

CHANGWON SON, PhD, CSP

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ACADEMIC POSITIONS

2021-Present	Assistant Professor , Department of Industrial, Manufacturing, and Systems Engineering (IMSE) Texas Tech University (TTU), Lubbock, Texas, USA
2021-Present	Director , Safety, Human factors, And Resilience Engineering (SHARE) Lab, TTU, Lubbock, Texas, USA
2016-2021	Research Assistant , Wm Michael Barnes '64 Department of Industrial and Systems Engineering, Texas A&M University (TAMU), College Station, Texas, USA
2014-2021	Research Assistant , Mary Kay O'Connor Process Safety Center, Artie McFerrin Department of Chemical Engineering, TAMU, College Station, Texas, USA

EDUCATION

2016-2021	Ph.D., Industrial Engineering Wm Michael Barnes '66 Department of Industrial and Systems Engineering Texas A&M University, College Station, Texas, USA Dissertation: 'A multifaceted approach to understanding resilience of incident management teams' Faculty Advisors: Farzan Sasangohar and S. Camille Peres
2014-2016	M.Sc., Safety Engineering Mary Kay O'Connor Process Safety Center, Artie McFerrin Department of Chemical Engineering Texas A&M University, College Station, Texas, USA Thesis: 'A Study of Safety Culture Assessment Framework for Process Industries and Its Application to a Bayesian Belief Network Analysis' Faculty Advisor: (late) M. Sam Mannan
2000-2008	B.Sc., Industrial Engineering Hanyang University, Seoul, South Korea
2005-2006	Exchange Student, Mechanical Engineering Pittsburg State University, Pittsburg, Kansas, USA

AWARDS, HONORS, & FELLOWSHIPS

2026	Fellow , Teaching Academy, TTU
2026	SafeRaider Award , Edward E. Whitacre Jr. College of Engineering, TTU
2024	BK 21 (Brain Korea 21st Century) Research Fellow , Ministry of Education, South Korea
2023	George T. and Gladys Abell-Hanger Faculty Award , Edward E. Whitacre Jr. College of Engineering, TTU
2022	Early-Career Research Fellowship , National Academies of Sciences, Engineering, and Medicine (NASEM) Gulf Research Program (GRP) Offshore Energy Safety Track
2020	Outstanding PhD Student Award , Industrial and Systems Engineering Department, TAMU
2020	National Ergonomics Month Best Educational Resource for K-12 , Human Factors and Ergonomics Society (HFES)
2020	Student Member with Honors , HFES
2020	Council of Technical Group Student Presenter Award , the 64 th HFES Annual Meeting
2020	Emerging Leader , HFES
2019	Best Student Paper , the 63 rd HFES Annual Meeting Safety Technical Group
2019	Student Presentation Competition Winner , the 2019 Resilience Week
2018	Graduate Student Research and Presentation Travel Award , TAMU
2018	Outstanding Graduate Student Service Award , Industrial and Systems Engineering Department, TAMU
2018	Texas Safety Foundation Steve Halliburton HSE Scholarship , American Society of Safety Engineers
2017	Young Talent , Resilience Engineering Association
2016	Best Poster Presentation Award , Inaugural Texas A&M Conference on Energy
2014	Award of Excellence Performance , Hoegh LNG Carriers Project
2013	Safety Excellence Award , Brunei Gas LNG Carriers Project
2010	Safety Excellence Award , Eni Norge Goliath FPSO Project
2007	Dean's Scholastic Honors , Pittsburg State University
2006	All A Scholastic Honors , Pittsburg State University
2005	Scholarship of Academic Excellence, Honor , Hanyang University
2005	Scholarship of Academic Excellence, Top , Hanyang University

GRANTS & CONTRACTS

Funded Projects (Total Amount=\$1,184,343, Son's portion=\$647,843)

- 2026-2027 Source: **Heartland Center for Occupational Health & Safety**
 Title: **Biomechanical and Usability Assessment of Occupational Exoskeletons for Nurses in Overweight and Obese Patient Handling**
 Amount: **\$19,337 (Son's portion = 30%, \$5,801)**
 Role: **Co-PI** (PI: Dr. Hanjun Park)
- 2025-2026 Source: **National Safety Council**
 Title: **3D-printed Ergonomic Head-Neck Rest for Overhead Work**
 Amount: **\$49,989 (Son's portion=100%, \$49,989)**
 Role: **Principal Investigator** (Co-PI: Frank Hyong Ryou [Boeing], Co-I: Felipe Zambrini Santos)
- 2025-2026 Source: **University of Calgary Transdisciplinary Scholarship Connector Grant**
 Title: **Artificial Intelligence (AI)-powered All-Hazard Response Center (AAHRC)**
 Amount: CAD \$8,500 equivalent to **USD \$6,000 (Son's portion=10%, \$600)**
 Role: **Co-PI** (PI: Junho Park [University of Calgary])
- 2024-2025 Source: **National Academies of Sciences, Engineering, and Medicine (NASEM) Gulf Research Program (GRP)**
 Title: **Inspire the Next Generation: Connecting Fellows with K-12 Students in the Gulf of Mexico Region**
 Amount: **\$4,863 (Son's portion=100%, \$4,863)**
 Role: **Principal Investigator (PI)**
- 2024 Source: **Ministry of Education, Republic of Korea**
 Title: **BK (Brain Korea) 21 Research Fellow**
 Amount: KRW ₩4,601,440 equivalent to **USD \$3,408 (Son's portion=100%, \$3,408)**
 Role: **Research Fellow**
- 2024 Source: **Texas 9-1-1 Alliance**
 Title: **Analysis of Texas 9-1-1 Funding**
 Amount: **\$19,965 (Son's portion=20%, \$3,993)**
 Role: **Co-PI** (PI: Rob Grace, University of Cincinnati; Co-PIs: Wesley Wehde, TTU; Hyeongsuk Na, University of Missouri)
- 2024-2026 Source: **National Institute of Standards and Technology (NIST) Standards Coordination Office Curricula Development Cooperative Agreement Program**
 Title: **Integrating Emergency, Disaster, and Crisis Management Standards into Safety Engineering Courses**
 Amount: **\$149,021 (Son's portion=50%, \$74,511)**
 Role: **Principal Investigator** (Co-PIs: Mihwa Park and Wesley Wehde)
- 2023-2026 Source: **National Academies of Science, Engineering, and Medicine (NASEM) Gulf Research Program (GRP), Safer Offshore Energy Systems Grant**
 Title: **Empowering and enhancing offshore workers' SWA, UWA, Reporting unsafe conditions, and Employee participation**
 Amount: **\$855,760 (Son's portion=50%, \$427,880)**

Role: **Project Director** (PIs: Marshall Watson, Kerk F. Kee, and Tyree Mitchell [LSU])

2022-2023 Source: **NASEM, Gulf Research Program, Offshore Energy Safety Track, Early-Career Research Fellowship**

Amount: **\$76,000 (Son's portion=100%, \$76,000)**

Role: **Research Fellow**

PUBLICATIONS

(SHARE Lab member in bold; †=advised by Son; ‡=co-advised by Son; *=corresponding author)

Refereed Journal Articles (accepted, in press, or published)

- [J.23] Atif, A., **Son, C.**, Peres, S. C., & Sasangohar, F. (2026). Design consideration for procedures and checklist across multiple domains: A scoping literature review. *International Journal of Industrial Ergonomics*, 115, 104028. DOI: 10.1016/j.ergon.2026.104028 (IF=3.6)
- [J.22] **Dos Santos, V.†**, Greenlee, E., & **Son, C.*** (2026). Effects of Situation Awareness (SA) Oriented Interventions on SA, Performance, and workload during a Simulated Firefighting Task. *Applied Ergonomics*, 138, 104860. DOI: 10.1016/j.apergo.2026.104860 (IF=3.5)
- [J.21] Park, M.*, **Son, C.**, & Fadillah, S. (2026). Self-Regulated Learning and Achievement Emotions in an Engineering Emergency Management Module. *Education Sciences*, 16(7), 1146. DOI: 10.3390/educsci16071146 (IF=3.5)
- [J.20] **Santos, F.‡**, **Son, C.***, Park, H., Liang, N., Xu, C., & Yang, J. (2026). Biomechanical Effects of 3D-Printed and Spring-Based Virtual Reality Headset Support and Task Demands on the Neck. *IIE Transactions on Occupational Ergonomics and Human Factors*. DOI: 10.1080/24725838.2026.2680465 (IF=1.8)
- [J.19] **Santos, F.‡**, **Son, C.***, Park, H., Liang, N., Xu, C., & Yang, J. (2026). Design, Fabrication, and Testing of an Ergonomic Intervention for Virtual Reality Headset Using 3D Printing. *Ergonomics*. DOI: 10.1080/00140139.2026.2653007 (IF=2.4)
- [J.18] **Son, C.***, **Parker, K.†**, & **Jamshidzadeh, M.†** (2026). Effects of semantically irrelevant virtual reality experience on memory and emotion after watching a traumatic event. *JMIR Formative Research*. DOI: 10.2196/75848 (IF=2.1)
- [J.17] **Shultz, C.†** & **Son, C.*** (2025). Multiple Simultaneous Disasters as a New Challenge to Disaster Management: An Interpretative Phenomenological Analysis. *Journal of Homeland Security and Emergency Management*. DOI: 10.1515/jhsem-2025-0010 (IF=1.0)
- [J.16] Park, J.*, Rathenberg, A., Panko J., McGhie Z., & **Son, C.** (2025). Identifying Smart Technology and Artificial Intelligence Solutions for Human Factors and Ergonomic Challenges in All-Hazard Response: A Survey Study. *Applied Ergonomics*, 126, 104488. DOI: 10.1016/j.apergo.2025.104488 (IF=3.1)
- [J.15] **Son, C.***, Ham, D., Jin, S., & Park, T. (2025). 158 Deaths at Halloween Night: An AcciMap Analysis of 2022 Itaewon Crowd Crush in South Korea. *Safety Science*, 184, 106741. DOI: 10.1016/j.ssci.2024.106741 (IF=4.7)
- [J.14] **Dos Santos, V. M.†** & **Son, C.*** (2024). Identifying Firefighters' Situation Awareness Requirements for Fire- and Non-fire emergencies Using a Goal-Directed Task Analysis. *Applied Ergonomics*, 114, 104136. DOI: 10.1016/j.apergo.2023.104136 (IF=3.1)

- [J.13] **Son, C.*** (2023). Disaster Ergonomics: A Human Factors approach to address escalating challenges from disasters, *Cognition, Technology, & Work*, 25, 325-344. DOI: 10.1007/s10111-023-00736-4 (IF=2.6)
- [J.12] Moon, J., Sasangohar, F.*, Peres, S. C., & **Son, C.** (2023). Naturalistic observations of multiteam interaction networks: Implications for cognition in crisis management teams, *Ergonomics*, 67(3), 305-326. DOI: 10.1080/00140139.2023.2221418 (IF=2.4)
- [J.11] **Son, C.**, Hegde, S., Markert, C., Zahed, K., & Sasangohar, F.* (2023). Use of a Mobile Biofeedback Application to Provide Health Coaching for Stress Self-Management: Findings from a Pilot Quasi-Experiment. *JMIR Formative Research*, 7 (e41018). DOI: 10.2196/41018 (IF=2.1)
- [J.10] **Son, C.**, Sasangohar, F.*, Peres, S. C., & Moon, J. (2022). Analyzing work-as-imagined and work-as-done of incident management teams using Interaction Episode Analysis. *Theoretical Issues in Ergonomics Science*, 24(6), 729-757. DOI: 10.1080/1463922X.2022.2153495. (IF=1.6)
- [J.09] Wang, X., Hegde, S., **Son, C.**, Keller, B., Smith, A., & Sasangohar, F.* (2020). Investigating Mental Health of US College Students During the COVID-19 Pandemic: Cross-Sectional Survey Study. *Journal of Medical Internet Research*, 22(9), e22817. DOI: 10.2196/22817 (IF=7.4)
- [J.08] **Son, C.**, Hegde, S., Smith, A., Wang, X., & Sasangohar, F.* (2020). Effects of COVID-19 on College Students Mental Health in the US: An Interview-survey Study. *Journal of Medical Internet Research*, 22(9), e21279. DOI: 10.2196/21279 (IF=7.4)
- [J.07] Moon, J. Sasangohar, F.*, **Son, C.**, & Peres, S. C. (2020). Cognition in Crisis Management Teams: An Integrative Analysis of Definitions. *Ergonomics*, 63(10), 1240-1256. DOI: 10.1080/00140139.2020.1781936 (IF=2.4)
- [J.06] **Son, C.**, Sasangohar, F.*, Peres, S. C., & Moon, J. (2020). Muddling through troubled water: resilient performance of incident management teams during Hurricane Harvey. *Ergonomics*, 63(6), 643-659. DOI: 10.1080/00140139.2020.1752820 (IF=2.4)
- [J.05] **Son, C.**, Larsen, E. P., Sasangohar, F.*, & Peres, S. C. (2020). Opportunities and challenges for resilient hospital incident management: Case study of a hospital's response to Hurricane Harvey. *Journal of Critical Infrastructure Policy*, 1(1), 81-104. DOI: 10.18278/jcip.1.1.7 (No IF)
- [J.04] **Son, C.**, Sasangohar, F.*, Peres, S. C., Neville, T. J., & Moon, J. (2020). Investigating Resilience in Emergency Management: An Integrative Review of Literature. *Applied Ergonomics*, 87, 103114. DOI: 10.1016/j.apergo.2020.103114 (IF=3.1)
- [J.03] **Son, C.**, Sasangohar, F.*, Peres, S. C., Neville, T. J., & Moon, J. (2020). Evaluation of Work-as-Done in Information Management of Multidisciplinary Incident Management Team via Interaction Episode Analysis. *Applied Ergonomics*, 84, 103031. DOI: 10.1016/j.apergo.2019.103031. (IF=3.1)
- [J.02] **Son, C.**, Sasangohar, F.*, Rao, A., & Larsen, E. P. (2019). Resilient Performance of Emergency Department: Patterns, Models and Strategies. *Safety Science*, 120, 362-373. DOI: 10.1016/j.ssci.2019.07.010. (IF=4.7)
- [J.01] **Son, C.**, Sasangohar, F.*, Peres, S. C., Neville, T. J., Moon, J., & Mannan, M. S. (2018). Modeling an Incident Management Team as a Joint Cognitive System. *Journal of Loss Prevention in the Process Industries*, 56, 231-241. DOI: 10.1016/j.jlp.2018.07.021. (IF=3.5)

Manuscripts in progress (in preparation, under review, or in revision)

- [U.08] **Shultz, C.†, Son, C., & Henderson, J.** (under review). Managing Resources During Multiple Simultaneous Disasters: A Mixed Methods Study of U.S. Emergency Responders' Preparedness, Challenges, and Strategies. *Journal of Homeland Security and Emergency Management*.
- [U.07] **Lee, S. A.*, Ji, Y., & Son, C.** (under review). Human-AI Emergency Communication: Comparing Speech to Human and AI Responders in Simulated Medical Emergencies. *Human-Machine Communication*.
- [U.06] **Santos, F.†, Son, C.*, Park, H., Liang, N., Xu, C., & Yang, J.** (under review). Ergonomic Design of Head-Neck Supports Using Additive Manufacturing. *Ergonomics in Design*.
- [U.05] **Dedeaux, J.† & Son, C.*** (in preparation). Design and Use of Non-lethal Countermeasures against Mass Shooting Incidents: A Scoping Review. *Applied Ergonomics*.
- [U.04] **Mim, A.† & Son, C.*** (under review). Assessing the Usability of Telemonitoring and Remote Patient Monitoring Systems: A Systematic Literature Review. *Applied Ergonomics*.
- [U.03] **Son, C.*, Hernandez, J.†, & Parker, K.†** (under review). Human detectability of AI-generated fake images in e-commerce setting: Effects of image veridicality and time pressure. *Applied Ergonomics*.
- [U.02] **Son, C.*, Parker, K.†, Hernandez, J.†, Grace, R., Park, J., Caballero, S., Lee, A., Alfonsin, B., Ji, Y., Elrod, N., Shultz, C.†, & Jones, J.** (under review). Teaming up for golden hour: comparison between human-human teams and human-AI teams for two simulated medical emergencies. *Human Factors*.
- [U.01] **Vaughn, A.†, Son, C.*, & Caballero, S.** (under review). Nursing Students' Cognitive Challenges and Efforts during the Use of an Electronic Health Record System: A Mixed Method Study. *Ergonomics*.

Peer-reviewed Papers in Conference Proceedings

- [C.24] **Okoroji, J., Vaughn, A.†, Medina, A., Appiah, A., Son, C., Kee, K., Mitchell, T., Watson, M., Kraishan, O., & Kumar, S.†** (under review). Enacting Reliability: Communication, Coordination, and Uncertainty in High-Risk Work. *Extended Abstract submitted to the Annual Conference of the National Communication Association (Organizational Communication Division)*. New Orleans, LA, November 19-22, 2026.
- [C.23] **Okoroji, J., Vaughn, A.†, Medina, A., Appiah, A., Son, C., Kee, K., Mitchell, T., Watson, M., Kraishan, O., & Kumar, S.†** (under review). Risk Communication as Process: Enacting Uncertainty and Coordinated Action in High-Risk Environments. *Paper submitted to the Annual Conference of the Association for Education in Journalism and Mass Communication (Communicating Science, Health, Environment, and Risk Division)*. New Orleans, LA, August 5-8, 2026.
- [C.22] **Son, C., Kumar, S.†, Kee, K., Watson, M., Mitchell, T., Okoroji, J., Vaughn, A.†, & Medina, A.** (2026). SURE Safety Mobile App: Design of LLM-powered Safety Observation Reporting Systems. *Proceedings of 2026 Institute of Industrial and Systems Engineers (IISE) Annual Conference*.

- [C.21] Park, M., **Son, C.**, & Wehde, W. (2026). Exploring Intrapersonal Factors in an Engineering Module on Emergency, Disaster, and Crisis Management: A Work-in-Progress Study. *Proceedings of 2026 American Society for Engineering Education (ASEE) Annual Conference*.
- [C.20] Grace, R., **Son, C.**, Pang, F., **Parker, K.†**, & **Hernandez, J.†** (2025). Human-AI Communication in First Aid Response: Effects on Team Effectiveness, Trust, Perceived Workload, and Self-efficacy. *Proceedings of the 22nd Information Systems for Crisis Response and Management (ISCRAM) Conference*. DOI: 10.59297/1v67zn37
- [C.19] **Son, C.**, Park, M., & Wehde, W. (2025). Preparing for the Unexpected: Needs for Emergency, Disaster, and Crisis Management Education Among Engineering Students. *Proceedings of 2025 American Society for Engineering Education Annual Conference*. DOI: 10.18260/1-2--57066
- [C.18] **Jamshidzadeh, M.†**, **Parker, K.†**, & **Son, C.** (2024). Effect of Active Virtual Reality Experience on the Memory and Emotion of an Indirect Exposure to an Adverse Event. *Proceedings of the 68th Human Factors and Ergonomics Society Annual Meeting*, 68(1) 1425-1429. DOI: 10.1177/10711813241262016
- [C.17] **Vaughn, A.†**, **Son, C.**, & Caballero, S. (2024). Capturing Nursing Students' Cognitive Challenges and Efforts in EHR-related Tasks: Findings from a Thematic Analysis. *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care*, 13(1), 16-21. DOI: 10.1177/2327857924131029
- [C.16] Usher, K., Park, J., & **Son, C.** (2024). Artificial Intelligence for Emergency Medical Service. *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care*, 13(1), 1-6. DOI: 10.1177/232785792413104
- [C.15] Park, J., Rathenberg, A., Usher, K., & **Son, C.** (2024). Smart All-Hazard Responses Framework (SARF). *Human Factors and Ergonomics Approach. Proceedings of the 68th Human Factors and Ergonomics Society Annual Meeting*, 68(1) 1761-1765. DOI: 10.1177/107118132412603
- [C.14] **Vaughn, A.†**, **Son, C.**, **Baek, S.†**, Caballero, S., & Decker, S. (2023). A Mixed-Methods Approach to Understanding Nursing Students' Cognitive Challenges and Workarounds during EHR-related Tasks. *Proceedings of the 67th Human Factors and Ergonomics Society Annual Meeting*, 67(1), 620-625. DOI: 10.1177/21695067231192633
- [C.13] **Dos Santos, V. M.†**, & **Son, C.** (2023). Modern Firefighters' Three-Level Situation Awareness in Fire and Non-Fire Incidents. *Proceedings of the 67th Human Factors and Ergonomics Society Annual Meeting*, 67(1), 2335-2337. DOI: 10.1177/21695067231192647
- [C.12] **Mim, A. R.†**, & **Son, C.** (2023). Help is on the way: Effects of pre-response information and planning on communication and performance of simulated firefighting teams. *Proceedings of the 67th Human Factors and Ergonomics Society Annual Meeting*, 67(1), 327-330. DOI: 10.1177/21695067231192603
- [C.11] **Vaughn, A.†**, **Son, C.**, **Baek, S.†**, Caballero, S., & Decker, S. (2023). Identifying EHR Novice Users' Cognitive Challenges: Mapping Critical Nursing Tasks Using HTA. *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care*, 12(1), 24-30. DOI: 10.1177/2327857923121007

- [C.10] **Dos Santos, V. M.† & Son, C.** (2022). Virtual Reality Simulation for Emergency Management teams – A Literature Review. *Proceedings of the 66th Human Factors and Ergonomics Society Annual Meeting*, 66(1), 1937–1941. DOI: DOI: 10.1177/1071181322661324
- [C.09] Ashraf, A., **Son, C.**, Peres, S. C., & Sasangohar, F. (2021). Navigating operating procedures in everyday work in a petrochemical facility: A comparative analysis of WAI and WAD. *Proceedings of the 65th Human Factors and Ergonomics Society Annual Meeting*, 65(1), 623-627. DOI: 10.1177/1071181321651210
- [C.08] **Son, C.**, Sasangohar, F., Peres, S. C., & Moon, J. (2020). Designing an emergency management simulation testbed to investigate incident management team performance. *Proceedings of the 64th Human Factors and Ergonomics Society Annual Meeting*, 64(1), 1881-1885. DOI: 10.1177/1071181320641453
- [C.07] **Son, C.**, Peres, S. C., & Sasangohar, F. (2020). Developing a novel operator performance measure for procedural tasks based on Safety-II perspective. *Proceedings of the 64th Human Factors and Ergonomics Society Annual Meeting*, 64(1), 1755-1759. DOI: 10.1177/1071181320641425
- [C.06] Mendonza, A. M., Liu, S. C., Dumlao, S. V., Hendricks, J. W., **Son, C.**, Sasangohar, F., & Peres, S. C. (2020). Where Two Ends Meet: Operator and Stakeholder Perceptions of Procedures. *Proceedings of the 64th Human Factors and Ergonomics Society Annual Meeting*, 64(1), 1350-1354. DOI: 10.1177/1071181320641322
- [C.05] **Son, C.**, Peres, S. C., & Ade, N. (2019). Reflecting Abstraction Hierarchy of a Chemical Processing System on Standard Operating Procedures. *Proceedings of the 63rd Human Factors and Ergonomics Society Annual Meeting*, 63(1), 1806-1810. DOI: 10.1177/1071181319631400 (**Best Student Paper, HFES Safety Technical Group**)
- [C.04] **Son, C.**, Sasangohar, F., Peres, S. C., & Moon, J. (2019). Orchestrating through Whirlwind: Identified Challenges and Resilience Factors of Incident Management Teams during Hurricane Harvey. *Proceedings of the 63rd Human Factors and Ergonomics Society Annual Meeting*, 63(1), 899-903. DOI: 10.1177/1071181319631265
- [C.03] **Son, C.**, Peres, S. C., Ade, N., & Sasangohar, F. (2019). A Dilemma on Procedure Compliance: Reflection of Ecological Approach on Standard Operating Procedures. *Proceedings of 2019 Mary Kay O'Connor Process Safety Center International Symposium*.
- [C.02] **Son, C.**, Moon, J., Sasangohar, F., & Peres, S. C. (2018). An Episode as a Trace of Resilient Performance in Multi-Agency Incident Management Systems. *Proceedings of the 15th International Conference on Information Systems for Crisis Response and Management*, 942-948.
- [C.01] **Son, C.**, Halim, S. Z., Koirala, Y., & Mannan, M. S. (2017). Incorporating Human Factors Engineering Methods in the System Life Cycle of Offshore Oil and Gas Industries. *Proceedings of Institution of Chemical Engineers Symposium Series: Hazards* 27, 162.

PRESENTATIONS (presenter underlined)

Conference Presentations

- [P.73] **Santos, F., Son, C., & Park, H.** (2026). What Happens to Your Neck when You Wear VR for Long: Effects of Task Demands and Ergonomic Supports on Muscle Activity and Kinematics. *Oral presentation at the 2026 Houston HFES Regional Symposium, College Station, TX.*
- [P.72] **Son, C., Kumar, S.†, Mitchell, T., Kee, K., Watson, M., Okoroji, J., Vaughn, A.†, & Medina, A.** (2026). LLM-powered Hazard Identification and Risk Analysis for Offshore Safety Reporting. *Poster presentation at the 69th Human Factors and Ergonomics Society Annual Meeting, Reno, NV (accepted).*
- [P.71] **Mim, A.† & Son, C.** (2026). Usability of Telemonitoring and Remote Patient Monitoring Systems: A Systematic Review. *Oral presentation at the 2026 Institute of Industrial and Systems Engineers (IISE) Annual Conference, Arlington, TX (accepted).*
- [P.70] **Son, C.,** Lee, S. A., Jung, H., & Ji, Y. (2026). Human-centered AI prompting: Designing LLM for a Team-oriented AI teammate. *Oral presentation at the 2026 Institute of Industrial and Systems Engineers (IISE) Annual Conference, Arlington, TX (accepted).*
- [P.69] **Kumar, S.† & Son, C.** (2026). SURE Safety Mobile App: Design of LLM-powered Safety Observation Reporting Systems. *Oral presentation at the 2026 Institute of Industrial and Systems Engineers (IISE) Annual Conference, Arlington, TX (accepted).*
- [P.68] **Son, C., Vaughn, A.†, Okoroji, J., Medina, A., Kee, K., Mitchell, T., & Watson, M.** (2026). Understanding Offshore Safety Programs from Safety-II Perspective: An Interview Study. *Oral presentation at the 29th Annual Applied Ergonomics Conference (AEC) 2026, Arlington, TX (accepted).*
- [P.67] **Santos, F.†, Son, C., & Park, J.** (2026). A 3D-Printed Shoulder Support to Reduce Neck Strain During Prolonged VR Device Use. *Oral presentation at the 29th Annual Applied Ergonomics Conference (AEC) 2026, Arlington, TX (accepted).*
- [P.66] **Son, C.** (2025). Team up with AI for medical emergencies: an experimental study. *Oral presentation at 2025 SimTech Up Conference, Lubbock, TX.*
- [P.65] **Medina, A., Okoroji, J., Vaughn, A.†, Kee, K., Mitchell, T., & Son, C.** (2025). Safety Innovations in High Reliability Organizations: Examining Leadership and Communication Practices Among Offshore Workers. *Oral presentation at the 111th Annual Conference of the National Communication Association (Health Communication Division), Denver, CO.*
- [P.64] **Lee, S. A., Alfonsin, B., Ji, Y., & Son, C.** (2025). Communication under pressure: Comparing human-AI and human-human teams in simulated medical emergencies. *Oral presentation at the 111th Annual Conference of the National Communication Association (Health Communication Division), Denver, CO.*
- [P.63] **Hernandez, J.† & Son, C.** (2025). Examining Human Ability to Detect AI-generated Fake Images in e-Commerce Context. *Poster presentation at 2025 Undergraduate Research Conference (URC), Texas Tech University, Lubbock, TX.*
- [P.62] **Santos, F.†, & Son, C.** (2025). A 3D-Printed Shoulder Support to Reduce Neck Strain During Prolonged VR Device Use: Pilot Findings. *Oral presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*

- [P.61] **Hernandez, J.†, Parker, K.†, & Son, C.** (2025). Rolling the Dice: Examining Human Ability to Detect AI-generated Fake Images in e-Commerce Context. *Oral presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.60] **Parker, K.†, Hernandez, J.†, Caballero, S., Park, J., & Son, C.** (2025). Call 9-1-1 or Call ChatGPT?: Human-AI Teaming for Two Simulated Medical Emergencies: An Experimental Study. *Oral presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.59] Walji, Z., Badhwar, R., Dave, P., **Park, J., & Son, C.** (2025). Multi-Agent Systems (MAS) for Remote Healthcare with Enhanced Efficiency and Trust through Quantum-Model Methodology and Validation. *Oral presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.58] **Dos Santos, V.† & Son, C.** (2025). Investigating the Effects of Information-based Interventions on Firefighters' Situation Awareness, Performance, and Workload. *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.57] **Mim, A.† & Son, C.** (2025). Analyzing Usability Challenges and Guidance for Telemonitoring and Remote Patient Monitoring Systems: Initial Insights from a Systematic Literature Review. *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.56] **Ashraf, A., Son, C., Peres, S. C., & Sasangohar, F.** (2025). Design Considerations for Procedures and Checklist Across Multiple Domains: A Scoping Review. *Oral presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.55] **Vaughn, A.†, Son, C., Kee, K., Mitchell, T., Watson, M., Okoroji, J., & Medina, A.** (2025) Identifying Barriers to Stop-Work Authority, Ultimate Work Authority, Safety Reporting, and Employee Participation in Offshore Energy Domain. *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Chicago, IL.*
- [P.54] **Son, C.** (2025). Stop-work authority: Is every person feeling in your organization empowered to stop work?. *Oral presentation at the 2025 American Society for Safety Professionals (ASSP) Annual Conference, Orlando, FL.*
- [P.53] **Okoroji, J., Mitchell, T., Son, C., Kee, K., Watson, M., Vaughn, A.†, & Median, A.** (2025). It's About Time: The Intersection of Leadership, Social Identity, and Temporal Factors in Offshore Energy Organizations. *Oral presentation at the 1st International Conference on Social Identity and Leadership and Followership, Prague, Czech.*
- [P.52] **Son, C., Kee, K., Mitchell, T., Watson, M., Vaughn, A.†, Okoroji, J., & Medina, A.** (2025, June). Challenges in implementing stop-work authority: Findings from interviews with offshore workers, *Oral presentation at the 2025 Institute of Industrial and Systems Engineers (IISE) Annual Conference, Atlanta, GA.*
- [P.51] **Son, C., Park, M., & Wesley, W** (2025, June). Assessing needs for emergency, disaster, and crisis management skills for engineering students, *Oral presentation at the 2025 Institute of Industrial and Systems Engineers (IISE) Annual Conference, Atlanta, GA.*
- [P.50] **Son, C., Parker, K.†, Hernandez, J.†, & Tweed, A.†** (2025, June). Teaming Humans with Generative AI for Two Simulated Medical Emergencies: An Experimental Study,

Oral presentation at the 2025 Institute of Industrial and Systems Engineers (IISE) Annual Conference, Atlanta, GA.

- [P.49] **Son, C.**, Wehde, W., & **Park, M.** (2025, June). Preparing for the Unexpected: Needs for Emergency, Disaster, and Crisis Management Education Among Engineering Students, *Oral presentation at the 2025 American Society for Engineering Education Annual Conference, Montreal, Canada.*
- [P.48] **Son, C.**, & **Parker, K.†** (2025, February). Effect of Active Virtual Reality Experience on the Memory and Emotion of an Indirect Exposure to an Adverse Event. *Poster presentation at Whitacre College of Engineering (WCOE) Research Day, Texas Tech University, Lubbock, TX.*
- [P.47] **Jamshidzadeh, M.†**, **Parker, K.†**, & **Son, C.** (2024, September). Effect of Active Virtual Reality Experience on the Memory and Emotion of an Indirect Exposure to an Adverse Event. *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Phoenix, AZ.*
- [P.46] **Son, C.** (2024, September). Human-AI Interaction for Safety and Security: Is Generative AI a Bliss or a Menace? *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Phoenix, AZ.*
- [P.45] **Mim, A.†**, Itani, O., Zahed, K., & **Son, C.** (2024, September). Usability of Remote Patient Monitoring and Telemonitoring Systems: A Literature Review. *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Phoenix, AZ.*
- [P.44] **Park, J.**, Rathenberg, A., Usher, K., & **Son, C.** (2024, September). Smart All-Hazard Responses Framework (SARF): Human Factors and Ergonomics Approach. *Poster presentation at the 68th Human Factors and Ergonomics Society Annual Meeting, Phoenix, AZ.*
- [P.43] **Vaughn, A.†**, **Son, C.**, & Caballero, S. (2024, March). Capturing Nursing Students' Cognitive Challenges and Efforts in EHR-related Tasks: Findings from a Thematic Analysis. *Oral presentation at the 2024 International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.*
- [P.42] **Parker, K.†** & **Son, C.** (2024, March). Virtual Travel: A Novel VR-based Approach toward Mental Health Issues among First Responders. *Oral presentation at the 2024 International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.*
- [P.41] **Usher, K.**, **Park, J.**, & **Son, C.** (2024, March). Artificial intelligence for Emergency Medical Service: From the lab to the real-world. *Oral presentation at the 2024 International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.*
- [P.40] **Vaughn, A.†**, **Son, C.**, & Caballero, S. (2023, October). A Mixed-Methods Approach to Understanding Nursing Students' Cognitive Challenges and Workarounds during EHR-related Tasks. *Oral presentation at the 67th Human Factors and Ergonomics Society Annual Meeting, Washington, DC.*
- [P.39] **Dos Santos, V. M.†** & **Son, C.** (2023, October). Modern Firefighters' Three-level Situation Awareness in Fire and Non-fire Incidents. *Poster presentation at the 67th Human Factors and Ergonomics Society Annual Meeting, Washington, DC.*
- [P.38] **Mim, A. R.†** & **Son, C.** (2023, October). Help is on the way: Effects of pre-response information and planning on communication and performance of simulated

- firefighting teams. *Oral presentation at the 67th Human Factors and Ergonomics Society Annual Meeting, Washington, DC.*
- [P.37] **Vaughn, A.[†], Son, C., & Caballero, S.** (2023, April). Nurse's cognitive challenges along the EHR data lifecycle: A hierarchical data analysis of an expert's live demonstration of critical nursing tasks. *Poster presentation at the 17th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.36] **Dos Santos, V. M.[†] & Son, C.** (2023, April). Determining Firefighters SA Requirements: A Goal-Directed Task Analysis (GDTA). *Oral presentation at the 17th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.35] **Dedeaux, J.[†] & Son, C.** (2023, April). Existing challenges in response to mass shooting events and needs for novel non-lethal countermeasures based on Human Factors principles. *Oral presentation at the 17th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.34] **Mim, A. R.[†] & Son, C.** (2023, April). Effects of pre-response information and planning on firefighting team communication and performance. *Poster presentation at the 17th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.33] **Vaughn, A.[†], Baek, S.[†], & Son, C.** (2023, March). Identifying EHR Novice Users' Cognitive Challenges: Mapping Critical Nursing Tasks Using Hierarchical Task Analysis. *Oral presentation at 2023 International Symposium on Human Factors and Ergonomics in Health Care, Orlando, FL.*
- [P.32] Markert, C., Hegde, S., **Son, C.**, Zahed, K., & Sasangohar, F. (2022, October). Evaluating a Biofeedback Mobile Health Application to Improve Self-Management of Stress. *Poster presentation at the 66th Human Factors and Ergonomics Society Annual Meeting, Atlanta, GA.*
- [P.31] **Peres, S. C.**, Zahabi, M., Sasangohar, F., Murphy, R., **Son, C.**, Hendricks, J., Ashraf, A., Aguilar Reyes, C. I., & Jei, A. (2022, March). Adaptive Procedures: Adjusting and accommodating changing conditions, worker states, and task attributes. *Poster presentation at the 25th Annual 2022 Applied Ergonomics Conference, Orlando, FL.*
- [P.30] **Dos Santos, V. M.[†]**, De Carvalho, P. V. R., Burns, C., Vidal, M. C. R., **Son, C.**, & Jatoba, A. (2022, March). A Framework to Assess Resilience in Health Care Patient Prioritization. *Poster presentation at 2022 International Symposium on Human Factors and Ergonomics in Health Care, New Orleans, LA.*
- [P.29] **Son, C.** (2021, October). Disaster Ergonomics: Growing threats from disasters and increasing needs for a human factors approach. *Oral presentation at 2021 Mary Kay O'Connor Process Safety Symposium, College Station, TX*
- [P.28] **Wang, X.**, **Son, C.**, Sasangohar, F., & Moon, J. (2021, July). Lessons Learned from Teaching Various Industrial Engineering Courses During the COVID-19 Pandemic. *Oral presentation at 2021 American Society for Engineering Education Annual Conference & Exposition (virtual).*
- [P.27] **Son, C.**, Sasangohar, F., & Peres, S. C. (2021, June). Qualitative and quantitative analysis of work-as-imagined and work-as-done of incident management teams using

- interaction episodes. *Oral presentation at the 21st Triennial Congress of the International Ergonomics Association (virtual).*
- [P.26] Quddus, N., Son, C., Halim, S. Z., & Behie, S. (2021, April). Practical Approaches for Integrating Pandemic Preparedness and Response into Business Continuity and Risk Management Planning of Critical Infrastructure Operations. *Oral presentation at 2021 American Institute of Chemical Engineers Annual Meeting (virtual).*
- [P.25] Son, C., Peres, S. C., & Sasangohar, F. (2020, October). Developing a Novel Operator Performance Measure for Procedural Tasks Based on Safety-II Perspective. *Oral presentation at the 64th Human Factors and Ergonomics Society Annual Meeting (virtual).*
- [P.24] Son, C., Sasangohar, F., & Peres, S. C. (2020, October). Designing an Emergency Management Simulation Testbed to Investigate Incident Management Team Performance. *Oral presentation at the 64th Human Factors and Ergonomics Society Annual Meeting (virtual).*
- [P.23] Son, C., Peres, S. C., & Sasangohar, F. (2020, October). Two Views of Evaluating Procedural Task Performance: A Transition from Safety-I to Safety-II Approach. *Oral presentation at the 2020 Mary Kay O'Connor Process Safety Symposium, (virtual).*
- [P.22] Son, C., Peres, S. C., & Sasangohar, F. (2020, August). New Wine in New Cups: Measuring Operator Performance for Safety-II Perspective. *Poster presentation at the 16th Global Congress on Process Safety (virtual).*
- [P.21] Son, C., Larsen, E. P., & Sasangohar, F. (2020, May). A Safety-II Perspective towards Hospital Incident Management during Hurricane Harvey. *Poster presentation at the 2020 International Symposium on Human Factors and Ergonomics in Health Care (virtual).*
- [P.20] Son, C., Sasangohar, F., Peres, S. C., & Moon, J. (2020, February). Characteristics of resilient incident management teams during an extreme event: A case study of Hurricane Harvey. *Poster presentation at the 2nd Texas Disaster Management Symposium, College Station, TX.*
- [P.19] Son, C., Sasangohar, F., Peres, S. C., & Moon, J. (2019, November). Resilience Traits of Incident Management Teams During Hurricane Harvey: A Qualitative Analysis from a Joint Cognitive Systems Perspective. *Oral presentation at 2019 Resilience Week, San Antonio, TX. (Winner of the Student Competition)*
- [P.18] Son, C., Sasangohar, F., Peres, S. C., & Moon, J. (2019, October). Orchestrating through Whirlwind: Resilience Factors of Incident Management Teams during Hurricane Harvey. *Oral presentation at the 63rd Human Factors and Ergonomics Society Annual Meeting, Seattle, WA.*
- [P.17] Son, C., Peres, S. C., & Ade, N. (2019, October). Reflecting Abstraction Hierarchy of a Chemical Processing System on Standard Operating Procedures. *Oral presentation at the 63rd Human Factors and Ergonomics Society Annual Meeting, Seattle, WA.*
- [P.16] Moon, J., Sasangohar, F., Peres, S. C., Neville, T. J., & Son, C. (2019, October). Investigating Incident Management Teams as Cognitive Systems of Systems via Network Analysis of Real Time Interactions. *Oral presentation at the 63rd Human Factors and Ergonomics Society Annual Meeting, Seattle, WA.*
- [P.15] Son, C., Sasangohar, F., Peres, S. C., & Moon, J. (2019, September). Resilience Functions of Incident Management Teams during Hurricane Harvey: A Qualitative

- Study. *Oral presentation at 2019 Resilience Rising Symposium of Hazard Reduction & Recovery Center, College Station, TX.*
- [P.14] **Son, C.**, Ade, N., Peres, S. C., & Neville, T. J. (2019, April). Analyzing Standard Operating Procedures using Abstraction Hierarchy: Implications for Designing Procedures. *Poster presentation at the 15th Global Congress on Process Safety, New Orleans, LA.*
- [P.13] **Son, C.**, Larsen, E. P., & Sasangohar, F. (2019, April). A Comparison Between Government and Hospital Incident Management Teams during Hurricane Harvey. *Poster presentation at the 15th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.12] **Son, C.**, Sasangohar, F., Peres, S. C., & Moon, J. (2019, April). Resilience Factors of Incident Management Teams during Hurricane Harvey. *Poster presentation at the 15th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.11] **Son, C.**, Sasangohar, F., Peres, S. C., Moon, J., Neville, T. J., & Larsen, E. P. (2019, March). Same Disaster, Different Response: A Comparison Between Government and Hospital Incident Management Teams during Hurricane Harvey. *Poster presentation at the 2019 International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.*
- [P.10] **Son, C.**, Sasangohar, F., Peres, S. C., & Neville, T. J. (2018, October). Representing 'Work-As-Done (WAD)' of Communication and Information Flow in an Incident Management Team. *Oral presentation at the 2018 MKOPSC International Symposium, College Station, TX.*
- [P.09] **Son, C.**, Sasangohar, F., Peres, S. C., Moon, J., & Neville, T. J. (2018, September). An Interaction-based Episode as 'Work-As-Done' in a Multidisciplinary Incident Management Team: A Trace of Resilient Performance. *Oral presentation at the 62nd Human Factors and Ergonomics Society Annual Meeting, Philadelphia, PA.*
- [P.08] **Son, C.**, Sasangohar, F., Peres, S. C., Moon, J., & Neville, T. J. (2018, April). Representing Work-As-Done (WAD) of Communication and Information Flow in an Incident Management Team. *Poster presentation at the 14th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, TX.*
- [P.07] **Moon, J.**, **Son, C.**, Sasangohar, F., Peres, S. C., & Neville, T. J. (2018, April). Modeling team cognition for coordinated decision-making in emergency response via naturalistic observation of interactions. *Poster presentation at the 14th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium, Houston, Texas.*
- [P.06] **Son, C.**, Moon, J., Sasangohar, F., Peres, S. C., & Mannan, M. S. (2018, March). Extracting Episodes as a Trace of Resilient Performance of Multi-Agency Incident Management Systems. *Poster presentation at the 2018 International Symposium on Human Factors and Ergonomics in Healthcare, Boston, MA.*
- [P.05] **Son, C.**, Peres, S. C., & Sasangohar, F. (2017, October). Conceptualizing Multiagency Emergency Management Systems. *Oral presentation at the 20th MKOPSC International Symposium, College Station, TX.*

- [P.04] **Son, C.**, Peres, S. C., & Sasangohar, F. (2017, October). Defining and Measuring Resilience in Emergency Management Systems. *Oral presentation at the 61st Human Factors and Ergonomics Society Annual Meeting*, Austin, TX.
- [P.03] **Son, C.**, Sasangohar, F., & Peres, S. C. (2017, June). Cognitive basis for defining and measuring resilience of emergency management systems. *Poster presentation at the 13th Southwest Regional (Houston) Human Factors and Ergonomics Society Annual Symposium*, San Antonio, TX.
- [P.02] **Son, C.**, Bernat, M., & Sasangohar, F. (2017, March). Towards More Resilient Performance of Emergency Department. *Poster presentation at the 2017 International Symposium on Human Factors and Ergonomics in Health Care*, New Orleans, LA.
- [P.01] **Son, C.**, Marengo-Ramirez, C., & Mannan, M. S. (2016, September). Safety culture assessment framework and its application to a Bayesian Belief Network analysis. *Poster presentation at the Inaugural Texas A&M Conference on Energy*, College Station, TX. **(Winner of the Best Poster Presentation Award)**

Invited Talks/Colloquia

- [T.11] **Son, C.** (2026, June 22). Perspectives from a New Safety Paradigm on Disaster Resilience. *Invited talk at the National Disaster Management Research Institute of Korea*, Ulsan, South Korea.
- [T.10] **Son, C.** (2024, August 9). Human Factors Approach toward Healthcare Safety: Problems and Solutions for Electronic Health Record (EHR) System. *Invited talk at Seoul National University Hospital (SNUH) Institute of Convergence Medicine with Innovative Technology*, Seoul, South Korea.
- [T.09] **Son, C.** (2024, July 31). Human Factors Research for Novel VR-based Mental Health Intervention. *Invited talk at Hanyang University at ERICA*, Ansan, South Korea.
- [T.08] **Son, C.** (2024, June 20). New Safety Paradigm for Managing Complex Safety Problems – Principles and Practices of Resilience Engineering. *Invited talk at Daeduk Research Complex Laboratory Safety Committee Forum*, Seoul, South Korea.
- [T.07] **Son, C.** (2024, April 19). Disaster Ergonomics – Growing Needs for Human Factors Efforts for Escalating Risks of Emergencies and Disasters. *Invited talk at Virginia Tech HFES Student Chapter (virtual)*.
- [T.06] **Son, C.** (2022, Apr 8). New cups for new wine – designing an adaptive operating procedure based on a new safety paradigm. *Invited talk at Wichita State University Human Factors Psychology Department (virtual)*.
- [T.05] **Son, C.** (2021, May 28). A New Wine Has Aged and We Need New Cups to Measure it: A Novel Framework to Measure Procedural Task Performance Based on Safety-II Perspective. *Invited webinar at the Next Generation Advanced Procedures (NGAP) Consortium Webinar Series*.
- [T.04] **Son, C.** (2020, Oct 31). A novel approach toward analyzing work-as-imagined and work-as-done of an incident management team's information management activity. *2020 Institute of Industrial and Systems Engineers (IISE) Doctoral Colloquium (virtual)*.

- [T.03] **Son, C.** (2019, Nov 7). A systems approach towards the procedure performance: the promise of abstraction hierarchy. *Invited webinar at the Next Generation Advanced Procedures (NGAP) Consortium Webinar Series.*
- [T.02] **Son, C.** (2019, Feb 28). Resilience in Emergency Management: A New Perspective on Safety of Complex Systems. *Invited presentation at Texas Chemical Council Process Safety Committee Meeting, Pasadena, TX.*
- [T.01] **Son, C.** (2015, Mar 12). Case Study: 2013 High-density Polyethylene Storage Silo Explosion Yeosu, South Korea. *Invited presentation at Mary Kay O'Connor Process Safety Center Steering Committee Meeting, Houston, TX.*

MEDIA COVERAGE & FEATURES

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- [M.11] Oliver, L. (2026). Texas Tech Faculty Members Selected for Teaching Academy. *WCOE News*, April 22, 2026. URL: <https://www.depts.ttu.edu/coe/wcoenews/posts/2026/04/texas-tech-faculty-selected-for-teaching-academy.php>
 - [M.10] Oliver, L. (2025). Texas Tech Engineering Professor Named Fellow of Institute for Faculty Excellence. *WCOE News*, September 29, 2025. URL: <https://www.depts.ttu.edu/coe/wcoenews/posts/2025/09/son-imse-fellow.php>
 - [M.09] Oliver, L. (2025). Texas Tech Professor Receives Grant to Address Workplace Injuries in Manufacturing. *WCOE News*, July 2, 2025. URL: <https://www.depts.ttu.edu/coe/wcoenews/posts/2025/07/son-nsc-grant-workplace-injury.php>
 - [M.08] Oliver, L. (2025). Changwon Son and Team Receive Prestigious Award from Texas 9-1-1 Alliance. *WCOE News*, September 25, 2024. URL: <https://www.depts.ttu.edu/coe/wcoenews/posts/2024/09/texasalliance.php>
 - [M.07] Oliver, L. (2024). Changwon Son Leads NIST-Funded Project to Develop Cutting-Edge Emergency, Disaster, and Crisis Management Education for Texas Tech Engineering Students. *WCOE News*, September 25, 2024. URL: <https://www.depts.ttu.edu/coe/wcoenews/posts/2024/09/nist.php>
 - [M.06] Hawkins, G. (2024). Firefighting research study prepares responders for emergency situations. *The Daily Toreador*, April 19, 2024. URL: https://www.dailytoreador.com/lavida/firefighting-research-study-prepares-responders-for-emergency-situations/article_c727c21a-f76f-11ee-ac0c-67d399c683f8.html
 - [M.05] Lujan, J. (2023). Changwon Son Performs Traditional Dance. *The Daily Matador*, October 7, 2023. URL: https://www.dailytoreador.com/changwon-son-preforms-traditional-dance/image_07b1010c-6558-11ee-8d61-27780bc0868c.html?fbclid=IwAR10MQ1sHNaKyIaeQFh1S3r6XRux8gNVECaZIZgfQ9_0aZW5GvVW9ysBbI8
 - [M.04] Oliver, L. (2023). Texas Tech's Dr. Marshall Watson and Dr. Changwon Son Receive Grant to Boost Offshore Safety with SURE Toolbox Program. *WCOE News*, December 13, 2023. URL: <https://www.depts.ttu.edu/coe/wcoenews/posts/2023/12/gulfresearch.php>

- [M.03] Ramsey, A. (2022). Engineering Faculty Member Named an Early-Career Research Fellow. *Texas Tech Today*, January 24, 2022.
URL: <https://today.ttu.edu/posts/2022/01/Stories/Engineering-Faculty-Member-Named-an-Early-Career-Research-Fellow>
- [M.02] KCBD (2022). TTU faculty member recognized by the National Academies' Gulf Research Program. *KCBD*, January 24, 2022.
URL: <https://www.kcbd.com/2022/01/24/ttu-faculty-member-recognized-by-national-academies-gulf-research-program/>
- [M.01] **Lubbock Avalanche-Journal** (2022). Texas Tech engineering faculty member named Early-Career Research Fellow, January 27, 2022.
URL: <https://www.lubbockonline.com/story/news/education/2022/01/27/texas-tech-engineering-faculty-member-named-early-career-research-fellow/9202286002/>

TEACHING

Texas Tech University

Instructor (student evaluation and number of students)

Fall, 2026	IE 4331, Individual Studies in Industrial Engineering: AI-powered Digital Product Design for Humans (20 students) IE 5331, Special Topics in Industrial Engineering: AI-powered Digital Product Design for Humans (11 students) IE 5331 Distance Section, Special Topics in Industrial Engineering: AI-powered Digital Product Design for Humans (7 students)
Summer, 2026	IE 4306 Distance Section, Advanced Systems Safety Engineering (15 students)* IE 5306 Distance Section, Advanced Systems Safety Engineering (5.0/5.0, 13 students)
Spring, 2026	IE 4306, Advanced Systems Safety Engineering (4.8/5.0, 30 students) IE 5306, Advanced Systems Safety Engineering (4.7/5.0, 14 students) IE 5306 Distance Section, Advanced Systems Safety Engineering (4.8/5.0, 16 students) IE 4331, Individual Studies in Industrial Engineering: Emergency/disaster/crisis mgt principles & practices (1 student)* IE 5331, Special Topics in Industrial Engineering: Emergency/disaster/crisis mgt principles & practices (2 students)* IE 5331 Distance Section, Special Topics in Industrial Engineering: Emergency/disaster/crisis mgt principles & practices (1 student)*
Fall, 2025	IE 5306, Advanced Cognitive Engineering (4.9/5.0, 12 students) IE 5306 Distance Section, Advanced Cognitive Engineering (4.9/5.0, 12 students)
Summer, 2025	IE 4306, Advanced Systems Safety Engineering (3 students)* IE 4306 Distance Section, Advanced Systems Safety Engineering (1 student)*

	IE 5306 Distance Section, Advanced Systems Safety Engineering (4.9/5.0 , 10 students)
Spring, 2025	IE 4306, Advanced Systems Safety Engineering (4.6/5.0 , 36 students) IE 5306, Advanced Systems Safety Engineering (4.6/5.0 , 34 students) IE 5306 Distance Section, Advanced Systems Safety Engineering (4.9/5.0 , 15 students)
Fall, 2024	IE 5305, Cognitive Engineering (4.9/5.0 , 23 students) IE 5305 Distance Section, Cognitive Engineering (4.7/5.0 , 5 students)
Spring, 2024	IE 4306, Advanced Systems Safety Engineering (4.7/5.0 , 38 students) IE 5306, Advanced Systems Safety Engineering (4.9/5.0 , 47 students) IE 5306 Distance Section, Advanced Systems Safety Engineering (5.0/5.0 , 9 students)
Fall, 2023	IE 5305, Cognitive Engineering (4.8/5.0 , 30 students) IE 5305 Distance Section, Cognitive Engineering (4.9/5.0 , 16 students)
Spring, 2023	IE 4306, Advanced Systems Safety Engineering (4.4/5.0 , 37 students) IE 5306, Advanced Systems Safety Engineering (4.7/5.0 , 49 students) IE 5306 Distance Section, Advanced Systems Safety Engineering (4.6/5.0 , 28 students)
Fall, 2022	IE 5305, Cognitive Engineering (4.9/5.0 , 15 students) IE 5305 Distance Section, Cognitive Engineering (4.9/5.0 , 8 students)
Spring, 2022	IE 4306, Advanced Systems Safety Engineering (4.9/5.0 , 34 students) IE 5306, Advanced Systems Safety Engineering (4.7/5.0 , 27 students) IE 5306 Distance Section, Advanced Systems Safety Engineering (4.9/5.0 , 23 students)

* A course with fewer than five (5) responses does not provide numerical evaluation scores.

Teaching Skills Development

2026-Present	Member, Teaching Academy , TTU
2025-2026	Institute for Faculty Excellence (IFE) , Nonviolence Communication (NVC), Teaching, Learning, & Professional Development Center (TLPDC), TTU
2023-2024	President's STEM Mentoring Academy , STEM Center for Outreach, Research, & Education (STEM CORE), TTU
2023	TeMPO (Teaching Mentoring through Peer Observation) Fellow , Teaching, Learning, & Professional Development Center (TLPDC), TTU
2023	Faculty Mentorship Academy (FMA) , Teaching, Learning, & Professional Development Center (TLPDC), TTU

Texas A&M University

Instructor

Fall, 2020 ISEN 302, Economic Analysis of Engineering Projects (88 students)

Teaching Skills Development

2020 Center for the Integration of Research, Teaching, & Learning (CIRTL)
Certificate

2017-2019 Academy for Future Faculty (AFF) Fellow, Center for Teaching Excellence
(CTE)

ADVISING & MENTORING

Texas Tech University

Dissertation/Thesis Chair

2026-Present Zineb Menzer (MS, IE, **Fulbright Scholar**), Thesis TBD.

2024-Present Felipe Zambrini Santos (PhD, IE), Dissertation, "Virtual Reality Headset
Shoulder Support: Reducing Cervical Spinal Load and Neck Muscle Fatigue
Due To Prolonged Use" *Defended May 2026*.

2022-Present Austin Vaughn (PhD, IE), Dissertation, "Assessing The Benefits And Challenges
Of Generative Artificial Intelligence As A True External Brain For Nursing
Students: An Experimental Approach"

2022-Present Jessica Dedeaux (PhD, SYEM), Dissertation TBD.

2022-Present Armina Rahman Mim (PhD, IE), Dissertation TBD.

2021-Present Viviana Maura Dos Santos (PhD, IE), Dissertation, "Improving Firefighters'
Situation Awareness (SA) and Performance: The Role of the Three Levels of SA
and SA-oriented Interventions to Drive Effective Emergency Response".
Defended October 2025.

2021-Present Corey Shultz (PhD, SYEM), Dissertation, "Identifying Challenges And Efforts
Of Resource Management In Multiple Simultaneous Disasters: A Sequential
Exploratory Design" *Defended September 2026*.

Dissertation/Thesis Committee Member

2024-Present Diego Polanco-Lahoz (PhD, IE, Chair: Jennifer Cross), Dissertation, "
Leveraging Resilience Analysis Grid (RAG) And Functional Resonance
Analysis Method (FRAM) For Assessing Organizational Resilience Potential In
Higher Education Institutions".

2024-Present Nan Zhang (PhD, IE, Chair: George Z. Tan), Dissertation, "Synergistic
Approaches in Material and Structural Innovations for 3D Bioprinting".
Defended June 2025.

2023-Present Trent Kelly (PhD, SYEM, Chair: George Z. Tan), Dissertation, "Life Cycle
Assessment of Copper-Based Coatings for Marine Applications: A Comparison
of the ecotoxicity potential and efficacy between novel impregnated polymers
and traditional copper paint coating". *Defended June 2025*.

2023	Chrissa Mayhall (PhD, SYEM, Chair: Jennifer Cross), Dissertation, "Preferences for and Perceived Effectiveness of Leadership Styles for Multigenerational Technical Teams in the Public Sector". <i>Defended October 2023</i> .
2023-2024	Seunghun Lee (PhD, ME, Chair: James Yang), Dissertation, "Optimization-Based Motion Prediction for Tossing Tasks". <i>Defended March 2024</i> .
2023-Present	Michael Rubin (PhD, SYEM, Chair: Dongping Du), Dissertation, "Improving the Reliability of Spacecraft Attitude Control Systems through Dynamic Failure Management". <i>Defended Oct 2025</i> .
2022-2024	Richard Burgess (PhD, SYEM, Chair: Mario Beruvides), Dissertation, "Strategic Resilience Planning for Conjunctive Water Resource Systems". <i>Defended June 2024</i> . Currently <u>Assistant Professor at South Dakota School of Mines and Technology</u> .
2022-Present	Brian Jacobi (PhD, SYEM, Chair: Jennifer Cross), Dissertation TBD.
2022	Ramy Hindiyeh (PhD, SYEM, Chair: Jennifer Cross), Dissertation, "Identifying Critical Team Performance Measurement Output Variables that Characterize Overall Team Performance". <i>Defended October 2022</i> .

Master's Student Research Supervision (*IMSE student unless noted otherwise*)

2026	Zineb Menzer, Logan Drake, Shamapti Chowdhury
2025	Chiedozie Paulinus-Nwammuo, Tafadzwa Banga, Zineb Menzer
2024	Mohammad Jamshidzadeh, Madison Hanson, Miranda Morris (<i>Psychological Sciences</i>), Chiedozie Paulinus-Nwammuo, Anderson July Jones, Tafadzwa Banga
2023	Margarita C. Caceres (<i>Healthcare Engineering</i>), Mohammad Jamshidzadeh, Zhenyu Wang (<i>Interdisciplinary Studies</i>), Madison Hanson
2022	Folayemi Ogunfuye, Luis Araiza, Margarita C. Caceres (<i>Healthcare Engineering</i>)
2021	Folayemi Ogunfuye, Luis Araiza

Undergraduate Student Research Supervision (*IMSE student unless noted otherwise*)

2026	Caden Newman (<i>Computer Science</i>), Jacob Smith (<i>Computer Science</i>)
2025	Killan Parker (<i>Psychology</i>), Aven Tweed (<i>Psychology</i>), Jacob Hernandez (<i>Biology</i>), Ruben Loreda, Jordyn Duckworth (<i>Mechanical Engineering, Honors College</i>), Nishita Umesh Amle (<i>Psychology</i>), Jacob Smith (<i>Computer Science</i>)
2024	Maysen Brown, Killan Parker (<i>Psychology</i>), Iris Youngblood, Aven Tweed (<i>Psychology</i>), Jacob Hernandez (<i>Biology</i>), Ruben Loreda, Vincent Shelton (<i>BAT-LSAMP Scholar</i>)
2023	Aaron Watson, Maysen Brown, Linh Nguyen, Killian Parker (<i>Psychology</i>), Iris Youngblood, Jacob Hernandez (<i>Biology</i>), Aven Tweed (<i>Psychology</i>)
2022	Mobisola Oyewole, Aaron Watson, Dylan A. Lopez, Maysen Brown, Linh Nguyen
2021	Nazeli Hannon, Shriya Satish (<i>Psychology</i>)

High School Student Research Supervision

2023 Evan Phipps, Engineering Research Internship Experience (ERIE), TTU

Texas A&M University

Undergraduate Research Supervision (*Industrial engineering students unless noted otherwise*)

2021 Alexandra Osborn (NSF REU), Pamela Navarrete, Ignacia Antoinette, Abigail Hyun-gee Jei, Mary Pinedo, Jainita Chauhan, Elyssa Ramos, Allison Chang, Kevin Mai, Joseph Cahill

2020 Jacob Palat, Cittely Fuentes, Jessica Farias Zanette, Minsoo Kim, Jainita Chauhan

2019 Vu Hoang Le, Katherine Renter, Anna Him, Kevin To, Lauren Luu (*Public Health*), Prisha Patel (*Public Health*)

2018 Trevor Hennington, Justin Wood, Jiahui Bian, Alec Smith, Nitesh Woona, Rohit Lilhare, Tudor Tutuianu, Sisley Yan (*Psychological Science*)

2017 Miha Bernat

PROFESSIONAL AFFILIATIONS & SERVICE

Journal and Conference Reviewer

2025-Present **Editorial Board Member**, IISE Transactions on Occupational Ergonomics and Human Factors

2021-Present **Editorial Board Member**, Human Factors in Healthcare

2021-Present **Associate Editor**, Emergency Management Science and Technology

Reviewer, Human Factors

Reviewer, IEEE Transactions on Human-Machine Systems

Reviewer, IISE Transactions on Health Systems Engineering

Reviewer, Applied Ergonomics

Reviewer, International Journal of Disaster Risk Reduction (IJDRR)

Reviewer, Journal of Medical Internet Research (JMIR)

Reviewer, Proceedings of Human Factors and Ergonomics Society Annual Meetings

Grant/Proposal Reviewer

2024, 2025 **Proposal Reviewer**, National Academies of Sciences, Engineering, and Medicine (NASEM) Gulf Research Program (GRP)

2024 **Proposal Review Panelist**, National Science Foundation (NSF)

2022 **Proposal Review Panelist**, National Science Foundation (NSF)

2022 **Proposal Reviewer**, Mission Daybreak, US Department of Veterans Affairs (VA)

Professional Memberships & Affiliations

2019-Present **Institute of Industrial and Systems Engineers (IISE)**, Member

2016-Present **Human Factors and Ergonomics Society (HFES)**, Member

Service to Profession

2026 **Co-Chair**, Panel Session on “From Digital Tools to Full Value: Offshore Security, Safety, and Operational Efficiency”, 2026 Offshore Technology Conference, Houston, TX

2025-2026 **Guest Editor**, IISE Transactions on Occupational Ergonomics and Human Factors (IISE TOEHF) Special Issue on 2026 IISE Annual Conference Human Factors and Ergonomics Track

2025-2026 **Co-Chair**, Gulf Offshore Energy Security, Safety and Risk Management Workshop Planning Committee, NASEM Gulf Research Program (other co-chairs: Dr. Najmedin Meshkati, Dr. Faisal Khan, Dr. Sarmistha Majumdar)

2025-2026 **Track Chair**, Human Factors and Ergonomics (HF/E) Track, 2026 IISE Annual Conference, Arlington, TX

2025 **Session Chair**, the 69th HFES Annual Meeting (ASPIRE), Chicago, IL

2025-Present **Social Media Coordinator**, IISE Transactions on Occupational Ergonomics and Human Factors

2024 **Session Chair**, Engineering Education Track, IISE Annual Conference, Atlanta, GA

2024-Present **Member**, Accreditation Committee, Education Division, HFES

2024-Present **Member**, Human-centered AI Undergraduate Course Development Committee, TTU

2024-Present **Member**, IEEE Oceanic Engineering Society (OES) Subcommittee for 2025 Offshore Technology Conference

2023-Present **Chair & Member**, Membership Committee, Internal Affairs Division, HFES

2023-2024 **Chair**, Patient Safety Track, 2024 International Symposium of Human Factors in Health Care

2023 **Faculty Judge**, North Central Regional Conference, IISE

2022-2023 **Co-chair**, Patient Safety Track, 2023 International Symposium of Human Factors in Health Care

2022 **Session Chair**, the 66th HFES Annual Meeting, Atlanta, GA

2022-2023 **Practitioner Engagement Committee**, 2023 Global Conference of ISCRAM

2022 **Guest Editor**, REA Newsletter, February, 2022

2021-2023 **Awards and Scholarships Committee Chair**, Healthcare TG, HFES

2021 **Session Chair**, the 65th HFES Annual Meeting, Baltimore, MD

2021 **Panelist**, the 65th HFES Annual Meeting Student Career Development Day

2021 **Guest Speaker**, HFES TAMU Student Chapter Webinars on Academic Job Search

2020-2022 **Student Outreach Officer**, Augmented Cognition TG, HFES
 2020 **Session Chair, Co-Chair**, the 64th HFES Annual Meeting (virtual)
 2019 **Session Chair**, the 63rd HFES Annual Meeting, Seattle, WA.
 2018 **Session Co-chair**, the 62nd HFES Annual Meeting, Philadelphia, PA.
 2018 **Session Chair**, 2018 HFES Healthcare Symposium, Boston, MA.

Service to Institution

2025-Present **Faculty Senate**, TTU
 2025 **Dean's Representative**, Final Doctoral Examination of **Ben Alfonsin** (PhD in Media and Communication, TTU College of Media & Communication)
 2025 **Dean's Representative**, Final Doctoral Examination of **Okere Chinedu** (PhD in Petroleum Engineering, TTU Department of Petroleum Engineering)
 2024 **Guest Speaker**, IMSE Departmental Seminar for First-Year Engineering Students, WCOE, TTU
 2024 **Panelist**, 'Behind the Scenes', TTU IMSE Department Academic Job Market Seminar
 2024-Present **Departmental Safety Officer (DSO)**, TTU IMSE Department
 2024 **Dean's Representative**, Final Doctoral Examination of **David Newton** (PhD in Human Factors Psychology, TTU Department of Psychological Sciences)
 2024-2025 **Member**, TTU IMSE Department Faculty Search Committee
 2024-2025 **Member**, TTU IMSE Department Chair Search Committee
 2024 **Dean's Representative**, Final Doctoral Examination of **Nick Garcia** (PhD in Human Factors Psychology, TTU Department of Psychological Sciences)
 2024 **Committee Member**, Strategic Planning Committee – Education Group, TTU WCOE
 2023 **Guest Speaker**, Tips for Networking, TTU HFES Student Chapter
 2023 **Dean's Representative**, Final Doctoral Examination of **Tiffany Lui** (PhD in Human Factors Psychology, TTU Department of Psychological Sciences)
 2023 **Guest Speaker**, IMSE Department Job Seeking Seminar, TTU
 2023 **Red Raider Orientation** for incoming students, IMSE Department, TTU
 2023 **Dean's Representative**, Final Doctoral Examination of **Leslie Stockel** (PhD in Technical Communication and Rhetoric, TTU Department of English)
 2023 **Dean's Representation**, Final Doctoral Examination of **Shadman Tahmid** (PhD in Mechanical Engineering, TTU Department of Mechanical Engineering)
 2023 **Dean's Representative**, Final Doctoral Examination of **Ritwik Rakshit** (PhD in Mechanical Engineering, TTU Department of Mechanical Engineering)
 2023 **Reviewer and Judge**, TTU Undergraduate Research Conference (URC)
 2022-Present **Undergraduate Recruitment Committee**, IMSE Department, TTU
 2023-2024 **Vice President**, Korean Faculty Association, TTU
 2022 **Public Relations Officer**, Korean Faculty Association, TTU

2022-2023	Faculty Search Committee (Lecturer Position) , IMSE Department, TTU
2022	Guest speaker , IMSE Department Job Seeking Seminar, TTU
2022	Dean's Representative , Final Doctoral Examination of Brittany Neilson (PhD in Human Factors Psychology, TTU Department of Psychological Sciences)
2022	Guest speaker , TTU Korean Student Association Academic Job Search Webinar
2022	Reviewer and Judge , TTU Undergraduate Research Conference (URC)
2022-Present	Faculty Co-advisor , Korean Student Association, TTU
2021-Present	Faculty Co-chair (co-advisor) , HFES Student Chapter, TTU

PROFESSIONAL DEVELOPMENT

2025	Fellow, Institute of Faculty Excellence (IFE) , Office of Provost, TTU
2024	NSF CMMI Panel Fellow , Game Changer Academies (proposal review skills and awareness development), National Science Foundation
2024	STEM CORE Member , STEM Center for Outreach, Research, and Education, TTU
2023	NSF CISE CAREER Proposal Workshop , National Science Foundation (virtual)
2022	New Faculty Colloquium , IISE Annual Conference, Seattle, WA
2022	NSF ENG CAREER Proposal Workshop , National Science Foundation (virtual)
2022	Research Development Workshop , TTU Office of Research & Innovation

INDUSTRY EMPLOYMENT HISTORY

2015	Engineering Co-op, Baker Engineering and Risk Consultants , Houston, TX • Conducted quantitative risk analyses (QRA) and facility siting studies (FSS). • Wrote technical proposals and reports for safety engineering consulting projects. • Conducted a research project to improve theoretical models of chemical release analysis software.
2008-2014	Project HSE Manager, Hyundai Heavy Industries , Ulsan, South Korea • Held responsible for HSE issues in multiple ship/offshore platform construction projects. • Investigated major fatality and high consequence events using root cause analysis. • Developed computer-aided safety systems: e-Permit-to-work, GPS-based Crane Collision Prevention System.

CERTIFICATIONS

2024	First Aid/CPR/AED , American Red Cross
2020	US Certified Safety Professional (CSP) (No. CSP-38445)

- 2011 **UK NEBOSH International General Certificate** (No. 00109476/293242)
- 2010 **Korean Industrial Safety Engineer** (No. 09203090024W)

LEADERSHIP, OUTREACH & COMMUNITY SERVICE

- 2025-Present **Volunteer**, South Plains Food Bank, Lubbock, Texas, USA
- 2024-Present **Band Booster**, Lubbock-Cooper High School Band
- 2023 **Volunteer**, Engineering Fair, TTU STEM Outreach & Engagement
- 2022-2024 **Parent Committee Member**, Lubbock Korean Language School
- 2017-2018 **Operating Officer**, Korean-American Scientists and Engineers Association, TAMU
- 2017-2018 **Coordination Officer**, Korean Student Association, TAMU
- 2016, 2017, 2021 **Korean mask dance performer**, Korean Language School and CSISD Summer School
- 2016-2017 **Departmental Representative**, Texas A&M Energy Research Society
- 2010-2014 **President**, Hyundai Heavy Industries English Conversation Club
- 2007 **President**, Korean Student Association, Pittsburg State University
- 2004 **President**, Seoul Pine Tree Club (Intercollegiate English Conversation Club)
- 2001-2003 **Sergeant**, Brigade 103, Republic of Korean Army