology to improve surgical team performance: a focus on nontechnical skills and exoskeletons.* April 6, 2022.

24. Voiland School of Chemical Engineering and Bioengineering, Washington State University, Women in Engineering Panelist. February 24, 2022.
25. Clemson Health Advancement Talks (The CHAT), Clemson University. *Sensor-based measurement of nontechnical skills in surgery*. October 21, 2021.
26. NSF REU Students, Center for Workforce Development, Clemson University, *Measuring Behavior and Performance for Smarter Systems.* June 21, 2021.
27. Voiland School of Chemical Engineering and Bioengineering, Washington State University, Women in Engineering Panelist. February 23, 2021.
28. Student Career and Professional Development Day, HFES 2020 Annual Meeting, Job Seeking and Networking Panelist. September 20, 2020.
29. HFES 2019 Annual Meeting, HeForShe in HFE: Strategies for Enhancing Equality in Female Leadership for All Allies Panelist. November 1, 2019.

In Press

1. Ball, M., Fuller, P., Goodwin, C., Anton, N., Athanasiadis, D. I., Hernandez, E., Stefanidis D., Yu D., & Cha, J. S. (2025, December). Developing metrics to measure leadership performance in critical care environments. *ISE Magazine*, 57(12), 50-51.
2. Gonzales, A., Lin, J. H., & Cha, J. (2023, February). Efforts to keep workers active in office and home environments. *ISE Magazine*, 55(2), 58–60.

Presentations at Conferences (presenter in bold)

International/ National Conferences

1. **Hildebrandt, M., Deb, S., Yin, X., Cha, J. Jeong, H.** (2025, October 12-17) Augmented Cognition Meets AI: Enhancing Human Performance with Real-Time, Adaptive, and Trustworthy Intelligence. *ASPIRE – 2025 Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.
2. **Fuller, P.***, Wiggins, J.*, Carbonell, A., Warren, J., Cha, J. S. (2025, October 12-17) Identifying and Assessing Nontechnical Skills in Robotic Surgery: A Task Analysis Approach. *ASPIRE – 2025 Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.
3. **Ball, M.***, Luo, Q., Carbonell, A., Cha, J. S. (2025, October 12-17) Investigating Adaptive-Training Curricula for Robotic Skills Training. *ASPIRE – 2025 Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.
4. **Gonzales, A.***, Dhar, Shuvangee, Ball, M., Carbonell, A., Cha, J. S. (2025, October 12-17) Measures of Surgeon Muscle Activity Throughout Live Hernia Repair Surgery Considering Shoulder-Support Exoskeletons. *ASPIRE – 2025 Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.
5. **Wang, Y.**, Park, J., Barbieri, D., Gonzales, A.*, Cha, J., Aviles, J., Beltran, G., Srinivasan, D. (2025, October 12-17) Mixed-Methods Evaluation of the Potential for Back-Support Exoskeletons to Assist Emergency Medical Services Clinicians in Performing Patient-Handling Tasks. *ASPIRE – 2025 Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.
6. **Fuller, P.***, Duffie, H.*, Li, D., Carbonell, A., Cha, J. S. (2025, October 12-17) Survey-Informed Systems Framework for Robotic-Assisted Surgery Cybersecurity. *ASPIRE – 2025 Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.
7. **Fuller, P.***, Kennedy, S., Ball, M.*, Duffie, D.*, Gainey, M., Luo, Q., Joseph, A., Carbonell, A., Cha, J. S. (2024, September 9-13) Stakeholders' Perspectives on the Adoption of Robotic-Assisted Surgery: Considerations of Human-Robot Interactions, the Built Environment, and Training. *ASPIRE – 2024 Human Factors and Ergonomics Society Annual Meeting and Exhibition.* Phoenix, AZ.
8. **Duffie, H.***, Singh, C.*, Li, D., Carbonell, A., Cha, J. S. (2024, September 9-13) Assessment of a Cognitive Workload-Adaptive Augmented Reality Training Aid for Laparoscopic Surgery.

ASPIRE – 2024 Human Factors and Ergonomics Society Annual Meeting and Exhibition. Phoenix, AZ.

9. **Gonzales, A.***, Barbieri, D., Raghuraman, R., Srinivasan, D., Carbonell, A., Joseph, A., Cha, J. S. (2024, September 9-13) Do exoskeletons support minimally invasive surgical postures? A systematic evaluation across a series of typical surgical postures. *ASPIRE – 2024 Human Factors and Ergonomics Society Annual Meeting and Exhibition.* Phoenix, AZ.
10. **Ball, M.***, Khademi, A., Cha, J. S. (2024, September 9-13) An Information Theoretic Approach to Understanding the Information Gain during Laparoscopic Motor Skill Training. *ASPIRE – 2024 Human Factors and Ergonomics Society Annual Meeting and Exhibition.* Phoenix, AZ. Poster.
11. **Raghuraman, R.**, Cha, J. S., Srinivasan, D. (2024, September 9-13) Biomechanical effects of powered vs. passive back-support exoskeletons in static tasks. *ASPIRE – 2024 Human Factors and Ergonomics Society Annual Meeting and Exhibition.* Phoenix, AZ.
12. **Gonzales, A.***, Barbieri, D., Srinivasan, D., Carbonell, A., Joseph, A., Cha, J. S. (2024, August 25-29) Shoulder-support exoskeletons as an intervention to support tasks performed by perioperative staff. *22nd Triennial Congress of the International Ergonomics Association (IEA).* Jeju, Republic of Korea.
13. **Raghuraman, R. N.,** Cha, J., & Srinivasan, D. (2024, August 25-29) Evaluation of Back-support Exoskeletons for Manual Material Handling Tasks. *22nd Triennial Congress of the International Ergonomics Association (IEA).* Jeju, Republic of Korea.
14. Fuller, P.*, Kennedy, S., Ball, M.*, Duffie, D.*, Gainey, M., Luo, Q., Joseph, A., Carbonell, A., **Cha, J. S.** (2024, May 18-21) Understanding the Adoption of Robotic-Assisted Surgery: A Focus on Human-Robot Interactions, Training, and Built Environments. *Institute of Industrial and Systems Engineers Annual and Expo.* Montreal, Canada.
15. **Cha, J. S.**, Franca Barbieri, D., Ranganathan, S., Ulrich, J., Chang, C., Srinivasan, D. (2024, March 24-27) System Engineering Approach to Understand Sepsis Care Workflow during Emergency Department Admissions. *International Symposium on Human Factors and Ergonomics in Health Care.* Chicago, IL.
16. Cha, J. S., **Kennedy, S.**, Joseph, J., Luo, Q. (2023, November 4-7) Physical Environment Considerations for the Future of Robotic Surgery. *2023 Healthcare Design Conference + Expo*. New Orleans, LA.
17. **Duffie, H.***, Barbieri, D., Fuller, P., Lin, J., Cha, J. S. (2023, October 23-27) Workers Standing Times with Use of Sit-Stand Desks and Social Influences: An Investigation of Two Months of Office Workers' Sit-Stand Desks Utilization. *Human Factors and Ergonomics Society Annual Meeting,* Washington D.C.
18. **Ball, M.***, Cha, J. S., Anton, N., Athanasiadis, D. I., Hernandez, E., Stefanidis, D., Yu, D. (2023, October 23-27) Evaluating Nontechnical Skills and Leadership Skills During Simulated Critical Care Scenarios. *Human Factors and Ergonomics Society Annual Meeting,* Washington D.C.
19. Gonzales, A.*, Barbieri, D., Srinivasan, D., Carbonell, A., Joseph, A., **Cha, J. S.** (2023, September 20-26) Evaluation of Shoulder-Support Exoskeletons to Support Minimally Invasive Surgical Postures. *11th International Scientific Conference on the Prevention of Work-Related Musculoskeletal Disorders*. Bengaluru, India.
20. **Gonzales, A.***, Barbieri, D., Srinivasan, D., Carbonell, A., Joseph, A., Cha, J. (2023, May 19-22) Evaluating Back and Shoulder Support Exoskeletons in Postures Typical in General Surgery. *Institute of Industrial and Systems Engineers Annual and Expo.* New Orleans, LA.
21. **Duffie, H.*,** Barbieri, D., Lin, J., Cha, J. (2023, May 19-22) Evaluation of Break Activities Among Office Workers with Sit-stand Desk Utilization. *Institute of Industrial and Systems Engineers Annual and Expo.* New Orleans, LA. Poster.
22. **Gonzales, A.***, Barbieri, D., Carbonell, A., Joseph, A., Srinivasan, D., Cha, J. (2023, March 29-April 1) Acceptance of Exoskeletons in Intraoperative Environments: A Qualitative Analysis of Surgical Teams' Perspectives. *Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) Annual Meeting*. Montreal, Canada.

23. **Gonzales, A.***, Barbieri, D., Carbonell, A., Joseph, A., Srinivasan, D., Cha, J. (2023, March 26-29) Compatibility of Exoskeletons in Surgical Workflows: A Simulated Walkthrough of Surgical Teams' Tasks. *International Symposium on Human Factors and Ergonomics in Health Care.* Orlando, FL.
24. **Duffie, H.*,** Ball, M.*, Kennedy, S., Joseph, A., Luo, Q., Cha, J. (2023, March 26-29) Training and Design Environment Considerations for Future of Robotic Surgery. *International Symposium on Human Factors and Ergonomics in Health Care.* Orlando, FL. Poster.
25. **Gonzales, A.***, Barbieri, D., Carbonell, A., Joseph, A., Srinivasan, D., Cha, J. (2023, March 1) Justification of Shoulder and Back Support Exoskeletons for Minimally Invasive Surgeons and Operating Room Nurses to Reduce Musculoskeletal Symptoms. *American College of Surgeons (ACS) 2023 Surgeons and Engineers: A Dialogue on Surgical Simulation*. Chicago, IL.
26. **Joseph, A.,** Markowitz, J., **Goel, S.**, Cha, J. S. (2022, October 8-11) Understanding Perceptions of Care Spaces in an Ambulatory Surgery Center. *2022 Healthcare Design Conference + Expo.* San Antonio, TX.
27. **Stribling, H.*,** Gonzales, A.*, Cha, J. S. (2022, October 10-14) Systematic Review and Comparison of Physical Activity Variations Among Global Worker Populations. *Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
28. **Gonzales, A.*,** Lin, J., Cha, J. S. (2022, October 10-14) Promoting Healthier Office Environments: Evaluation of Mindfulness and Gym Interventions. *Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
29. **Narasimhan Raghuraman, R**., Gupta, G., Upasani, S., Aviles, J., Cha, J. S., Srinivasan, D. (2022, October 10-14) Manufacturing Industry Stakeholder Perspectives on Occupational Exoskeletons: Changes Before and After Exposure to Exoskeletons. *Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
30. **Dong, M.,** Lee, Y., Cha, J. S., Huang, G. (2022, October 10-14) Effects of Alcohol Consumption on Driving: A Systematic Review. *Human Factors and Ergonomics Society Annual Meeting*, Atlanta, GA.
31. **Gonzales, A.***, Barbieri, D., Carbonell, A., Joseph, A., Srinivasan, D., Cha, J. (2022, September 23) Assessing Surgical Team Members for Exoskeleton Implementation: An Observation of Work Demands. *First Annual Research Symposium of the Society of Surgical Ergonomics*. Virtual.
32. **Gonzales, A.***, Lin, J., Cha., J. S. (2022, May 21-24) Evaluation of Interventions on Office Worker Health. *Institute of Industrial and Systems Engineers Annual and Expo*. Seattle, WA.
33. **Gonzales, A.*,** Shah, A., Luo, Q., Cha., J. S. (2022, May 21-24) Retention of Robotic-Assisted Surgery Skills: Leveraging Scheduling and Training Tasks to Improve Performance. *Institute of Industrial and Systems Engineers Annual and Expo.* Seattle, WA.
34. Anton, N., Cha, J. S., Hernandez, E., Athanasiadis, D. I., Yang, J., Zhou, G., Stefanidis, D., **Yu, D.** (2022, May 2-7) Utilizing Eye Tracking to Assess Medical Student Non-Technical Performance During Scenario-Based Simulation: Results of a Pilot Study. *Association for Surgical Education (ASE) Annual Meeting.* San Antonio, TX.
35. **Gonzales, A.***, Lin, J., Cha., J. S. (2022, March 20-24) COVID-19 Effects on Work-From-Home Office Workers: Evaluation of Physical Activity from Objective and Subjective Metrics. *International Symposium on Human Factors and Ergonomics in Health Care.* New Orleans, LA. Poster.
36. **Gonzales, A.***, Shah, A., Luo, Q., Cha., J. S. (2022, March 20-24) Identifying Optimal Training Tasks and Scheduling Times to Improve Robotic-Assisted Surgical Training. *International Symposium on Human Factors and Ergonomics in Health Care.* New Orleans, LA. Poster.
37. **Cha, J. S.,** Athanasiadis, D., Asadi, H., Monfared, S., Stefanidis, D., Nussbaum, M., Yu, D. (2022, March 2) Evaluation of Exoskeleton Implementation in the Operating Room. *American College of Surgeons (ACS) Surgeons and Engineers: A Dialogue on Surgical Simulation Meeting.* Chicago, IL.

38. **Cha, J. S.**, Yang, J., Wachs, J., Sundaram, C., Yu, D. (2021, October 4-7) Measuring Cognitive Load from EEG during Motor Control Calibration in Robotic-Assisted Surgery. *Human Factors and Ergonomics Society Annual Meeting*, Baltimore, MD.
39. **Cha, J. S.**, Athanasiadis, D., Anton, N. E., Stefanidis, D., Yu, D. (2021, June 13-18) Sensor-Based Behavior Measurement of Non-Technical Skills in Robotic-Assisted Surgery. *21st Triennial Congress of the International Ergonomics Association*, Vancouver, CA.
40. **Cha, J. S.,** Barragan Nogurea, J. A., Sundaram, C., Wachs, J., Yu, D. (2021, April 12-16) Understanding effects of inverted motion control during robotic skills tasks to cognitive workload and performance. *International Symposium on Human Factors and Ergonomics in Health Care. Virtual Conference.*
41. **Cha, J. S.**, Peng, Y., Anton, N., Mizota, T., Stanton- Maxey, K., Stefanidis, D., Yu, D. (2021, March 10) Non-Technical Skills Evaluation of Medical Students Through Objective and Subjective Measures. *American College of Surgeons (ACS) Surgeons and Engineers: A Dialogue on Surgical Simulation Meeting.* Chicago, IL.
42. **Cha, J. S**., Ausri, F., Mudge, L., Yu, D. (2020, October 5-9) Sensitivity of Wrist-wearables to Changes in Physical and Mental Demands. *Human Factors and Ergonomics Society Annual Meeting*. Virtual Meeting.
43. **Anton N.E.**, Whiteside J.A., Cha J. S., Perkins L.A., Martin M, Stefanidis D. (2020, August 20) Characterizing Robotic Surgical Expertise: An Exploratory Study of Neural Activation during Mental Imagery of Robotic Suturing. *Association for Surgical Education Virtual Highlights*.
44. **Anton, N. E.**, Athanasiadis, D. I., Karipidis T., Keen, A. Y., Karim, A. N., **Cha, J. S.**, Walke, N. J., Stefanidis, D. (2020, August 13) Surgeon Stress Negatively Affects Their Nontechnical Skills in the Operating Room*. 2020 Association for Surgical Education (ASE) Annual Meeting Virtual Highlights*. Virtual Meeting.
45. Cha, J. S., **Steward, J.**, Sulek, J., Sundaram, C. P., Wachs, J. P., Yu, D. (2020, May 15-18) Objective Metrics of High Cognitive Workload during Robotic Partial Nephrectomy: A Pilot Study. *American Urological Association (AUA) Annual Meeting*. Washington, D.C.
46. **Anton, N. E.**, Whiteside, J. A., Cha, J. S., Andrew, L., Martin, M., Stefanidis, D. (2020, April 28-30) Characterizing Robotic Surgical Expertise: An Exploratory Study of Neural Activation during Mental Imagery of Robotic Suturing. *2020 Association for Surgical Education (ASE) Annual Meeting*. Seattle, WA.
47. **Anton, N. E.**, Huffman, E. M., Ahmed, R. A., Cooper, D., Athanasiadis, D. I., **Cha, J. S.**, Stefanidis, D., Lee, N. K. (2020, March 12-14) Stress and Resident Interdisciplinary Team Performance: Results of a Pilot Trauma Simulation Program*. American College of Surgeons (ACS) Surgical Simulation Summit: An International Multi-Professional Meeting.* Chicago, IL.
48. **Zhou, T.,** Cha, J. S., Gonzalez, G., Sundaram, C. P., Wachs, J. P., Yu, D. (2019, November 4-8) JISAP: Joint Inference for Surgeon Attributes Prediction during Robot-Assisted Surgery. *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2019)*. Macao, Macau, China.
49. **Cha, J. S.**, Monfared, S., Ecker, K., Lee, A., Stefanidis, D., Nussbaum, M., Yu, D. (2019, October 28-November 1) Identifying Barriers and Facilitators of Exoskeleton Implementation in the Operating Room. *Human Factors and Ergonomics Society Annual Meeting*. Seattle, WA.
50. **Wu, C.**, Cha, J. S., Sulek, J., Zhou, T., Sundaram, C. P., Wachs, J. P., Yu, D. (2019, October 28-November 1) Analysis of Eye Behavior: Mental Workload Assessment in Robotic Surgery. *Human Factors and Ergonomics Society Annual Meeting*. Seattle, WA.
51. Stowers, K., Hancock, G.M., Neigel, A., **Cha, J.**, Chong, I., Durso, F.T., Peres, S.C., Stone, N.J. and Summers, B. (2019, October 28-November 1). HeForShe in HFE: Strategies for Enhancing Equality in Leadership for All Allies. *Human Factors and Ergonomics Society Annual Meeting, Seattle, WA.*

52. Cha, J. S., Sulek, J., **Sundaram, C. P.**, Cai, X., Wachs, J. P., Yu, D. (2019, April 23-27) Ergonomics driven training: Can wearable sensors guide robotic skills training? *Association for Surgical Education Annual Meeting*. Chicago, IL.
53. Peng, Y., Cha, J. S., Anton, N., Mizota, T., Hennings, J., Stambro, R., Rendina, M., Stanton- Maxey, K., Stefanidis, D., **Yu, D.** (2019, April 23-27) Objective Assessments of Medical Students' Communication and Relationships with Non-Technical Skills. *Association for Surgical Education Annual Meeting*. Chicago, IL.
54. Chong, I., **Cha, J.**, Peng, F., & Yu, D. (2019, March 24-27) Usability of a Home-Use Blood Pressure Monitor System: An Evaluation of the Device and Instructional Materials. *International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL*.
55. Peng, Y., **Anton, N.**, Cha, J., Mizota, T., Hennings, J., Stambro, R., Rendina, M., Stanton, K., Stefanidis, D., Yu, D. (2018, October 21-25) Automated Communication Assessments Predict Acute Care Team Simulation Performance. *Clinical Congress 2018.* Boston, MA.
56. **Peng, Y.,** Anton, N., Cha, J., Mizota, T., Hennings, J., Stambro, R., Rendina, M., Stanton, K., Stefanidis, D., Yu, D. (2018, October 1-5) Do objective measures of communication predict clinical performance? –Application in Acute Care Trauma Simulation. *Human Factors and Ergonomics Society Annual Meeting. Philadelphia, PA.*
57. **Cha, J. S.,** Anton, N. E., Mizota, T., Hennings, J. M., Rendina, M.A., Stanton- Maxey, K., Ritter, H. E., Stefanidis, D., Yu, D. (2018, May 1-3) Use of non-technical skills can predict medical student performance in acute care simulated scenarios. *Association for Surgical Education*. Austin, TX.
58. Cha, J. S., **Anton, N. E.**, Mizota, T., Hennings, J. M., Rendina, M.A., Stanton- Maxey, K., Ritter, H. E., Stefanidis, D., Yu, D. (2018, April 11-14) Assessment of non-technical skills in acute care team simulation training. *Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) 16th World Congress*. Seattle, WA.
59. **Zhou, T.,** Cha, J. S., Gonzalez, G. T., Wachs, J. P., Sundaram, C., & Yu, D. (2018, March 5-8). Joint Surgeon Attributes Estimation in Robot-Assisted Surgery. *2018 ACM/IEEE International Conference on Human-Robot Interaction. Chicago, IL.*
60. Wachs, J.P., Cha, J. S., Gonzalez, G., Sundaram, C., & **Yu, D.** (2017, July 17-21) Performance and physiological stresses during robotic surgical skills tasks. *8th International Conference on Applied Human Factors and Ergonomics*. Los Angeles, CA.
61. **Cha, J. S.**, Wagner, E., & Ashton-Miller, J.A. (2017, May 28-31) Student and Faculty Evaluations of Michigan Engineering's 'Train-the Trainer' RCRS Program. *5th World Conference on Research Integrity.* Amsterdam, Netherlands.
62. **Cha, J. S.**, Wagner, E., & Ashton-Miller, J.A. (2017, May 28-31) Evaluation of the Effectiveness of Michigan Engineering Ethics Programs Using the Ethical Decision Making Measure. *5th World Conference on Research Integrity.* Amsterdam, Netherlands.
63. **Cha, J. S.**, Wagner, E., Sick, V., & Ashton-Miller, J.A. (2017, May 25-26) Building and Implementing a Program to Foster a Culture of Research Integrity. *Research Integrity and Regulatory Compliance Symposium.* Portland, ME.
64. **Cha, J. S.**, Gonzalez, G. T., Wachs, J. P., & Yu, D. (2017, March 5-8) Workload measurement during robotic surgical skills tasks using wearable sensors. *2017 International Symposium on Human Factors and Ergonomics in Health Care*. New Orleans, LA.
65. **Cha, J. S.**, Yu, D., Kasten, S.J., Green, C., & Armstrong, T. J. (2016, April 13-16) Using Hierarchical Task Analysis for Standardization of Surgical Technique: Investigation of Adventitial Stripping. *2016 International Symposium on Human Factors and Ergonomics in Health Care: Shaping the Future.* San Diego, CA.
66. **Yu, D.**, Cha, J. S., Kasten, S. J., & Armstrong, T. J. (2014, October 27-31). Gaze and viewing patterns in microsurgery Task analysis in the operating room. *Human Factors and Ergonomics Society Annual Meeting.* Chicago, IL.

Regional/ University Conferences (does not include 22 posters prior 2021)

1. **Knipschild, L.*, Cheney, E.*,** Fuller, P.*, Carbonell, A., Warren, J., Cha, J. (2025, April). Closing the Loop: Exploring Communication and Nontechnical Skills in Robotic Surgery. *8th Annual Clemson University Student Research Forum*, Clemson, SC.
2. **Maharaj, A.***, Gonzales, A.*, Carbonell, A., Cha, J. (2025, April). Expert vs Novice Surgeons: Unveiling the Gaps in Decision-Making During Simulated Surgical Tasks. *8th Annual Clemson University Student Research Forum*, Clemson, SC.
3. **Whaley, V.***, Gonzales, A.*, Carbonell, A., Cha, J. (2025, April). Through the Eyes of a Surgeon: Exploring Cognitive Load Differences in Minimally Invasive Surgery Between Experts and Novices Through Eye-Tracking. *8th Annual Clemson University Student Research Forum*, Clemson, SC.
4. **Wiggins, J.***, Fuller, P.*, Carbonell, A., Warren, J., & Cha, J. (2025, February 12). Dissecting the Impact of Robotics: An Investigation of Nontechnical Skills in Robotic-Assisted Surgery. *USCSOMG 2025 Medical Student Research Symposium*, Greenville, SC, United States.
5. **Fallon, K.***, Barbieri, D., Ransing, V., Ulrich, J., Srinivasan, D., Pirallo, R., Ranganathan, S., Chang, C., & Cha, J (2025, February 12). Investigating Sepsis Workflow in the Emergency Department. *USCSOMG 2025 Medical Student Research Symposium*, Greenville, SC, United States.
6. **Knipschild, L.*, Mosca, T.*,** Ball, M.*, Carbonell, A., Luo, Q., Cha, J. (2024, August). Personalized Skills Training for Robotic Surgery Skills: Implementation of an Adaptive Scheduling Method. *8th Annual Summer Creative Inquiry + Undergraduate Research Showcase*, Clemson, SC.
7. **Livesey, M.***, Gonzales, A.*, Carbonell, A., Cha, J. (2024, August). Bridging the Cognitive Gap: Analyzing Mental Models of Novices During Minimally Invasive Surgical Training Tasks. *8th Annual Summer Creative Inquiry + Undergraduate Research Showcase*, Clemson, SC.
8. **Driver, E.***, Duffie, H.*, Li, D., Carbonell, A., Cha, J. (2024, August). Cyber-Attack Ack! Investigating Information Transparency and Performance During Simulated Surgical Tasks. *8th Annual Summer Creative Inquiry + Undergraduate Research Showcase*, Clemson, SC.
9. **McCurley, C.***, Gonzales, A.*, Narasimhan, R., Barbieri, D., Srinivasan, D., Carbonell, A., Joseph, A., Cha, J. (2024, April). Assessing the Effectiveness of Passive Exoskeletons for Surgeons during Simulated Laparoscopic Surgery. *7th Annual Clemson University Student Research Forum*, Clemson, SC.
10. **Ashley, L.***, Franca Barbieri, D., Chang, C., Ulrich, J., Srinivasan, D., Cha, J. (2024, April). Improving Sepsis Care and Treatment Using a System-Approach to Understand Clinical Decision Support Systems. *7th Annual Clemson University Student Research Forum*, Clemson, SC.
11. **Thompson, Z.***, Duffie, H.*, Singh, C.*, Li, D., Carbonell, A., Cha, J. (2024, April). Assessment of a Cognitive Workload-Adaptive Aid for Surgical Training. *7th Annual Clemson University Student Research Forum*, Clemson, SC.
12. **Knipschild, L.*, Whaley, V.***, Ball, M.*, Luo, Q., Carbonell, A., Cha, J. (2024, April). One Size Does Not Fit All: Developing Personalized Robotic-Assisted Surgery Training Through an Adaptive Scheduling Approach*. 7th Annual Clemson University Student Research Forum,* Clemson, SC.
13. **Lanier, S.***, Gonzales, A.*, Barbieri, D., Srinivasan, D., Joseph, A., Carbonell, A., Cha, J. (2024, April). Can Exoskeletons Help Surgical Staff?: Evaluation of Shoulder-Support Exoskeletons During Simulated Surgical Tasks. *Clemson University 19th Annual Focus on Creative Inquiry Forum*, Clemson, SC.
14. **Lanier, S.***, Gonzales, A.*, Haselman, T., Dhar, S., Barbieri, D., Srinivasan, D., Joseph, A., Carbonell, A., Cha, J. (2023, August) Scrubbing into the Future; Evaluating Exoskeletons' Affect on Health Care Workers' Energy Expenditure and Fatigue. *Clemson University 7th Annual Summer CI + UR Showcase Poster Symposium.* Clemson, SC.
15. **Haselman, W. T.***, Dhar, S.*, Gonzales, A.*, Barbieri, D., Carbonell, A., Srinivasan, D., Joseph, A., Cha, J. (2023, July 14) Passive Exoskeletons to Reduce Muscle Activity and Metabolic Demand

in Surgical Staff. *University of South Carolina School of Medicine Greenville Research Symposium*. Greenville, SC.

16. **Dhar, S.***, Gonzales, A.*, Barbieri, D., Carbonell, A., Srinivasan, D., Joseph, A., Cha, J. (2023, July 14) Evaluating the Role of Shoulder and Back Exoskeletons in Augmenting Surgeon Ergonomics During Simulated Surgical Tasks. *University of South Carolina School of Medicine Greenville Research Symposium*. Greenville, SC.
17. **Mohammad, Y.*,** Barbieri, D., Beltran, G., Aviles, J., Srinivasan, S., Cha, J. (2023, July 14) Evaluating the Role of Shoulder and Back Exoskeletons in Augmenting Surgeon Ergonomics During Simulated Surgical Tasks. *University of South Carolina School of Medicine Greenville Research Symposium*. Greenville, SC.
18. **Gainey, M.***, Carbonell, A., Cha, J. (2023, July 14) Integrating Expert Perspective on Current and Future Challenges for Robotic-Assisted Surgery (RAS) Workflow. *University of South Carolina School of Medicine Greenville Research Symposium*. Greenville, SC.
19. **Ludden, D.***, Gonzales, A.*, Barbieri, D., Srinivasan, D., Carbonell, A., Joseph, A., Cha, J. (2023, April). Exo-Lent Posture: Evaluating Potential Benefits of Exoskeleton Support for Postures Common in Minimally Invasive Surgeons. *Clemson University 18th Annual Focus on Creative Inquiry Forum*, Clemson, SC.
20. **Fuller, P.***, Duffie, H.*, Ball, M.*, Kennedy, S., Carbonell, A., Luo, Q., Joseph, A., Cha, J. (2023, April). Future of Robotic Surgery: Identifying the Changing Paradigm of Surgical Human-Robotic Interactions. *Clemson University 18th Annual Focus on Creative Inquiry Forum*, Clemson, SC.
21. **Ludden, D.***, Gonzales, A.*, Barbieri, D., Carbonell, A., Joseph, A., Srinivasan, D., Cha, J. (2022, August 23) Suit Up: Assessing Integration of Exoskeletons to Reduce the Physical Demands of Surgeons. *Clemson University 6th Annual Summer CI + UR Showcase Poster Symposium.* Clemson, SC.
22. **Bozard, R. ***, Duffie, H.*, Liu, H., Carbonell, A., Luo, Q., Cha., J. S. (2022, August 23) How to Train Your Surgeon: Eye Tracking Metrics for Robotic-Assisted Surgery Skills Training. *Clemson University 6th Annual Summer CI + UR Showcase Poster Symposium.* Clemson, SC.
23. **Ludden, D. ***, Gonzales, A.*, Barbieri, D., Carbonell, A., Joseph, A., Srinivasan, D., Cha, J. (2022, July 29) Suit Up: Assessing Integration of Exoskeletons to Reduce the Physical Demands of Surgeons. *9th Annual Summer Undergraduate Research Poster Symposium.* Clemson, SC.
24. **Bozard, R. ***, Duffie, H.*, Liu, H., Carbonell, A., Luo, Q., Cha., J. S. (2022, July 29) How to Train Your Surgeon: Eye Tracking Metrics for Robotic-Assisted Surgery Skills Training. *9th Annual Summer Undergraduate Research Poster Symposium.* Clemson, SC.
25. **Duffie, H.***, Stefanidis, D., Yu, D., Cha., J. S. (2022, April 8) How Loud are Your Doctors? A Systematic Approach to Quantifying Vocal Interactions in Medical Training Simulations. *5th Annual Clemson University Student Research Forum*. Clemson, SC.
26. **Mazur, K.***, Gonzales, A.*, Goel, S., Joseph, A., Cha., J. S. (2022, April 8) Taking Care of You: Evaluating Heart Rate Variability and Skin Conductance of Children and Parents Throughout a Surgical Procedure. *Clemson University 17th Annual Focus on Creative Inquiry Forum*. Clemson, SC.
27. **Stribling, H.***, Gonzales, A.*, Cha., J. S. (2022, April 7) This is How We Move It: Physical Activity Distinctions Between Global Populations. *5th Annual Clemson University Student Research Forum.* Clemson, SC.
28. **Goodwin, C.***, Ball, M.*, Gonzales, A.*, Stefanidis, D., Yu, D., Cha., J. S. (2022, April 7) Does a Good Doctor Ask a lot of Questions? A Quantitative Approach to Assessing Communication in Medical Training Simulations. *5th Annual Clemson University Student Research Forum*. Clemson, SC.
29. **Gonzales, A.***, Lin, J., Cha., J. S. (2021, October 22) Actively Working-From-Home but Without the Active: Perceptions Versus Reality of Work-From-Home Physical Activity. *Prisma Health Research Showcase.* Clemson, SC.

30. **Witt, S.***, Gonzales, A.*, Lin, J., Cha, J., (2021, August 17) Comparison of the Effects of COVID-19 Pandemic on Workers' Physical Activity. *Clemson University 5th Annual Summer CI + UR Showcase Poster Symposium*. Clemson, SC.
31. **Anton N.E.**, Huffman E.M., Ahmed R., Cooper D., Athanasiadis D.I., Cha J.S., Stefanidis D., Lee N.K. (2021, April 22) Stress and resident interdisciplinary team performance: results of a pilot trauma simulation. *Indiana University School of Medicine Annual Education Research Day.* Indianapolis, IL.
32. **Anton N.E.**, Whiteside J.A., Cha J., Perkins L.A., Martin M., Stefanidis, D. (2021, April 22) Characterizing robotic surgical expertise: an exploratory study of neural activation during mental imagery of robotic suturing. *Indiana University School of Medicine Annual Education Research Day.* Indianapolis, IL.
33. **Nunez, L.*, Mazur, K.*,** Lin, J., Cha, J. (2021, April 1-2) Happy Body, Happy Boss?: Evaluating Mind-Body Interventions on Health Outcomes Among Office-based Workers. *Clemson University 16th Annual Focus on Creative Inquiry Forum,* Clemson, SC.

Professional Society Membership

Human Factors and Ergonomics Society (HFES), Member	2015 – Present
Institute of Industrial and Systems Engineers (IISE), Member	2021 – Present

Referee/Reviewer

Source

Peer-reviewed journal articles

Human Factors, Applied Ergonomics, Ergonomics, Journal of Safety Research, IISE Transactions on Occupational Ergonomics and Human Factors, IISE Transactions on Healthcare Systems Engineering, IEEE Transactions on Human-Machine Systems, American Journal of Surgery, Journal of the American Medical Informatics Association, BMC Medical Education, International Journal of Industrial Ergonomics

Conference proceedings/abstracts

Human Factors & Ergonomics Society Annual Conference, Human Factors & Ergonomics Society Health Care Symposium, IEEE International Conference on Systems, Man, and Cybernetics (SMC), International Ergonomics Association (IEA) Congress

Proposals

National Institutes of Health (NIH) Bioengineering, Technology and Surgical Sciences (BTSS) Study Section	2025
National Science Foundation (NSF), panels	2022– 2025

STUDENTS

Chaired Doctoral Degrees

1. Alec Gonzales, Chair, *Decision-making Training of Minimally Invasive Surgical Skills*. Clemson University Industrial Engineering, December 2025.

Current Doctoral Students

1. Matthew Ball, UW- Madison ISyE, Chair, began Fall 2023 (Clemson). Passed Qualifying Exam.
2. Patrick Fuller, UW- Madison ISyE, Chair, began Fall 2024 (Clemson). Passed Qualifying Exam.

Chaired Masters Degrees

1. Matthew Ball, Industrial Engineering, Chair (co-chair with A. Khademi), Spring 2024
   Title: "Application of an Information Gain Model in a Motor Learning Task: An Application in a Laparoscopic Surgical Skills Task"
2. Patrick Fuller, Industrial Engineering, Chair, Summer 2024
   Title: "Understanding the Challenges to Robotic-Assisted Surgery Adoption from the perspectives of the Human-Interaction, Built Environment, and Training"

Completed PhD/MS Student Committees

1. Steven Foster, Clemson University Industrial Engineering, PhD student, Summer 2024
   Title: Identification and Validation of a Measurement of Emergency Physician (EP) Workload During End of Shift Patient Handoffs
2. Hansamali Lekamalage, Clemson University Mathematical Sciences, Chair (Shyam Ranganathan), Summer 2025
   Non-thesis.

Current Student Committee

1. Arsalan Ahmad, University of Wisconsin – Madison Industrial and Systems Engineering, PhD student. Title: TBD
2. Jeevan Ramesh Jayasuriya Arachchige, University of Wisconsin – Madison Industrial and Systems Engineering, PhD student. Title: TBD
3. Sara Kennedy, Clemson University Architecture+Health Design, PhD student, Summer 2026 (expected)
   Title: Understanding the Impact of the Built Environment on Workflows and Team Communication during Robotic-Assisted Surgery
4. Vishwajeet Ransing, Clemson University Industrial Engineering, PhD student, Fall 2026 (expected)
   Title: TBD

Graduate Research Supervision

1. Yufan Li, University of Wisconsin-Madison Industrial and Systems Engineering, MS student. (Present)
2. Holden Duffie, Clemson University Industrial Engineering PhD student (Fall 2022 – Spring 2025)
3. Mackenzie Kramer, Clemson University Biomedical Data Science and Informatics PhD student, Lab rotation (Spring 2025)
4. Uche Iwuchukwu, Clemson University Industrial Engineering MS student, Research Assistant (Spring – Summer 2024)
5. Charanjit Singh, Clemson University Computer Science MS student, Research Assistant (Spring 2023 – Summer 2024)
6. Saurabh Sharma, Clemson University Computer Science MS student, Research Assistant (Spring – Summer 2023)
7. Connor Moore, Clemson University Biomedical Data Science and Informatics MS student, Research Assistant (Fall 2022)

Undergraduate Research Supervision

Industrial & Systems Engineering student unless otherwise noted.

<u>At UW-Madison</u>

1. Seba Al Tawfiq (Present)
2. Bohan Jia (Present)
3. Dhruv Vir (Present)
4. Nicole Silva (Present)
5. Annika Alva (Present)

6. Harvey Ji (Computer science student) (Present)
7. August Booth (Fall 2025-Present)
8. Ben Belew (Fall 2025)
9. Charles Bianchi (Fall 2025)
10. Katlin Hoang (Fall 2025)
11. Maria Prameno (Fall 2025)
12. Kathryn Thurlow (Fall 2025)

At Clemson University

13. Ella Cheney (Spring 2025)
14. Ashley Maharaj (Spring 2025)
15. Lauren Knipschild (Spring 2024 – Spring 2025)
16. Voné Whaley (Spring 2024 – Spring 2025)
17. Tyler Mosca (Summer 2024)
18. Max Livesey (Summer 2024)
19. Emery Driver (Summer 2024)
20. Zachary Thompson (Spring 2024)
21. Lauren Ashley (Spring 2024)
22. Calvin McCurley (Fall 2023 – Spring 2024)
23. Sydney (Hope) Lanier (Summer 2023, Spring 2024)
24. Ayushi Patel (Spring 2023)
25. Patrick Fuller (Fall 2022 – Spring 2023)
26. Riya Patel (CS student) (Fall 2022 – Spring 2023)
27. Daniel Ludden (Summer 2022 – Spring 2023)
28. Richard Bozard (CS student) (Spring 2022 – Summer 2022)
29. Corbin Goodwin (BME student) (Spring 2022)
30. Matthew Ball (Spring 2022)
31. Hannah Stribling (Honors student) (Fall 2021 – Spring 2022)
32. Gregory Robichaud (Fall 2021)
33. Holden Duffie (Fall 2021 – Spring 2022)
34. Keegan Mazur (Spring 2021 – Spring 2022)
35. Luis Nunez (Spring – Fall 2021)
36. Savannah Witt (Spring, Summer 2021)
37. Chavah Green (Spring 2021)

Medical Student Research Supervision

Through University of South Carolina School of Medicine Greenville

1. Shuvangee Dhar (Summer 2023-Spring 2025)
2. Kathleen Fallon (Summer 2024)
3. Joshua Wiggins (Summer 2024)
4. Melanie Gainey (Spring 2023-Spring 2024)
5. Tyler Haselman (Summer 2023)
6. Yousuf Mohammad (Summer 2023)

Achievements of current/former students

1. Patrick Fuller, 2025 HFES Student Member with Honors
2. Alec Gonzales, 2025 Clemson IE Outstanding Graduate Research Assistant
3. Alec Gonzales, 2024 HFES Augmented Cognition TG Student Grant Award
4. Matthew Ball, 2024 HFES Training TG Best Poster Award
5. Patrick Fuller, 2024 IISE Work Systems Division Best Work Systems Student Paper
6. Shuvangee Dhar, 2024 AΩA Carolyn L. Kuckein Student Research Fellowship

7. Patrick Fuller, Award, 2024 Clemson IE Janine Bowen ’89 Graduate Fellow Award
8. Alec Gonzales, Award, 2024 Clemson IE Student Development Award
9. Alec Gonzales, 2023 HFES Student Member with Honors
10. Alec Gonzales, 2nd runner up, 2023 Clemson 3MT (Three Minute Thesis)
11. Alec Gonzales, 1st place, 2023 IISE Doctoral Colloquium Pitch Competition - People and Systems Category
12. Alec Gonzales, Award, 2023 Clemson IE Janine Bowen ’89 Graduate Fellow Award
13. Alec Gonzales, Scholarship, 2022-2023 IISE John S.W. Fargher Scholarship
14. Alec Gonzales, Fellowship, 2022-2023 Clemson University Graduate Diversity Doctoral Fellowship
15. Alec Gonzales, Fellowship, 2022-2024 Clemson University Interdisciplinary Research Graduate Fellowship
16. Alec Gonzales, Finalist, 2022 Graduate Research and Discovery Symposium (GRADS)
17. Richard Bozard, Summer 2022 Clemson CECAS Undergraduate Research Grant

RESEARCH ACTIVITIES

Total Research Funding: $2,305,067; PI Share: $1,320,875
*Industry and seed grants are not listed.

1. Ethical Considerations in The Design and Testing of Back-Support Exoskeletons
   Sponsor: National Institutes of Health/ NIBIB. $397,694
   PI: Divya Srinivasan, 12/2024-11/2026

2. HCC: CAREER: Redefining Skill Requirements and Evaluating Interaction Dynamics in Human-Robot Surgical Teams
   Sponsor: National Science Foundation. $574,834
   PI: Jackie Cha, 6/2024 – 5/2029

3. CICI: UCSS: Human-Centered Cybersecurity in Robotic Surgery (HCCRS) - Coordinating the Human and Cyber Infrastructure for Cybersecurity
   Sponsor: National Science Foundation. $599,982
   PI: Jackie Cha, 7/2023 – 6/2026

4. FW-HTF-P: Adapting to the Future of Robotic Surgery: Understanding Training and Design Environments for Human-Robot Teams
   Sponsor: National Science Foundation. $149,913
   PI: Jackie Cha, 10/2022 – 9/2023

5. Investigating the Use of Exoskeletons for Reducing Musculoskeletal Injuries in Surgical Care Tasks
   Sponsor: Agency of Healthcare Research and Quality (AHRQ). $99,910
   PI: Jackie Cha, Project period: 9/2022 – 9/2024

TEACHING AND MENTORING

Course	Title	Semester	Enrollment
At UW-Madison			
ISyE/BME 564	Occupational Ergonomics and Biomechanics	Spring 2026	51
At Clemson University			
IE 4880	Human Factors Engineering	Spring 2024	79
		Spring 2022	57
		Spring 2021	89
IE 4500/6500 (previously IE 4910/6910)	Human Factors in Device Design & Analysis	Fall 2024	6
		Fall 2023	28
		Fall 2022	30
		Fall 2021	77
IE 4890/6890	Industrial Ergonomics & Automation	Fall 2023	30
IE 8080	Research Design and Analysis for Human Factors & Ergonomics	Spring 2025	4
IE 8900	PhD Seminar (co-teach with T. Sharkey)	Fall 2021	15

Guest Lectures for Courses

1. Human Factors Engineering Design and Evaluation (ISyE 552), Department of Industrial & Systems Engineering, University of Wisconsin – Madison, Spring 2026

2. Human Factors for Healthcare Systems (ISyE 557), Department of Industrial & Systems Engineering, University of Wisconsin – Madison, Spring 2026
3. The Practice of Industrial Engineering (ISyE 191), Department of Industrial & Systems Engineering, University of Wisconsin – Madison, Spring 2026
4. Mind-Motor-Machine Interactions (ISyE 859), Department of Industrial & Systems Engineering, University of Wisconsin – Madison, Fall 2025
5. Bioengineering Capstone Project I (BIO_ENG 410), Voiland School of Chemical Engineering and Bioengineering, Washington State University, March 31, 2022
6. Human Factors/ Ergonomics (ISE 210), Department of Industrial & Systems Engineering, San Jose State University, Fall 2021
7. Bioengineering Design Theory (BIOE 4010), Department of Bioengineering, Clemson University
8. Bioengineering Capstone Project I (BIO_ENG 410), Voiland School of Chemical Engineering and Bioengineering, Washington State University, Spring 2021
9. Bioengineering Capstone Project I (BIO_ENG 410), Voiland School of Chemical Engineering and Bioengineering, Washington State University, Fall 2020
10. Work Analysis and Design I (IE 386), School of Industrial Engineering, Purdue University, Fall 2017

Student Team Mentoring

- Spring 2021, 2022, 2023, 2024, 2025: Exoskeletons in Healthcare, Seminar in Human-Computer Interaction, California State University, Long Beach
- Spring 2023: Coach for HFES Healthcare Student mHealth Design Competition, PeaceofMind (Michelle Lai from University of Toronto), winning team

Other Mentoring

- Engineering Academic Career Club (EACC) Summer Mentoring Circles, Purdue University, Summer 2022

SERVICE

Department Service

2026	UW-Madison ISyE Research Symposium Co-Organizer
2025-Present	UW-Madison ISyE Colloquium Committee, Member
2025- Present	UW-Madison ISyE Connections, Faculty Advisor
2023-2025	Clemson IE Scholarships, Awards, and Honors Committee, Member
2023	Clemson ENGR 100 Major Discovery Day Presenter
2021-2022	
2022-2023	Clemson IE Graduate Program Committee, Member
2021-2022	Clemson IE Seminar Series Organizer
2022	Clemson IE Associate Chair Search Committee, Member

College/ University Service

2023, 2024	Clemson Summer Scholars STEM camp lab tour
2021-2024	Creative Inquiry research symposium, Judge
2021-2022	Clemson Graduate Research and Discovery Symposium (GRADS) research competition, Judge
2021	Clemson STEM Camp, IE Session Leader

Professional Society and Other Service

Editorial Activities

2026-Present *Ergonomics in Design*, Senior Editor
2025-Present *Journal of Safety Research*, Editorial Board member
2023-Present *IISE Transactions on Occupational Ergonomics and Human Factors*, Editorial Board member
2022-Present *Human Factors*, Preferred Reviewer/Provisional Editorial Board member

Society Leadership & Activities

2025 National Academy of Engineering Frontiers of Engineering 30th Anniversary Gala Program Committee
2025-Present HFES Annual Meeting Chapanis Best Student Paper Award Committee, Chair
2025-Present HFES Student Affairs Committee, Chair
2025-Present Society of Surgical Ergonomics, Program Chair & Board of Directors Member
2024-2025 Society of Surgical Ergonomics, Program Co-Chair
2024-2025 HFES Augmented Cognition Technical Group Program Chair
2023-2025 HFES User Experience Technical Group Program Chair
2023-Present Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) Robotics Committee, Member
2024 Society of Surgical Ergonomics, Program Committee Member
2024 HFES Jerome H. Ely Human Factors Article Award Committee Member
2023-Present HFES Health Care Robotics Summit, Co-Chair
2023-2024 HFES Augmented Cognition Technical Group Secretary Treasurer / Program Chair Elect
2020-2023 HFES Augmented Cognition Technical Group Newsletter Editor
2017-2019 HFE Women's Organization for Mentoring and Networking Luncheon Subcommittee Member

Conference Activities

2026 NeuroErgonomics Conference Scientific Committee
2025 HFES Occupational Ergonomics Session Chair
2024 IEA Scientific Programming Committee, Member
2024 IEA Slips, Trips, and Falls Session Chair
2023 HFES Occupational Ergonomics Technical Group Awards Committee, Member
2023 HFES Computer Systems Session Chair
2023 IISE Annual Meeting Doctoral Colloquium Judge
2022 HFES Annual Meeting Healthcare Technical Group Best Student Paper Award, Reviewer
2022 IISE Annual Meeting Healthcare 1 Session Chair
2022 IISE Annual Meeting Physical Ergonomics 1 Session Chair
2021-2024 HFES Annual Meeting Chapanis Best Student Paper Award Committee, Member
2021 HFES Annual Meeting K-HFES Best Student Paper Award Committee, Reviewer
2021 HFES Annual Meeting Healthcare Session Chair
2019 HFES Annual Meeting Augmented Cognition Session Chair
2019 HFES Annual Meeting Student Forum Session Co-Chair
2019-2025 HFES Annual Meeting Reviewer
2018-2019 HFES Annual Meeting Student Volunteer
2017 International Symposium on Human Factors and Ergonomics in Healthcare, Student Volunteer

Certifications

2022- Certified Professional Ergonomist (CPE), Board of Certification in Professional Ergonomics (BCPE)

Faculty Development Activities

2025-Present Engineering4All, University of Wisconsin – Madison
2022-2023 NIH Accelerator, Clemson University
2022-2023 Investigating Active Learning to Enhance Student Comprehension, Engagement, and Critical Thinking Faculty Learning Communities Program, Clemson Office of Teaching Effectiveness and Innovation
2022 Enhancing the next generation of mentors: Entering and Facilitating Culturally Aware Mentorship Workshop, National Research Mentoring Network (NRMN)

AWARDS AND HONORS

National Academy of Engineering (NAE) The Grainger Foundation Frontiers of Engineering Symposia Participant	2024	National Academy of Engineering (NAE)
Robert L. Wears Early-Career Award - Academic Track	2024	HFES Health Care Technical Group
Best Work Systems Track Paper	2024	Institute of Industrial and Systems Engineers (IISE) Work Systems Division
Best Student Paper Award	2020	HFES Product Design Technical Group
College of Engineering Outstanding Graduate Student Research Award	2020	Purdue University
Human Factors and Ergonomics (HFE) WOMAN Rising Star Award	2019	HFES
Student Member with Honors Award	2019	HFES
People's Choice Poster Presentation	2019	2019 Regional Education and Research Center Symposium
1st place HFES Annual Conference UX Day Business Wire® Heuristic Evaluation Competition	2018	HFES
Graduate Student Government Travel Grant	2017, 2019	Purdue University
Graduate Student Government Professional Grant	2018	Purdue University
3rd place, School of Industrial Engineering Poster Competition	2018	Purdue University
3rd place, Health & Disease: Science, Technology, Culture and Policy Research Poster Session	2018	Purdue University
Ross Fellowship	2016-2017	Purdue University
Rackham Domestic Travel Grant	2016	University of Michigan