



Erika Elizabeth (Miller) Gallegos

Associate Professor, Colorado State University

Department of Systems Engineering

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EDUCATION

Ph.D. Civil Engineering, May 2018

University of Washington, Seattle, WA

Advisor: Dr. Linda Ng Boyle

Dissertation: Behavioral Adaptations of Drivers to Autonomous Systems: Evaluating Intermediate and Carryover Effects

M.S. Applied Artificial Intelligence, Expected May 2027

University of San Diego, San Diego, CA

M.S. Civil Engineering, June 2013

University of Washington, Seattle, WA

Advisor: Dr. Linda Ng Boyle

Thesis: Effects of Roadway on Driver Stress: An On-Road Study Using Physiological Measures

B.S. Civil Engineering, June 2010

Oregon State University, Corvallis, OR

PROFESSIONAL POSITIONS

Associate Professor, 2025 – present

Department of Systems Engineering, Colorado State University

Assistant Professor, 2018 – 2025

Department of Systems Engineering, Colorado State University

Expert Witness Consultant, 2015 – 2019

Graduate Research Assistant, 2011 – 2018

Department of Industrial & Systems Engineering, University of Washington

Department of Civil & Environmental Engineering, University of Washington

Undergraduate Research Assistant, 2010

Department of Civil & Construction Engineering, Oregon State University

PUBLICATIONS

Note: Last name changed to Gallegos from Miller in 2024

Underlining denotes graduate advisees; * denotes postdoc supervisees

Refereed Journal Articles

1. Ortolano, F., & Gallegos, E.E. (accepted). Advancing human-AI collaboration in small and medium-sized enterprises: A systems engineering approach. *Systems Engineering*.

2. Alipour, P., & **Gallegos, E.E.** (2025). Leveraging generative AI synthetic and social media data for content generalizability to overcome data constraints in vision deep learning. *Artificial Intelligence Review*, 58. doi.org/10.1007/s10462-025-11137-6
3. Botyarov, M., & **Gallegos, E.** (2025). Generative design solution space parsing: An evaluation of user experience, workload, and performance. *Journal of Systems Science and Systems Engineering*. doi.org/10.1007/s11518-024-5626-8
4. Coronado, P. J., & **Gallegos, E.E.** (2025). Defining medical device ecosystems: A systematic literature review. *IEEE Access*, 13, 173065-173080. doi.org/10.1109/ACCESS.2025.3615110
5. Gracias, M.H., & **Gallegos, E.E.** (2025). Balancing structure and flexibility: evaluating agile, waterfall, and hybrid methodologies in aerospace and defense projects. *ITEA Journal of Test and Evaluation*, 46(3). doi.org/10.61278/itea.46.3.1003
6. Lanigan, T., Biggs, T., **Gallegos, E.E.**, Daily, J., Reid, E., & Powers, S. (2025). Impact of cyber threat awareness on driver response to an unexpected vehicle cyberattack. *Journal of Transportation Security*, 18(12). doi.org/10.1007/s12198-025-00303-0
7. Pourfalatoun, S., **Gallegos, E.E.**, & Ahmed, J.* (2025). Drivers' risk and emotional intelligence in safe interactions with vulnerable road users: Toward sustainable mobility. *Sustainability*, 17(20), 9185. doi.org/10.3390/su17209185
8. Stewart, E., & **Gallegos, E.E.** (2025). Reliability, resilience, and alerts: Preferences for autonomous vehicles. *Future Transportation*, 5(4), 164. https://doi.org/10.3390/futuretransp5040164
9. Ahmed, J.*, Robinson, A., & **Miller, E.E.** (2024). Effectiveness of signs for pedestrian-railroad crossings: Colors, shapes, and messaging strategies. *Journal of Safety Research*, 89, pp 141-151. doi.org/10.1016/j.jsr.2024.01.003
10. Ahmed, J.*, Ward, N., Otto, J., McMahill, A., & **Miller, E.E.** (2024). Identifying measures of emotional intelligence and dangerous driving. *Transportation Research Record*, 2678(3), pp 365-375. doi.org/10.1177/03611981231179698
11. Alipour, P., **Gallegos, E.E.**, & Sridhar, S. (2024). AI-driving marketing personalization: Deploying convolutional neural networks to decode consumer behavior. *International Journal of Human-Computer Interaction*, 41(16), pp 10266-10284. doi.org/10.1080/10447318.2024.2432455
12. Chellin, M.D., & **Gallegos, E.E.** (2024). Visualization tool for obsolescence management: Reducing supply chain risk for C5ISR systems. *Defense Acquisition Research Journal*, 31(1), pp 36-61. doi.org/10.22594/dau.23-914.31.01
13. Gracias, M.H., & **Gallegos, E.E.** (2024). Transitioning Perspectives: Agile and Waterfall Perceptions in the Integration of Model-Based Systems Engineering (MBSE) within Aerospace and Defense Industries. *ITEA Journal of Test and Evaluation*, 45(4). doi.org/10.61278/itea.45.4.1006
14. Nickkar, A., Pourfalatoun, S., **Miller, E.E.**, & Lee, Y.J. (2024). Applying the heteroskedastic ordered probit model on injury severity for improved age and gender estimation. *Traffic Injury Prevention*, 25(2), pp 202-209. doi.org/10.1080/15389588.2023.2286429
15. Ahmed, H., & **Miller, E.E.** (2023). Needs analysis and payback models for tractor design based on field data from traditional farmers in Sudan. *World*, 4(4), pp 698-708. doi.org/10.3390/world4040044
16. Ahmed, H., & **Miller, E.E.** (2023). Quantifying the economic impact on farmers from agricultural machinery: A case study of farmers in Sudan. *World*, 4(2), pp 347-359. doi.org/10.3390/world4020022

17. Ahmed, J.*, Ward, N., McMahon, A., Otto, J., & **Miller, E.E.** (2023). Effects of emotional intelligence on dangerous driving: A comparison between commercial and non-commercial drivers. *Transportation Planning and Technology*, 46(6), pp 695-709. doi.org/10.1080/03081060.2023.2228760
18. Aliebrahimi, S., & **Miller, E.E.** (2023). Effects of cybersecurity knowledge and situation awareness on cyberattacks on autonomous vehicles. *Transportation Research Part F: Traffic Psychology and Behaviour*, 96, pp 82-91. doi.org/10.1016/j.trf.2023.06.010
19. Birch, D.S., **Miller, E.E.**, & Bradley, T.H. (2023). Human reliability analysis using a human factors hazard model. *Journal of System Safety*, 58(2), pp 7-29. doi.org/10.56094/jss.v58i2.251
20. Chellin, M.D., & **Miller, E.E.** (2023). Frustrated with obsolescence – Try changing your mental model. *Defense Acquisition Research Journal*, 30(3), pp 228-249. doi.org/10.22594/dau.23-903.30.03
21. Chellin, M.D., & **Miller, E.E.** (2023). Proactive obsolescence management methods for C5ISR systems: Insights from practitioners. *Defense Acquisition Research Journal*, 30(1), pp 24-44. doi.org/10.22594/dau.21-886.30.01
22. Pourfalatoun, S., Ahmed, J.*, & **Miller, E.E.** (2023). Shared electric scooter users and non-users: Safety, adoption, and risk. *Sustainability*, 15(11), 9045. doi.org/10.3390/su15119045
23. Pourfalatoun, S., & **Miller, E.E.** (2023). Effects of COVID-19 pandemic on use and perception of shared e-scooters. *Transportation Research Interdisciplinary Perspectives*, 22, 100925. doi.org/10.1016/j.trip.2023.100925
24. Trinko, D., Horesh, N., Porter, E., Dunckley, J., **Miller, E.**, & Bradley, T. (2023). Transportation and electricity systems integration via electric vehicle charging-as-a-service: a review of techno-economic and societal benefits. *Renewable & Sustainable Energy Reviews*, 175, 113180. doi.org/10.1016/j.rser.2023.113180
25. Botyarov, M., & **Miller, E.E.** (2022). Partitioning around medoids as a systematic approach to generative design solution space reduction. *Results in Engineering*, 100544. doi.org/10.1016/j.rineng.2022.100544
26. Johnson, R.A., **Miller, E.E.**, & Conrad, S. (2022). Technology adoption and acceptance of Urban Air Mobility systems: Identifying public perceptions and integration factors. *The International Journal of Aerospace Psychology*, 32(4), pp 240-253. doi.org/10.1080/24721840.2022.2100394
27. Botyarov, M., & **Miller, E.** (2021). Evaluating usability of generative design process for human-centered design. *International Journal of Development Research*, 11(3), pp 45148-45152.
28. Pourfalatoun, S., & **Miller, E.E.** (2021). User perceptions of automated truck-mounted attenuators: Implications on work zone safety. *Traffic Injury Prevention*, 22(5), pp 413-418. doi.org/10.1080/15389588.2021.1925116
29. Strle, G., Xing, Y., **Miller, E.E.**, Boyle, L.N., & Sodnik, J. (2021). Take-over time: A Cross-cultural study of take-over responses in highly automated driving. *Applied Sciences*, 11(17), 7959. doi.org/10.3390/app11177959
30. **Miller, E.E.**, & Boyle, L.N. (2019). Adaptations in attention allocation: Implications for takeover in an automated vehicle. *Transportation Research Part F: Traffic Psychology and Behaviour*, 66, pp 101-110. doi.org/10.1016/j.trf.2019.08.016
31. **Miller, E.E.**, & Boyle, L. N. (2018). Behavioral adaptations to lane keeping systems: Effects of exposure and withdrawal. *Human Factors*, 61(1), pp 152-164. doi.org/10.1177/0018720818800538

32. **Miller, E.E.**, Boyle, L. N., Jenness, J. W., & Lee, J. D. (2018). Voice control tasks on cognitive workload and driving performance: Implications of modality, difficulty, and duration. *Transportation Research Record*, 2672(37), pp 84-93. doi.org/10.1177/0361198118797483
33. Hurwitz, D.S., **Miller, E.E.**, Jannat, M., Boyle, L.N., Brown, S., Abdel-Rahim, A. & Wang, H. (2016). Improving teenage driver perceptions regarding the impact of distracted driving in the pacific northwest. *Journal of Transportation Safety & Security*, 8(2), pp 148-163. doi.org/10.1080/19439962.2014.997329
34. **Miller, E.E.**, & Boyle, L.N. (2015). Driver's behavior in road tunnels: Association with driver stress and performance. *Transportation Research Record*, 2518, pp 60-67. doi.org/10.3141/2518-08

Refereed Proceedings

‡ Denotes oral podium presentation

1. ‡ **Perreault, D.**, & **Gallegos, E.E.** (2025). Analysis of systemic failures in application of failure modes and effects analysis in v-model based complex design. *To Appear in the Proceedings of the INCOSE Western States Regional Conference*.
2. ‡ **Stewart, E.**, & **Gallegos, E.E.** (2025). What would I see in court? A survey analysis of who Americans would blame for self-driving vehicle crashes and traffic violations. *Proceedings of the International Council on Systems Engineering (INCOSE) International Symposium*, 35(1), 736-759. Ottawa, Canada: July 2025. doi.org/10.1002/iis2.70017
3. ‡ **Ledgerwood, S.**, & **Gallegos, E.E.** (2024). Performance of firefighters in a multiple-sensory VR pump panel training simulation. *Proceedings of the Applied Human Factors and Ergonomics (AHFE) International Conference on Human Factors in Design, Engineering, and Computing*. Honolulu, HI: Dec 2024. doi.org/10.54941/ahfe1005684
4. ‡ Bumgarner, S., Rudder, S., **Gallegos, E.E.**, & Dailey, J. (2024). Human factors engineering (HFE) considerations for mounting internal interfaces in industry vehicles. *Proceedings of the Human Factors and Ergonomics Society (HFES) Annual Meeting*. Phoenix, AZ: Sept 2024. doi.org/10.1177/10711813241282266
5. ‡ **Perreault, D.**, **Gallegos, E.E.**, Paglioni, V., & Bradley, T.H. (2024). Usability challenges of failure mode and effects analysis (FMEA) within the V-model. *Proceedings of the International Council on Systems Engineering (INCOSE) Human Systems Integration (HSI) Conference*. Jeju, Korea: Aug 2024. <https://easychair.org/publications/preprint/rkD3>
6. ‡ **Ledgerwood, S.**, **Gallegos, E.E.**, & Vans, M. (2024). Measuring Detection and habituation of olfactory stimuli in virtual reality for improved immersion. *Proceedings of the 15th International Conference on Applied Human Factors and Ergonomics*. Nice, France: July 2024. doi.org/10.54941/ahfe1005001
7. ‡ **Corl, K.**, & **Gallegos, E.E.** (2024). A method for human systems integration requirements within model based systems engineering. *Proceedings of the International Council on Systems Engineering (INCOSE) International Symposium*, 34(1), 1787-1806. Dublin, Ireland: July 2024. doi.org/10.1002/iis2.13237
8. ‡ Biggs, T., **Lanigan, T.**, Ruddell, D., **Gallegos, E.E.**, & Daily, J. (2024). Modeling a heavy-duty vehicle data collection process for authenticating driver identify and analyzing driver behavior under duress. *Proceedings of the 19th Annual System of Systems Engineering (SoSE) Conference*, 256-263. Tacoma, WA: June 2024. doi.org/10.1109/SOSE62659.2024.10620958

9. * **Sabale, A., & Miller, E.E.** (2024). Artemis lunar surface navigation: Potential modern solutions to known ancient challenges. *AIAA SciTech 2024 Forum*. Orlando, FL: Jan 2024. doi.org/10.2514/6.2024-0620
10. * **Ahmed, J.*, & Miller, E.E.** (2023). Effects of traffic and road contextual language on survey design: A comparison of two emotional intelligence scales. *Proceedings of the Human Factors and Ergonomics Society (HFES) 67th Annual Meeting*. Washington, DC: Oct 2023. doi.org/10.1177/21695067231192554
11. * **Ahmed, H., & Miller, E.E.** (2022). Human-systems integration of agricultural machinery in developing economy countries: Perceptions of adoption. *Proceedings of the INCOSE Human Systems Integration Conference*, pp. 18-28, San Diego, CA: Nov 2021. doi.org/10.1002/iis2.12868
12. * **Frison, A.K., Wintersberger, P., Riener, A., Schartmuller, C., Boyle, L.N., Miller, E., & Weigl, K.** (2019). In UX we trust: Investigation of aesthetics and usability of driver-vehicle interfaces and their impact on the perception of automated driving. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. Glasgow, UK: May 2019. doi.org/10.1145/3290605.3300374
13. **Miller, E.E., Hwang, S., Cegovnik, T., Boyle, L.N., and Sodnikj J.** (2019). Takeover response: differences between US and Slovenia. *Proceedings of the 11th International Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutoUI)*, pp. 227–231. Utrecht, NL: Sept 2019. doi.org/10.1145/3349263.3351322
14. * **Miller, E.E., & Boyle, L.N.** (2017). Driver adaptation to lane keeping assistance systems: Do drivers become less vigilant? *Proceedings of the Human Factors and Ergonomics Society (HFES) 61st Annual Meeting*, pp. 1934-1938. Austin, TX: Oct 2017. doi.org/10.1177/1541931213601963
15. * **Miller, E.E., & Boyle, L.N.** (2013). Variations in road conditions on driver stress: Insights from an on-road study. *Proceedings of the Human Factors and Ergonomics Society 57th Annual Meeting*, pp. 1864-1868. San Diego, CA: Sept-Oct 2013. doi.org/10.1177/1541931213571416

Conference Presentations (without paper)

* Denotes oral podium presentation

1. **Lanigan, T., Biggs, T., Gallegos, E.E., Daily, J., Reid, E., & Powers, S.** (accepted). Improving driver response to vehicle cyberattacks: On-road insights of awareness and protocol training. *To be Presented at the Transportation Research Board (TRB) Annual Meeting*, Washington, DC: Jan 2026.
2. **Kim, J., Gallegos, E.E., Lanigan, T.F., Biggs, T., & Daily, J.** (accepted). Determining human and mechanical factors affecting fuel efficiency for medium-heavy-duty vehicles using machine learning. *To be Presented at the Transportation Research Board (TRB) Annual Meeting*, Washington, DC: Jan 2026.
3. **Corl, K., & Gallegos, E.** (2024). A Method to Customize Human Systems Integration Requirements for Advancement of Existing and Future Mission Platforms. *Presented at the 27th Annual Systems & Mission Engineering Conference*. Norfolk, VA: Oct 2024.
4. **Ortolano, F., & Gallegos, E.** (2024). Towards A Human-AI Collaboration Maturity Model (HAIC-MM) for Small and Medium-Sized Enterprises. *Presented at the AI4SE & SE4AI Workshop*. Arlington, VA: Sept 2024.
5. * **Baker, R., & Gallegos, E.E.** (2024). Electric vehicle mission metrics for operational decisionmaking. *Presented at the 92nd Military Operations Research Society (MORS) Symposium*. Monterey, CA: June 2024.

6. ‡ **Baker, R., & Gallegos, E.E.** (2024). Energy management system demand response methods: An alternative to priority-based. *Presented at the 92nd Military Operations Research Society (MORS) Symposium*. Monterey, CA: June 2024.
7. ‡ Ahmed, J.*, Ward, N., Otto, J., McMahill, A., & **Miller, E.E.** (2023). Identifying measures of emotional intelligence and dangerous driving. *Presented at the Transportation Research Board (TRB) Annual Meeting, TRBAM-23-02994*, Washington, DC: Jan 2023.
8. ‡ **O'Connor, E., & Miller, E.E.** (2022). Root cause analysis techniques – Removing the jargon and understanding what works. *Presented at the INCOSE 2022 Western States Regional Conference*, Golden, CO: Sept-Oct 2022.
9. **Pourfalatoun, S., & Miller, E. E.** (2022). Effects of COVID-19 pandemic on use and perceptions of shared micro-mobility. *Presented at the Applied Human Factors and Ergonomics (AHFE)*, New York, NY: July 2022.
10. **Aliebrahimi, S., & Miller, E. E.** (2022). Evaluating factors that impact situation awareness and takeover responses during cyberattacks on automated vehicles. *Presented at the Applied Human Factors and Ergonomics (AHFE)*, New York, NY: July 2022.
11. ‡ **Johnson, R., & Miller, E.E.** (2022). Perceptions of emerging urban air mobility systems: Differences between early to laggard adopters of passenger air vehicles. *Presented at the INCOSE International Symposium (IS2022)*, Detroit, MI: June 2022.
12. **Kirwin, J., & Miller, E.E.** (2021). Quantifying the performance of the Astro™ space suit. *Presented at the American Institute of Aeronautics and Astronautics (AIAA) Rocky Mountain Section Annual Technical Symposium 2021*, Boulder, CO: Sept 2021.
13. **Pourfalatoun, S., & Miller, E.E.** (2021). Trust in automated truck-mounted attenuators: A survey on worker perceptions. *Presented at the Transportation Research Board (TRB) Annual Meeting, TRBAM-21-02603*. Washington, DC: Jan 2021.
14. Liu, J., **Miller, E.**, & Boyle, L. N. (2019). The relationship between driver performance and driver workload using functional data analysis. *Presented at the American Statistical Association's Joint Statistical Meeting*, Denver, CO: July 2019.
15. ‡ **Miller, E.E.**, & Boyle, L. N. (2018). Effects of exposure and withdrawal of a lane keeping system. *Presented at the 8th International Conference on Information Society and Technology*. Kopaonik, Serbia: March 2018.
16. ‡ **Miller, E.E.**, & Boyle, L. N. (2018). Behavioral adaptations to autonomous systems: Evaluating intermediate and carryover effects. *Presented at the Transportation Research Board (TRB) 97th Annual Meeting*. Washington, DC: Jan 2018.
17. ‡ **Miller, E.E.**, Boyle, L. N., Jenness, J. W., & Lee, J. D. (2018). The impact of voice control task modality, difficulty, and duration on cognitive workload and driving performance. *Presented at the Transportation Research Board (TRB) 97th Annual Meeting*. Washington, DC: Jan 2018.
18. ‡ **Miller, E.E.**, & Boyle, L. N. (2015). Driver's behavior in road tunnels: Association with driver stress and performance. *Presented at the Transportation Research Board (TRB) 94th Annual Meeting*. Washington, DC: Jan 2015.
19. ‡ **Miller, E.E.**, & Boyle, L. N. (2014). Standardization of measurement of driving performance: Statistical considerations. *Presented at the Transportation Research Board (TRB) 93rd Annual Meeting*. Washington, DC: Jan 2014.

Technical Reports and Theses

1. **Gallegos, E.E.**, Ahmed, J.*, & **Robinson, A.** (2024). *Effectiveness of Mitigation Methods and Signage in Reducing Railway Trespassing Events (Report No. MPC 24-557)*. Fargo, ND: Mountain-Plains Consortium. Available from: <https://rosap.ntl.bts.gov/view/dot/79104>
2. **Miller, E.**, & **Young, C.** (2023). *Literature Review Synthesizing the Current and Potential ATMA Applications (Report No. CDOT 2023-14)*. Denver, CO: Colorado Department of Transportation (CDOT). Available from: <https://rosap.ntl.bts.gov/view/dot/80139>
3. **Miller, E.E.**, **Pourfalamatoun, S.**, Nysten, A., & Weldon, T. (2021). *Evaluating the human-automated maintenance vehicle interaction for improved safety and facilitating long-term trust (Report No. CDOT-2021-05)*. Denver, CO: Colorado Department of Transportation (CDOT). Available from: <https://trid.trb.org/View/1959668>
4. Jenness, J. W., Boyle, L. N., Lee, J. D., **Miller, E.E.**, Yahoodik, S., Huey, R., Lee, J. Y., Benedick, A. K., & Petraglia, E. (2020). *In-vehicle voice control interface evaluation: Preliminary driver workload and risk analysis (Report No. DOT HS 812 813)*. Washington, DC: National Highway Traffic Safety Administration (NHTSA). Available from: <https://rosap.ntl.bts.gov/view/dot/43640>
5. **Miller, E.E.** (2018). *Behavioral adaptations of drivers to autonomous systems: Evaluating intermediate and carryover effects*. Doctoral dissertation, University of Washington. Available from: <https://digital.lib.washington.edu/researchworks/handle/1773/42254>
6. Boyle, L., Cordahi, G., Grabenstein, K., Madi, M., **Miller, E.**, & Silberman, P. (2014). *Effectiveness of safety and public service announcement (PSA) messages on dynamic message signs (DMS) (Report No. FHWA-HOP-14-015)*. Washington, DC: Federal Highway Administration (FHWA). Available from: <https://ops.fhwa.dot.gov/publications/fhwahop14015/fhwahop14015.pdf>
7. Boyle, L. N., Lee, J. D., Peng, Y., Ghazizadeh, M., Wu, Y., **Miller, E.**, & Jenness, J. (2013). *Text reading and text input assessment in support of the NHTSA visual-manual driver distraction guidelines (Report No. DOT HS 811 820)*. Washington, DC: National Highway Traffic Safety Administration (NHTSA). Available from: <https://www.nhtsa.gov/sites/nhtsa.gov/files/811820.pdf>
8. **Miller, E.E.** (2013). *Effects of roadway on driver stress: An on-road study using physiological measures*. Master's thesis, University of Washington. Available from: <https://digital.lib.washington.edu/researchworks/handle/1773/23592>

Other Presentations and Publications

1. Reid, E., Powers, S., **Gallegos, E.E.**, Daily, J., Biggs, T., & **Lanigan, T.** (2025). Driver identification dataset. *Constellation*. doi.org/10.13139/ORNLNCCS/2513388
2. **Alipour, P.**, & **Gallegos, E.E.** (2025). Facial Emotion Recognition for Content Generalizability. *GitHub Repository*. <https://github.com/pantehaalipourTeslaeng/consumer-fer-content-generalization>
3. Pathways to Engineering: Personal and Professional, Panel Speaker. *CSU Workshop for Undergraduate Women in Engineering*. Fort Collins, CO: October 11, 2024.
4. **Chellin, M.**, & **Gallegos, E.E.** (2024). Obsolescence visualization tool. *Zenodo*. doi.org/10.5281/zenodo.10606850
5. Birch, D., Narsinghani, J., Herber, D., Bradley, T., & **Miller, E.** (2022). Human factors hazard model. *Zenodo*. doi.org/10.5281/zenodo.7352422
6. Cybersecurity and Human Factors in Autonomous Vehicles, Panel Speaker. *ErgoX Symposium*. Atlanta, GA: October 15, 2022.

7. Pathways to Engineering: Personal and Professional, Panel Speaker. *CSU Workshop for Undergraduate Women in Engineering*. Fort Collins, CO: February 19, 2022.
8. Pathways to Engineering: Personal and Professional, Panel Speaker. *CSU Workshop for Undergraduate Women in Engineering*. Fort Collins, CO: February 15, 2020.
9. Intelligent Mobility, Panel Speaker. *Parametrix 2nd Future of the Profession Conference*. Seattle, WA: November 19, 2019.
10. Transitioning Through Academia: Graduate Students, Postdocs, and Tenure-Track Faculty, Panel Speaker. *Human Factors and Ergonomics Society Annual Meeting*. Seattle, WA: October 28, 2019.
11. Industrial & Systems Engineering Seminar, Invited Speaker. *University of Washington Department of Industrial & Systems Engineering*. Seattle, WA: April 17, 2018.
12. Longitudinal Effects of Advanced Driver Assistance Systems on Driver Behavior. *PacTrans-Tongji PhD Symposium on Transportation Science and Technology*. Seattle, WA: August 2, 2016.

CONTRACTS & GRANTS

Externally Funded Projects as PI

Pavement & Airfield Tactical Robotic On-site Locator (PATROL), PI Erika Gallegos, ARPA-I Ideas Challenge Stage 1, **\$20,000**, 2025 – 2026

Autonomous Maintenance Technology Pooled Fund Management Phase 3, PI Erika Gallegos, Colorado Department of Transportation, **\$139,194**, 2024 – 2025

Driver Identification Phase 2: Noninvasive In-Cabin Biometrics, PI Erika Gallegos, co-PI Jeremy Daily, Oak Ridge National Laboratory, **\$136,298**, 2025 – 2026

ADAS for Bustang Intercity and Regional Bus Transit: Fuel Economy Impacts, PI Erika Gallegos, co-PI Thomas Bradley, US Federal Transit Administration (CDOT as Prime), **\$325,000** (total funded \$1,253,952), 2024 – 2026

Driver Identification Using Models Developed from Onboard Data Acquisition Devices, PI Erika Gallegos, co-PI Jeremy Daily, Oak Ridge National Laboratory, **\$150,000**, 2023 – 2024

Autonomous Maintenance Technology Pool Fund Management 2, PI Erika Gallegos, Autonomous Maintenance Technology Pooled Fund, **\$78,300**, 2021 – 2024

AMT Pooled Fund 2023 Annual Meeting Coordination, PI Erika Gallegos, Autonomous Maintenance Technology Pooled Fund, **\$40,658**, 2023

Effectiveness of Mitigation Methods and Signage in Reducing Railway Trespassing Events, PI Erika Gallegos, Mountain-Plains Consortium [UTC], **\$15,000**, 2022 – 2023

AV Program Support and ATMA Data Acquisition, PI Erika Gallegos, co-PI Thomas Bradley, Colorado Department of Transportation, **\$98,850**, 2021 – 2023

Literature Review on Autonomous Delivery: Drone (Air) and Robots (Ground), PI Erika Gallegos, Colorado Department of Transportation, **\$7,499**, 2022

Literature Review on Cognitive Impairment of Older Drivers, PI Erika Gallegos, Colorado Department of Transportation, **\$7,499**, 2022

Literature Review in Support of the State Transportation Funding Proposal's Online Retail Order Fee, PI Erika Gallegos, Colorado Department of Transportation, **\$11,999**, 2021

Evaluating the Human-Automated Maintenance Vehicle Interaction for Improved Safety and Facilitating Long-Term Trust, PI Erika Gallegos, Autonomous Maintenance Technology Pooled Fund, **\$74,997**, 2019 – 2021

Literature Review in Support of SB19-239, PI Erika Gallegos, co-PI Thomas Bradley, Colorado Department of Transportation, **\$24,999**, 2019

Externally Funded Projects as Co-PI

Resuspension Emissions based on Aerodynamic Characteristics (ReACh), PI Vincent Paglioni, co-PIs Erika Gallegos and Tim Coburn, Center for Transformative Infrastructure Preservation and Sustainability [UTC], **\$60,000**, 2024 – 2026

Colorado’s Multi-Network Resilience Plan for Electrified Transportation, PI Thomas Bradley, co-PIs Erika Gallegos, Tim Coburn, Jon Van de Lindt, Katie Dunker, Kay Kelly (CDOT), Mike King (CDOT), Christian Williss (Colorado Energy Office), Zhaocai Liu (NREL), Eric Wood (NREL), Jesse Bennett (NREL), Xiangyu Zhang (NREL), and Bonnie Trowbridge (Drive Clean Colorado), Department of Energy Joint Office of Energy and Transportation, **\$1,337,218**, 2024 – 2027

Systematic, Antho-centric Packages for Protecting Households in Realistic Exposure Situations (SAPPHIRES), PI Tami Bond, co-PIs Erika Gallegos, Christian L’Orange, Marilee Long, and Lori Shupe (University of Illinois - Urbana Champaign), National Science Foundation (NSF) LEAP HI, **\$1,999,998**, 2022 – 2026

ZEV Manufacturing and Engineering Workforce Development, PI Thomas Bradley, co-PI Erika Gallegos, Colorado Department of Transportation, **\$100,000**, 2023 – 2024

Agent-Based, Bottom-Up Medium- and Heavy-Duty Electric Vehicle Economics, Operation, Charging, and Adoption, PI Thomas Bradley, co-PIs Erika Gallegos, Marcus Alexander (EPRI), William Kelley (Lightning eMotors), and Brian Johnston (Lightning eMotors), Department of Energy Vehicle Technologies Office, **\$292,541**, 2021 – 2024

TEACHING

Colorado State University (as instructor)

Year	Semester	Course No. / Title	Cr. Hrs.	Enrollment
2025	Fall	SYSE 541: Engineering Data Design & Visualization	3	29
2025	Spring	SYSE 534: Human Systems Integration	3	41
2025	Spring	ENGR 478: Applied Engineering Data Analytics	3	10
2024	Fall	ENGR 180a2: Engineering Your Success	1	29
2024	Fall	SYSE 541: Engineering Data Design & Visualization	3	32
2024	Spring	SYSE 534: Human Systems Integration	3	36
2024	Spring	ENGR 478: Applied Engineering Data Analytics	3	9
2023	Summer	SYSE 541: Engineering Data Design & Visualization	3	35
2023	Spring	SYSE 534: Human Systems Integration	3	27
2023	Spring	ENGR 531: Engineering Risk Analysis	3	30
2022	Fall	SYSE 541: Engineering Data Design & Visualization	3	20
2022	Spring	ENGR 380a4: Engineering Data Analytics	3	6
2022	Spring	SYSE 534: Human Systems Integration	3	29

2021	Fall	ENGR 580a5: Systems Data Lifecycle & Visualization	3	18
2021	Spring	SYSE 534: Human Systems Integration	3	34
2020	Fall	ENGR 531: Engineering Risk Analysis	3	35
2020	Fall	ENGR 580a5: Systems Data Lifecycle & Visualization	3	12
2020	Spring	ENGR 581a4: Human Systems Integration	3	35
2019	Fall	ENGR 580a5: Systems Data Lifecycle & Visualization	3	28
2019	Summer	ENGR 531: Engineering Risk Analysis	3	59
2019	Spring	ENGR 581a4: Human Systems Integration	3	21

University of Washington (as instructor)

Year	Semester	Course No. / Title	Cr. Hrs.	Enrollment
2017	Summer	INDE 315: Probability and Statistics for Engineers	3	40
2016	Summer	INDE 315: Probability and Statistics for Engineers	3	53
2015	Spring	INDE 351: Human Factors in Engineering Design	4	59

Short Course (as instructor)

Year	Month	Audience	Course Title
2025	January	Gillig	Software Design Failure Mode and Effects Analysis (DFMEA)
2024	September	Gillig	ISO 26262: Functional Safety

Guest Instructor (as guest lecturer)

Year	Semester	Course No. / Title
2024	Spring	CIVE 303: Infrastructure and Transportation Systems (CSU)
2024	Spring	ENGR 501: Foundations of Systems Engineering (CSU)
2021	Spring	ENGR 501: Foundations of Systems Engineering (CSU)
2020	Spring	ENGR 501: Foundations of Systems Engineering (CSU)
2019	Fall	ENGR 501: Foundations of Systems Engineering (CSU)
2019	Spring	CIVE 303: Infrastructure and Transportation Systems (CSU)
2018	Spring	CEE 327: Transportation Engineering (UW)
2017	Winter	CEE 327: Transportation Engineering (UW)
2016	Winter	CEE 327: Transportation Engineering (UW)
2016	Spring	CEE 327: Transportation Engineering (UW)
2014	Spring	CEE 327: Transportation Engineering (UW)

Development of New Courses

Since joining CSU, I have developed the three following completely new courses. Each course began as an experimental course, and then were approved as permanent courses through the university curriculum committee.

SYSE 534 / ENGR 581a4 - Human Systems Integration

This graduate-level course introduces students to human systems integration (HSI) and human factors engineering. The course covers design considerations, human-machine teaming, evaluation

methods, and research methods relevant to HSI across various contexts, including transportation, healthcare, manufacturing, defense, energy, automation, and other complex control systems. Students learn practical knowledge of how to integrate human factors into the design and evaluation of complex systems, in order to enhance safety, performance, usability, sustainability, and reduce life cycle costs. This course is delivered synchronously for on-campus students, synchronously for online students, and asynchronously for online students. One to two peer-reviewed journal articles are assigned as weekly reading assignments. Homework assignments and the midterm exam combine both quantitative problems and qualitative reflections from lectures and readings. For the final project, students are tasked with developing a novel system that can assist a specific subpopulation with a common task, focusing on the interaction of humans using the system, which culminates in a digital prototype and 8- to 12-page paper.

SYSE 541 / ENGR 580a5 - Engineering Data Design & Visualization

This graduate-level course provides engineering students with practical and applicable data science skills, including data aggregation and filtering, intuitive data exploration, effective communication of patterns, summaries, and findings, and methods of archiving for data sharing or future use. This class combines principles and theories of information visualization and data management with implementation techniques centered around the R statistical software program. The course is developed such that students with no coding experience through students with expert coding experience can be successful and find value in the course. This is achieved through availability of additional resources, office hours, and flexible homework assignments. This course is delivered synchronously for on-campus students, synchronously for online students, and asynchronously for online students. Homework assignments and the midterm exam leverage a variety of assessments, including critiquing data visualizations, structured coding, and explorative data analysis. Students complete a final project, which includes a 10-minute presentation in front of their peers and an 8- to 10-page paper, where they identify and answer two to four research questions with a dataset of their choosing.

ENGR 478 / ENGR 380a4 - Applied Engineering Data Analytics

This undergraduate-level course is intended to provide students with a working knowledge of the statistics required for engineering analytics. Students are introduced to and learn to apply the tools required for data mining and analytics in professional engineering settings, using applications of real-world engineering data. Students learn a variety of data management, analysis, and communication skills, across topics including data literacy, hypothesis testing, regression, and supervised machine learning. This course primarily utilizes the R statistical software program. This course is delivered synchronously for on-campus students only. Students complete homework assignments and in-class exercises throughout the semester that leverage real-world data across a variety of domain areas. Students are evaluated based on in-class participation, homework assignments, two midterm exams, and one final exam.

Development of New Certificates

I led the creation of a new certificate program to be offered by the Systems Engineering Department. This certificate proposal has passed review by the university curriculum committee and is currently awaiting approval by the CSU Board of Governors. It has a target start date of Spring 2025.

Certificate in Human Systems Integration

This 12-credit certificate provides an interdisciplinary perspective designed to equip professionals and students with the essential skills and knowledge to seamlessly integrate human factors and technology within complex systems. This certificate program focuses on understanding the intricate

relationships between people, technology, and the environment, ensuring that graduates possess the expertise to create efficient, user-friendly, and safe systems. Within this certificate, students have the option to select a more data-centric or AR / VR focused set of courses. Graduates are well-prepared to address the evolving challenges of our complex, technology-driven society, making them invaluable assets in the fields of systems engineering, design, and human-computer interaction.

Participation in Professional Development Activities Related to Teaching

Participant, Best Practices in Teaching: First Four Weeks, CSU TILT, May 2022

This was a 3-week online course about preparing students for success during the first four weeks of a course, including establishing a positive and inclusive classroom climate.

Participant, Best Practices in Teaching: Student Motivation, CSU TILT, March 2021

This was a 3-week online course about instructional techniques to promote student motivation, including building connections between course subject matter and student interests.

Participant, Incorporating Best Practices in Remote and Hybrid Teaching, CSU TILT, Jan 2021

This was a 90-minute workshop about developing student-to-student, student-to-content, and student-to-instructor engagement in the classroom.

Participant, Best Practices in Teaching: Create Assignments, CSU TILT, Jan 2021

This was a 3-week online course aligning assignments to learning outcomes and developing rubrics for student success.

Participant, Best Practices: Theoretical Foundations of Online Courses, CSU TILT, Sept 2018

This was a 3-week online course about organizing content for an online course and engaging with students remotely.

Participant, Online Course Development, Are You Ready, CSU TILT, Aug 2018

This was a 1-hour workshop on how to prepare and deploy an online course, including developing expectations and clear timelines.

Participant, Canvas Create Eye Catching Courses with Design Tools, CSU TILT, Aug 2018

This was a 1-hour workshop on using Design Tools in Canvas to create attractive and intuitive course pages.

ADVISING

Postdoctoral Fellows

1. Dr. Ganesh Pai Mangalore, 2024 – present
2. Dr. Jubaer Ahmed, 2022 – 2023

Current Graduate Student Advisees

1. Anima Sabale, PhD
Extravehicular Activity Command and Telemetry Capability for Artemis
2. Christopher Pastor, PhD
A Systems Approach to Measuring Large Language Model Cognitive Realism in Multiple Applications and Environments

3. Dan Perreault, PhD
A Novel Framework for Failure Modes Effects Analysis Application in Complex System Design
4. Eric Stewart, PhD
Public Perceptions and Expectations as a Barrier to Self-Driving Vehicle Adoption
5. Flavio Ortolano, PhD
Toward a Human-AI Collaboration Maturity Model (HAIC-MM) for Small and Medium-Sized Enterprises
6. Georgiy Guralnik, PhD
Human-Centered Quality Culture, Training Effectiveness, and Error Prevention in Advanced Pharmaceutical Systems
7. Jinman Kim, PhD
Quantifying Fuel Economy and Emissions Benefits from Automated Vehicles
8. Joshua Hicks, PhD
Pilot Physiological Responses to Alerts and Errors in the Flight Deck
9. Lauren Jurek, PhD
Developing a Civilian Commercial Spaceflight Training Program Baseline in a Model-Based Systems Engineering Tool
10. Marshall Huffaker, PhD
Data Governance Framework using the Unified Architecture Framework
11. Maryam Gracias, PhD
Embracing Agile Excellence: Implementing Model-Based Systems Engineering (MBSE) in the Transition from Waterfall to Agile in Aerospace and Defense Companies
12. Peter Coronado, PhD
FDA Medical Device Authorization Process as a Complex System
13. Ryan Couture, PhD
Using Machine Learning to Optimize Dynamic Route Planning for Real-Time Delivery Adjustments
14. Samir Albaroudi, PhD
Human Factors in Medical Imaging Systems
15. Scott Ledgerwood, PhD
XR for Public Safety Operations and Training
16. Shawnette Adams, PhD
Improving Surgical Situation Awareness for Companion Animal Veterinarians
17. Susan Archer, PhD
Understanding the Human Factors of General Aviation Accidents: An Application of Factor Analysis, Structural Equation Modeling, and Multivariate Analysis of Variance
18. Mark Rogers, DEng
A Framework for Applying Systems Engineering to Achieve Administrative Efficiency in Regulated Industries
19. Paul Jenkins, DEng
Using Data Analytics to Improve Veteran Health Outcomes and Reduce VA Utilization
20. Chandler Young, MS plan A (thesis)
Predicting Resuspension Emissions Based on Vehicle Aerodynamics

Graduate Degrees Completed Under My Supervision

PhD: N = 7

DEng: N = 1

MS plan A (thesis): N = 2

MS plan B (project): N = 9

ME (project): N = 3

1. John Phillips, PhD, 2025
Accelerating Capability to the Fleet: Rapid Fielding of Small Unmanned Surface Vehicles
2. Panteha (Penny) Alipour, PhD, 2025
Vision Based Artificial Intelligence for Optimizing E-Commerce Experiences in Virtual Reality
3. Ricole Johnson, PhD, 2025
Evaluating and Enhancing User Trust in Urban Air Mobility Autonomous Passenger Systems
4. Trevor Lanigan, MS plan A (thesis), 2025
Factors Influencing Driver Response Toward an Instrument Cluster Cyberattack: Experience, Awareness, and Training
5. Mounika Makkena, MS plan B (project), 2025
Design and Implementation of a Unified Data Logging System for PV Manufacturing Processes
6. Maggie Bauer, ME (project), 2025
Transportation Infrastructure: A Systems Engineering Approach
7. Kenneth (Kenny) Corl, DEng, 2024
Relational and Technological Process Concept Utilizing a Human-in-the-Loop Centered Methodology for USSOCOM
8. Shiva Pourfalatoun, PhD, 2024
Evaluating Micromobility Adoption, Perception, and Implementation
9. Andrew Watts, MS plan B (project), 2024
Architecting a Military Engineering Organization Training Interface Using a Systems Engineering Approach
10. Isaac Spoon, MS plan B (project), 2024
Residential Use of Natural Gas and the Associated Concerns
11. Amber Moin, ME (project), 2024
Pre-Deployment Risk Assessment for Bluehalo BADGER Program
12. Kaelin Glover, ME (project), 2024
Risk-Informed Design for Complex Spacecraft
13. Matthew Chellin, PhD, 2023
Techniques in Reactive to Proactive Obsolescence Management for C5ISR Systems
14. Michael Botyarov, PhD, 2023
Optimizing Designer Cognition Relative to Generative Design Methods
15. James Copenhaver, MS plan B (project), 2023
A Novel Approach to Rocket Engine Alignment

16. Tim Kemp, MS plan B (project), 2023
A Systems Engineering Approach to Transportation Demand Management (TDM) Strategies
17. Hamza Ahmed, PhD, 2022
Human Systems Integration of Agricultural Machinery in Developing Economy Countries: Sudan as a Case Study
18. Somayeh Aliebrahimi, MS plan A (thesis), 2022
Evaluating Factors that Impact Situation Awareness and Takeover Responses During Cyberattacks on Automated Vehicles
19. Alston Banahan, MS plan B (project), 2022
The Use of Generators During Power Outages: Designing a Better Interface for Elderly & Physically Impaired Users
20. Jaciel Espinosa-Severo, MS plan B (project), 2022
Research Methods: Ubiquity of Autonomous Electric Vehicles
21. Brice Kipps, MS plan B (project), 2021
Stall Warning and Prevention System: A System Designed to Precurse Stall Conditions and Prevent Them
22. James Kirwin, MS plan B (project), 2021
Quantifying the Performance of the Astro Space Suit

Undergraduate Students Advised

1. Chandler Young, Mechanical Engineering, Summer 2023
2. Tyler Archer, Mechanical Engineering, Spring 2023
3. Lesley-Ann Knee, Electrical & Computer Engineering, Fall 2022

Thesis Committee Member

Ph.D.

Completed (N = 21): James Wheaton (2025), Timi Oguntola (2025), Eric Enos (2025), Jennifer Giang (2025), Barry Hawkey (2024), Braden Limb (2024), Megan Younes (2024), Jason Orr (2024), Frank Nguyen (2024), Cailin Simpson (2024), Michael Cabrera (2023), Moe Huss (2023), Kenly Maldonado (2023), Amy Eddy (2023), Harshwardhan Ketkale (2023), Vinja Vljajnic (2022), Rudy Pirani (2022), Andrew Miller (2022), Jim Scheibmeir (2021), Dustin Birch (2021), Tami Katz (2001)

In-Progress (N = 41): Adam Ebersole, Anthony Garrison, Anthony Roebuck, Anthony Waters, Bash Bistrow, Bertina Nguyen, Carl Thompson, Chris Clark, Christian Abney, Christine Lozano, D'Adrin Worrell, Dan Benedict, Dave Garbrick, David Weissman, Dina Hamed, Elvis Adjei, Erin Gilmore, Gregory Suchanek, Ibibia Altraide, Ibtasam Arshad, Jade Penney, James Earley, Jas Sheth, Jason Lantz, Joel Marcelo, Johanna Malaer, Joshua Alormenu, Joshua Oluwatumise, Monzoor Murshed, Michael McKinney, Michael Virnelson, Minh Luu, Mohamed Rajraji, Orville Ashley, Rebecca Cook, Ricardo Castillo, Ricardo Saez, Ryan Agte, Son Nguyen, Vinay Mohan, Ziluo Xiong

D.Eng.

Completed (N = 2): Amanda Normand (2023), Art Villanueva (2023)

In-Progress (N = 3): Chris Wendland, Heidi Perry, Jose Vazquez

M.S.

Completed (N = 1): Ishita Kekare (2020)

In-Progress (N = 4): Jordan Rice, Sean Bumgarner, Stefan Haugen, Tyler Biggs

Descriptions of Mentoring Activities

K-12 STEM

Davila (2022), 5th grade student at O’Dea Elementary School. She was working on a class project about autonomous vehicles. Her teacher facilitated the connection and the three of us met a few times throughout the academic year.

Mia (2019), student at Compass Community Collaborative High School. We worked on a “She’s in Power” clean energy project with Colorado C3E. For this project, we collected longitudinal data on refrigeration energy consumption at the Rocky Mountain Raptor Program and developed a plan for them to reduce their emissions and monthly electricity bill.

Undergraduate Research

Chandler Young (2023), undergraduate student summer intern, University of Jamestown Mechanical Engineering Department. He helped with data cleaning and analysis for a driving simulator study.

Tyler Archer (2023), Scott Undergraduate Research Experience (SURE) researcher, CSU Mechanical Engineering Department. He helped with experimental setup for a driving simulator study.

Lesley-Ann Knee (2022), undergraduate student research intern, CSU Electrical and Computer Engineering Department. She helped with a literature review for CDOT about autonomous maintenance technology.

Other Mentoring

In 2020, I volunteered for a few hours at the career fair resume booth at the Transportation Research Board Annual Meeting. During that time, numerous undergraduate students came for review of their resumes and guidance on how to improve them.

HONORS & AWARDS

Outstanding Distance Educator Award, Colorado State University Online, Fort Collins CO, 2024

Faculty Fellow for Inclusive Excellence, Colorado State University, Fort Collins CO, 2024

Best Doctoral Student Research Presentation, TRB Annual Meeting (Joint Session of ANB20 & ABJ80 Committees), Washington DC, 2018

Travel Award, University of Ljubljana Department of Electrical Engineering, Ljubljana Slovenia, 2018

Best Student Paper, HFES Surface Transportation Technical Group, Austin TX, 2017

Travel Award, OFFIS - Institute for Information Technology, Oldenburg Germany, 2017

Member of the Year, Oregon State University Institute of Transportation Engineers (ITE) Student Chapter, Corvallis OR, 2010

EXPERT WITNESS EXPERIENCE

AIT v. Salesforce (for plaintiff AIT), Patent Dispute

Edulog Logistics v. DML (for defendant DML), Trade Secret

Fiat Chrysler Automobiles Class Action (for consumers), Consumer Protection
Ford Class Action (for consumers), Consumer Protection
FTC v. Amazon (for defendant Amazon), Consumer Protection
Hailo v. Lyft (for defendant Lyft), Patent Dispute
InduSoft v. Taccolini (for defendant Taccolini), Trade Secret
Level one v. Penske (for plaintiff Level One), Trade Secret
Securus v. GTL (for plaintiff Securus), Patent Dispute
Sony v. ARRIS (for plaintiff Sony), Patent Dispute
Title Source v. Canary Analytics (for plaintiff Title Source), Trade Secret

OUTREACH / SERVICE / ENGAGEMENT

Committees

University

Member, Council for Gender Equity on the Faculty, 2019 – 2021

College

Member, WSCOE Faculty Awards Committee, 2025

Member, New Common First Year Course Development Committee, 2024 – 2025

Member, Search Committee for Dean of Walter Scott Jr College of Engineering, 2022/23

Department

Chair, Search Committee for Tenure Track Faculty, 2025/26

Member, Diversity Equity and Inclusion Committee, 2021 – present

Chair, Diversity Equity and Inclusion Committee, 2022 – 2025

Chair, Search Committee for Tenure Track Faculty, 2024

Chair, Search Committee for Tenure Track Faculty, 2023/24

Chair, Search Committee for Tenure Track Faculty, 2022/23

Chair, Search Committee for PPM Adjunct Instructor, 2022

Member, Search Committee for Tenure Track Faculty, 2021/22

Member, Search Committee for Postdoctoral Fellow, 2021

Member, Search Committee for Tenure Track Faculty, 2020/21

Member, Search Committee for Tenure Track Faculty, 2019/20

Professional Affiliations and Activities

Memberships

American Statistical Association (ASA)

Human Factors and Ergonomics Society (HFES)

International Council on Systems Engineering (INCOSE)

Transportation Research Board (TRB), Member of ACH30 & Member of ACH50

Grant Review Panels

Technical Reviewer, National Center for Transportation Cybersecurity and Resiliency (TraCR) led by Clemson University, 2024, 2025

Technical Reviewer, University of California Institute of Transportation Studies (UC ITS), 2023

NSF Panel Member, Civic Innovation Challenge, 2020

Journal Editorship

Safety Findings, Editorial Advisory Board

Manuscript & Conference Refereeing

Accident Analysis & Prevention; Energies; Human Factors; IEEE International Conference on Intelligent Reality; IEEE Transactions on Intelligent Transportation Systems; International Journal of Transportation Science and Technology; Journal of Cognitive Engineering and Decision Making; Journal of Intelligent Transportation Systems: Technology, Planning, and Operations; Journal of Transportation Engineering, Part A: Systems; Proceedings of Automotive User Interfaces; Proceedings of the Human Factors and Ergonomics Society; Psychology Research and Behavior Management; Scientific Reports; Transport Policy; Transportation Research Board Annual Meeting; Transportation Research Part F: Traffic Psychology and Behaviour; Transportation Research Record

Conference Service

Program Chair, Transportation Research Board ACH30 Committee, 2023-2025

Publication Committee, Automotive User Interfaces, 2017-2023

Publication Co-Chair, Automotive User Interfaces, 2014

Workshop Assistant, Human Factors and Ergonomics Society Annual Meeting, 2013

Outreach

Mentor, O'Dea Elementary 5th Grade Student Research Project, 2022

Mentor, TRB Career Fair Resume Booth, 2020

Mentor, Colorado C3E Clean Energy High School Student Project, 2019

Presenter, Engineering Discover Days at University of Washington, 2012-2018

Presenter, Teenage Driver Education on Distracted Driving at Eastlake High School, May 2013

Presenter, Teenage Driver Education on Distracted Driving at Skyline High School, April 2013

Presenter, Teenage Driver Education on Distracted Driving at Roosevelt High School, April 2013

Presenter, Teenage Driver Education on Distracted Driving at Garfield High School, April 2013

Other Activities / Accomplishments

Professional Development

- Certificate, Python 3 Programming Specialization, University of Michigan via Coursera, June 2025
- Participant, Humanizing Engineering: Evolving the Status Quo, CSU College of Engineering, March 2024
- Participant, Improving Workplace Climate, CSU College of Engineering, March 2023
- Participant, Equitable Search and Hiring Practices, CSU College of Engineering, Feb 2023
- Participant, Uncovering Bias, CSU Office of Equal Opportunity, June 2022
- Participant, DEI Foundations, CSU Office of Equal Opportunity, June 2022
- Participant, Safe Zone Training, CSU Pride Resource Center, Dec 2021
- Participant, How to Consider Diversity in the Search Progress, CSU Office of Equal Opportunity, Sept 2021
- Participant, Search Chair, CSU Office of Equal Opportunity, Sept 2021

GOOGLE SCHOLAR PROFILE

Profile URL: <https://scholar.google.com/citations?user=ttkFZJgAAAAJ&hl=en>

Category	Total	Since 2020	Definition
Citations	795	734	Number of citations to all publications
h-index	15	14	Largest h such that h publications have at least h citations
i10-index	21	19	Number of publications with at least 10 citations

Data obtained from Google Scholar on November 30, 2025