Laura M. Stanley, Ph.D., CPE

EMPLOYMENT:

MONTANA STATE UNIVERSITY, Bozeman, MT
Professor (Tenured) - School of Computing, 2024-current
Center for Inclusive Computing – Committee Member
Associate Professor (Tenured) - School of Computing, 2019-2024
Director, Human Interaction Lab
Co-Director, Biomedical Innovation for Research and Development Hub (BioRed Hub)
Center for Mental Health Research & Recovery, Affiliate Faculty
Associate Professor (Tenured), Mechanical & Industrial Engineering Department, 2014-2017.
Graduate Program Coordinator, Industrial & Management Systems Engineering Program, 2014 & 2017.
Director, Murdock Naturalistic Lab, Western Transportation Institute, 2010-2017.
Assistant Professor, Mechanical & Industrial Engineering Department, 2008-2014.

U.S. FOOD & DRUG ADMINISTRATION (FDA), appointment October 2024-2027
Special Government Employee - FDA Advisory Committee on Digital Health & AI, Center for Devices and Radiological Health

Clemson's School of Health at Prisma Health, Greenville, SC, May 2019-current
Clinical Research Professor

IMMERSIVE REALITY GROUP – Innovative Digital Health Interventions
Bozeman, MT, & Charlotte, NC, 2021 – current
Co-Founder

CLEMSON UNIVERSITY, Clemson, SC, August 2017-2019
Associate Professor (Tenured), Industrial Engineering Department
Graduate Program Coordinator, Industrial Engineering Department
Faculty, School of Computing - Biomedical Data Science & Informatics
Director of Human Interaction Lab, Industrial Engineering Department
Faculty Scholar, Clemson University School of Health Research
Faculty Director Human Machine Interface, Deep Orange 10 Autonomous Vehicle

NATIONAL SCIENCE FOUNDATION, May 2015-August 2017
Program Director – Human-Centered Computing Group, Information & Intelligent Systems Division, CISE Directorate, Arlington, Virginia.

- Oversaw and provided strategic direction for federal government-sponsored projects, co-managing a substantial $200 million budget.
- Executed and managed 30+ scientific review panels (e.g., CAREER), overseeing projects with budgets ranging from $1 million to $10 million.
- Spearheaded the development of new national solicitations in collaboration with government agencies (NIH and USDOT) and industry partnerships, contributing to creating comprehensive frameworks and clearly defining the roles and responsibilities of diverse stakeholders.
- Nominated and served on NSF's Working Group on The Future of Graduate Education

VIRGINIA TECH, July 2006-July 2008
Research Associate, Virginia Tech Transportation Institute, Blacksburg, Virginia
Adjunct Instructor, Industrial & Systems Engineering Department

IBM, Research Triangle Park, Raleigh, North Carolina, August 2000-August 2003
Program Engineer - Personal Systems Group (PSG), Engineering Operations & Technical Evaluation Center.

EDUCATION

Montana State University, Bozeman, MT
Ph.D. Engineering (emphasis: Human-Computer Interaction)
United States Department of Transportation Scholar

M.S. Industrial & Management Engineering (emphasis: Human Factors Engineering)
Boeing Scholar

Virginia Tech, Blacksburg, VA
B.S. Industrial & Systems Engineering
U.S. Olympic Cycling Scholar

HONORS & AWARDS

- *The Norm Asbjornson College of Engineering Lloyd Berg Faculty Mentorship Award* Nominee (2023 & 2024)
- *Defense Science Study Group* – DARPA (Defense Advanced Research Projects Agency) – Clemson University's Presidential Nominee (2019)
- Clemson University *President's Leadership Institute* Nominee (2019)
- Personalized Manufacturing, Designing Manufacturing Systems Around Human Emotion to Give the Most and Get the Most from our People, *2nd Annual David Dornfeld Manufacturing Vision Award and Blue Sky Competition*-National Science Foundation, award: runner-up (2018).
- Society of Women Engineers *Academic Leadership for Women in Engineering* (2015)
- MSU's *College of Engineering Excellence in Research Award* Nominee (2015)
- MSU's *President's Award of Excellence in Service-Learning* Nominee (2014)
- MSU's *College of Engineering Excellence in Research Award* Nominee (2014)
- MSU's *College of Engineering Excellence in Research Award* Nominee (2013)
- MSU's *President's Award of Excellence in Service-Learning* Nominee (2013)
- National Science Foundation Travel Award for *Women in Industrial Engineering Academia* (2012)
- *Montana State University's Most Valuable Professor* Homecoming (2011)
- *NSF & Society of Women Engineers Academic Leadership for Women in Engineering* Travel Award *(2011)*
- *Frontiers in Education* Grant Finalist (2010)
- National Science Foundation Travel Award for *Women in Industrial Engineering Academia*, Turkey, U.S., and the Middle East (2008)
- Western Transportation Institute University Transportation Center *Outstanding Student of the Year* (2006)
- ENO *Transportation Foundation Award* (2005)
- Western Transportation Institute *Professional Advancement Graduate Fellowship* (2003-2005)
- Philip E. Rollhaus, Jr. Essay Competition *Finalist Best Student Paper Award* (2004)
- Institute of Transportation Engineers *Best Student Paper Award* Recipient (2004)

- Institute of Transportation Engineers *James Kell Award* – Sacramento, CA (2004)
- Alpha Pi Mu Industrial Engineering Honor Society
- Boeing *Academic Engineering Scholarship* (2002)
- National Science Foundation *Women in Engineering Academic Scholarship* (2001)
- USA Olympic *Collegiate Cycling Scholarship* (2001)

GRANTS

$20M+ in grants for 41 sponsored research projects (NSF, NIH, USDOT, NHTSA, Murdoch Foundation, Epic Games, MDT, Prisma Health, NSF SBIR.

1. **Principal Investigator:** NSF EAGER: *Personalizing Learning in a Complex Collaborative Robotic Tasks*, National Science Foundation, Co-PI: Apostolos Kalatzis (Cleveland State University), September 2024-September 2026. **$300,000**

2. **Co-Principal Investigator:** NIH SBIR Phase 2: *An Artificial Intelligence-Inspired Application for Detecting and Managing Respiratory Diseases*. PI: Apostolos Kalatzis (Cleveland State University), Co-PI: Vishnu Prabhu (University of North Carolina), in prep. **$1,972,828**

3. **Principal Investigator:** *Innovating Counselor Training using Mixed Reality Simulation*. Research Collaborative Grant Program Office of Vice President of Research, Co-PI: Ania Bartowiak, July 2024-July 2025. **$64,000**

4. **Co-Principal Investigator** – Murdock Charitable Trust Foundation - *BioReD Hub-Interdisciplinary Biomedical Hub* bringing together engineering, nursing, and computer science. 2023-2025. PI: Bernadette McCrory (Montana State University, Industrial Engineering Program.), Co-PI: Elizabeth Johnson (Montana State University, College of Nursing) **$400,000**

5. **Principal Investigator:** *Collaborative Research: An intelligent Pervasive Augmented reaLity therapy (iPAL) for Opioid Use Disorder and Recovery*, Smart & Connected Health: National Science Foundation and National Institutes of Health, 2020-2025, Co-PIs: Ranjana Mehta (Texas A&M) & Alain Litwin (Prisma Health & Clemson University). **$1,200,000**

6. **Principal Investigator:** *Human-Centered Computing (HCC) MEDIUM: Augmenting Human Cognition with Collaborative Robots (AMELIA: AugMEnted Learning InnovAtion)* National Science Foundation, 2019-2025, Co-PIs: Ranjana Mehta (Texas A&M), Mike Wittie (Montana State University), Kapil Madathil (Clemson University) **$1,200,000**

7. **Principal Investigator:** Epic Games Mega Award – *Digitally Immersive Mental Health Experience for Anxiety Disorders*, 2020-2021. **$75,000**

8. **Principal Investigator:** Montana Department of Commerce Phase II: *IntelligHealth: An Intelligent Human-AI Collaborative System for Chronic Respiratory Disease Management*. 2023-2024. Co-PI: Apostolos Kalatzis (MSU), Co-PI: Vishnu Prabhu (University of North Carolina). **$30,000**

9. **Co-Principal Investigator:** NSF SBIR Phase I: *An Artificial Intelligence-Inspired Computing Application for Detecting the Early Onset of Pneumonia.* PI: Apostolos Kalatzis (MSU), Co-PI: Vishnu Prabhu (University of North Carolina), 2021-2022. **$256,000**

10. **Principal Investigator:** Montana Department of Commerce Phase I: *IntelligHealth: An Intelligent Human-AI Collaborative System for Chronic Respiratory Disease Management*. 2021-2022. Co-PIs: Apostolos Kalatzis (MSU), Co-PI: Vishnu Prabhu (University of North Carolina). **$30,0000**

11. **Principal Investigator:** Equipment Fee Allocation Committee Award: *Virtual and Mixed Reality Teaching Lab*, Norm Asbjornson College of Engineering (2021), Montana State University **$14,000**

12. **Co-Principal Investigator:** *NRT-HDR: Technology-Human Integrated Knowledge Education and Research (THINKER)*, National Science Foundation Research Traineeship Harnessing the Data Revolution, 2018-2020, PI: Laine Mears (Clemson University). **$3,000,000**

13. **Senior Investigator:** *MRI: Development of Enodia: A highly reconfigurable, HPC-backed instrument enabling multifaceted interactive visualization,* National Science Foundation*,* 2018-2023, PI: Brygg Ullmer (Clemson University). **$499,375**

14. **Principal Investigator:** *RELIEVE (viRtual rEaLity IntErVEntion) – An Immersive Technology Intervention for Managing Acute Pain and Anxiety* SCRA-Academia Collaboration Team (SACT), 2018-2019, Co-PI: Robert Morgan, MD. (Prisma Health). **$100,000**

15. **Principal Investigator:** *Efficacy of Virtual Reality for Operative Pain and Anxiety Management*, Greenville Health System-Health Science Center 2018-2019, Co-PI: Robert Morgan, MD. (Prisma Health) **$20,000**

16. **Principal Investigator:** *A Longitudinal Study to Assess the Efficacy of Virtual Reality for Pain and Anxiety Management in AYA Cancer Patients*, Greenville Health System-Health Science Center, 2018-2019, Co-PI: Elizabeth Cull, MD (Prisma Health) **$14,000**

17. **Principal Investigator:** *Modeling the Validity and Transfer of Eye-scanning Patterns for Hazard Perception from Virtual Reality Training Environments to Reality*, National Science Foundation, Cyber-Human Systems, CISE Directorate, 2011-2015, 4W3706, Co-PIs: Nic Ward, Erwin Boer **$499,610**

18. **Principal Investigator:** *Assessing the Effectiveness of Montana's Occupant Protection Programs*, Montana Department of Transportation, 2013-2015, 4W4354, Co-PI: Kezia Manlove, **$91,249**

19. **Principal Investigator:** *Engineering Communications Resource Toolkit for the College of Engineering*, Montana State University-Faculty Excellence Award*,* 2015. **$4,000**

20. **Principal Investigator:** *Systems Thinking in Sustainability Course Development*, Montana State University-Faculty Excellence Award*,* 2014. **$4,000**

21. **Principal Investigator:** *A Peer-to-Peer Traffic Safety Campaign*, Montana Department of Transportation, 2012-2014,4W3968, **$134,598**

22. **Principal Investigator***: Science & Engineering Integrated Research Facility for Human Factors in Rural Traffic Safety* Murdock Charitable Trust, 2009-2014, 4W2462, Co-PI: Nic Ward. **$535,000**

23. **Principal Investigator:** *Naturalistic Safety Evaluation of the Medic's Work Environment*, Federal Highway Safety Administration, October 2009-Dec 2011,4W2879. **$58,980**

24. **Principal Investigator:** *Human Factors Engineering Research Equipment*, U.S. Federal Highway Administration, February 2009-July 2012, 4W2495. **$101,186**

25. **Project Advisor:** *Voice-Activate Texting – Is it Safe?* – Research Experience for Undergraduates. Federal Highway Administration US Department of Transportation. October 2010 – May 2011, 4W1365. **$15,000**

26. **Principal Investigator:** *An Experiment in Integrating an Engineering Communications Toolkit into the Industrial Engineering Curricula*, Engineering Information Foundation, December 2009- January 2011, 4W2913, **$25,598**

27. **Principal Investigator:** *Effects of Defensive Vehicle Handling Training on Novice Driver Safety*, Montana Department of Transportation, FHWA, August 2006-October 2010, 4W0171, 4W0434, 4W1066 **$220,000**

28. **Principal Investigator:** *Haptic and Auditory Interfaces as a Collision Avoidance Technique during Run-Off-Road and Head-On Collisions and Driver Perception of Modalities.* Research and Innovative Technology Administration, US Department Transportation, FHWA, July 2004 – May 2006, 4W0767, Co-PI: Mike Kelly. **$63,600**

29. **Co-Principal Investigator:** *An Objective Evaluation of an Education-Based Distracted and Drowsy Driving Intervention for Teen Drivers in Rural America*, National Highway Traffic Safety Administration (NHTSA), August 2008-January 2011, 4W2928, 4W2461, PI: Nic Ward **$200,000**

30. **Project Advisor:** *The Design and Evaluation of a Pedestrian/Cyclist Sensing Device Phase 2* – Research Experience for Undergraduates. Federal Highway Administration US Department of Transportation. *PI: Jerry Stephens* October 2008 – May 2009, 4W1365-URE **$15,000**

31. **Task Manager:** *Rural EMS Driver Safety Research Program: Phase I Feasibility Study*. August 2008 – May 2009, $110,000, 4W2008, **$110,000**

32. **Project Manager:** *Naturalistic Evaluation of an In-vehicle Navigation System*, in partnership with TNO Transportation Research Institute, March 2008-July 2008. **$200,000**

33. **Project Manager:** *Older Driver Naturalistic Observation*, Federal Highway Administration and U.S. Department of Transportation, August 2007-August 2009. **$280,000**

34. **Task Manager:** *Cooperative Agreement for Advanced Crash Avoidance Technologies Program*, National Highway Traffic Safety Administration (NHTSA) in Response to Cooperative Agreement DTNH22-06-H-00011, August 2006-2009. **$4,000,000**

35. **Project Manager:** *Effects of Visual Alert Location and Gaze Location on Driver's Ability to Respond to Forward Scene Changes*, General Motors Structure and Safety Integration Center, February 2007-September 2007, $158,000. **$158,000**

36. **Task Manager***: Commercial Motor Vehicle (CMV) Driving Simulator Validation Study (SimVal): Phase2, Interim Report Work Plan.* Federal Motor Carrier Safety Administration, National Highway Traffic and Safety Administration, August 2006-2010. **$1,800,000**

37. **Task Manager:** *Development and Assessment of a Driver Fatigue Monitoring System.* Federal Motor Carrier Safety Administration: National Highway Traffic and Safety Administration, June 2006-October 2008. **$300,000**

38. **Project Manager:** *Safety Evaluation of an In-Vehicle Communication Device for Commercial Trucks*, DLA Piper Inc. – propriety work, October 2006 – December 2006. **$150,000**

39. **Task Manager** Phase II: *511 Virginia Statewide Evaluation.* For Virginia Department of Transportation, June 2006 – September 2006. **$300,000**

40. **Project Manager:** Simulation Phase: *Bozeman Pass Channelization ITS Project.* Montana Department of Transportation.,2004-2005. **$208,000**

41. **Project Manager:** *Driver Performance while using a Cellular Telephone Interface to a Traveler Information System.* For Research and Innovative Technology Administration, United States Department of Transportation, 2003-2004 **$25,000**

PEER-REVIEWED PUBLICATIONS

(Italicized authors are students)

Conference Proceedings

1. Stanley, L., , Bayrami, Foran, B., & Simpson, J. Designing Ethical Safety Guardrails in Large Language Model Chatbots for Student Mental Health Support: A Case Study, Intelligent Human Interaction & Emerging Technologies International Conference, 2026, submitted.

2. Identifying the Contributors of Intrinsic, Extraneous, and Germane Load in Human-Robot Collaboration Through Interview Questions, 16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025), Orlando, Florida, USA July 26-30, 2025

3. Stanley, L., Bartkowiak, A., & Harrington, B. Leveraging Mixed Reality in Human-Computer Interaction: Enhancing Empathy in Counseling Education, Intelligent Human Interaction & Emerging Technologies International Conference, April 23-24, 2025 at Universidad de Málaga, Malaga, Spain.

4. Integrating Robotics, AI, and Immersive Technologies: A Modular Framework for Human-Metahuman-Robot Collaboration, 16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025), Orlando, Florida, USA July July 26-30, 2025

5. Haghighi, T. Gholami, S, Alam, M.N, Prabhu, V.G., **Stanley, L.** and Leng, T. (2025).AR-EyeLLAMA: Intelligent Conversational Digital Humans for Ophthalmology. In the proceedings of The Association for Research in Vision and Ophthalmology (ARVO) conference (submitted December 2024).

6. *Kalatzis, A.* & **Stanley, L**. Identifying Correlation Between Robot Speed and Cognitive Workload Using Eye Tracking Data. In Proceedings of the 2025 ACM/IEEE International Conference on Human-Robot Interaction (in prep).

7. *Kalatzis, A., Rahman, S.,* **Stanley, L.,** Wittie, M. & Pagilla, P. Identifying Optimal Robot Speed Adaptations with Respect to Cognitive Workload Limitations Using Q-learning. ACM Transactions on Human-Robot Interaction (in prep).

8. *Kalatzis, A.,* Prabhu, V. G., **Stanley, L.**, Switzer, F. & Madathil, K. Uncovering the Interplay between Intrinsic, Extraneous, and Germane Workload in Human-Robot Interaction Through Semi Structured Interviews. In Proceedings of the 26th International Conference on Multimodal Interaction (ICMI 2024) (submitted April 2024)

9. *Kalatzis, A., Shah, J., Rahman, S*., Wittie, M. & **Stanley, L** & Pagilla. *Real-Time Cognitive Workload Detection and Robot Adaptation in* Collaborative Tasks Using a Machine Learning Framework. ACM Transactions on Human-Robot Interaction (THRI) (conditional acceptance, revised and resubmitted).

10. **Stanley, L.** & *Kalatzis, A.* Current Challenges and Needs for Affective Computing in Collaborative Robotics Environments. Proceedings of ACM Conference on Human Factors in Computing Systems (CHI) Conference, Honolulu, Hawaii, 2024 (in press).

11. *Nath, N.,* **Stanley, L.,** Molina, K., Perez, A., *Zavarelli, J*. Kalatzis, A., Lundberg, C., & Litwin, A. Integrating Cognitive Behavioral Therapy and Heart Rate Variability Biofeedback in Virtual Reality, Augmented Reality, and Mixed Reality for Mental Health Interventions. Proceedings of IEEE Virtual Reality 2024, Orlando, FL, 2024 (in press).

12. *Kalatzis*, A., Wittie, W., & **Stanley, L**. A Multimodal Approach to Investigate the Role of Cognitive Workload in Human-Robot Interaction. In Proceedings of the 25th International Conference on Multimodal Interaction, 5–14. ICMI '23. New York, NY, USA: Association for Computing Machinery.

13. *Nath, N., Kalatzis, A.,* & **Stanley, L**. Measuring User Engagement of Virtual, Augmented, and Mixed Reality Interventions for Stress Reduction. In: Gao, Q., Zhou, J., Duffy, V.G., Antona, M., Stephanidis, C. (eds) HCI International 2023 – Late Breaking Papers. HCII 2023. Lecture Notes in Computer Science, vol 14055. Springer, Cham. 2023 (pgs 570-583).

14. *Kalatzis A., Prabhu V.,* **Stanley L**. & Wittie, M. Effect of Augmented Reality User Interface on Task Performance, Cognitive Load, and Situational Awareness in Human-Robot Collaboration, IEEE Conference on Robot and Human Interactive Communication (RO-MAN), (pp. 1252-1259), 2023.

15. *Kalatzis, A., Hopko, S.,* Mehta, R., Wittie, M. & **Stanley, L**. Sex Parity in Cognitive Fatigue Model Development for Effective Human-Robot Interaction. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), (pgs. 10951-10958), 2022.

16. *Kalatzis, A., Prabhu, V., Rahman, S.,* Wittie, M., & **Stanley, L**. Emotions Matter: Towards Personalizing Human-System Interactions Using a Two-layer Multimodal Approach. ACM Proceedings of the International Conference on Multimodal Interaction, (pgs. 63-72), 2022.

17. *Rahman S., Kalatzis, A*., Wittie, M., Millman, D. & **L. Stanley**, Checkpointing Time Prediction using Online Learning for C-RAN MEC-Serverless Computing IEEE International Conference on Omni-Layer Intelligent Systems, Annual Proceedings, (pgs. 1-6), 2022.

18. *Coziahr K., Rabideaux K.,* Lundberg, C., **Stanley L.,** Perez-Litwin A., & Litwin A., Designing a Digital Mental Health App for Opioid Use Disorder Using UX Design Thinking, 11th International Conference, DUXU 2022, 24th HCI International Conference, HCII 2022, June 26–July 1, 2022, Proceedings, Part II.

19. *Rahman, S.,* Wittie, M., Elmokashfi A., **Stanley L.,** Patterson, S., & Millman, D. Short and Sweet Checkpoints for C-RAN MEC, IEEE CLOUD Summit, October, (pgs. 69-76), 2021

20. *Kalatzis, A., Teotia, A., Prabhu, V. G.,* & **Stanley, L**. A Database for Cognitive Workload Classification Using Electrocardiogram and Respiration Signal. Proceedings of the AHFE 2021 Virtual Conferences on Neuroergonomics and Cognitive Engineering, Industrial Cognitive Ergonomics and Engineering Psychology, and Cognitive Computing and Internet of Things, July 25-29, 2021, USA (pp.509-516)

21. *Prabhu, V. G.,* **Stanley, L.**, Morgan, R., & Shirley, B. Comparing the Efficacy of a Video and Virtual Reality Intervention to Mitigate Surgical Pain and Anxiety. Proceedings of the International Conference on Human Interaction & Emerging Technologies, (pp. 1041-1048), 2021.

22. *Kalatzis, A.,* **Stanley, L.,** *Karthikeyan, R.,* & Mehta, R. K. Mental Stress Classification During a Motor Task in Older Adults Using an Artificial Neural Network. In Adjunct Proceedings of the 2020 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2020 ACM International Symposium on Wearable Computers (pp. 244 248), 2020.

23. *Prabhu, V.*, **Stanley**, L. *C. Linder*, & R. Morgan, Analyzing the Efficacy of a Restorative Virtual Reality Environment using HRV Biofeedback for Pain and Anxiety Management. In the proceedings of the 2020 IEEE International Conference on Human-Machine Systems, Rome, Italy, 2020.

24. *Prabhu, V., Linder, C.*, **Stanley, L.** & Morgan, R. Affective Computing in Virtual Reality Environments for Managing Surgical Pain and Anxiety. Proceedings of the International Conference on IEEE Artificial Intelligence and Virtual Reality, 2019.

25. *Deb, S.,* Carruth, D. Fuad, M., **Stanley, L.**, & Frey D., Comparison of child and adult pedestrian perspectives of external features on autonomous vehicles using a virtual reality experiment. In the Proceedings of the International Conference on Applied Human Factors and Ergonomics and part of Advances in Intelligent Systems and Computing, Volume 964, Springer Nature, 2019.

18. *Imtiaz, A.* & **Stanley, L.** Hazard Perception Differences Between Experienced and Less Experienced Drivers. Industrial and Systems Engineering Research Conference Proceedings, Nashville, TN, 2015.

19. Schell, B., Claudio, D., Sobek, D., **Stanley, L**. & Ward, N. Introducing Flexibility in an Engineering Curriculum Through Student Designed Elective Programs. 2014 ASEE Annual Conference Proceedings, (pgs. 24.808.1 - 24.808.8) June 2014.

20. *Mueller, J., Gallagher, C., Martin, T.* & **Stanley, L.** Driving Simulator and Scenario Effects on Driver Response. Industrial and Systems Engineering Research Conference Proceedings. Montreal, Canada, May 2014.

21. *Imtiaz, A., Mueller, J.* & **Stanley, L.** Driving Behavior Differences among Early Licensed Teens, Novice Teens, and Experienced Drivers in Simulator and Real World Hazards. Industrial and Systems Engineering Research Conference Proceedings. Montreal, CAN, May 2014.

22. ***Mueller, J.*** & Stanley, L. Emergency Medical Services: A Naturalistic Posture Evaluation While Providing Patient Care during Patient Transport. Human Factors and Ergonomics Society Annual Meeting Proceedings, San Diego, CA, October 2013.

23. *Mueller, J., Hoyt, T.* & **Stanley, L.** Improving Restraint Feasibility through Ambulance Layout Redesign. 7th Annual Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design Proceedings, Bolton Landing, NY, June 17-20, 2013.

24. *Mueller, J.,* **Stanley, L.,** *Azamian, T. & Mercer, D.* Assessing Physiological Response Validity in Simulated and Real Driving Environments. Industrial and Systems Engineering Research Conference Proceedings. San Juan, PR, May 2013.

25. *Young, K.* & **Stanley, L.** Driver's Attitudes and Behaviors Regarding Voice Activated Texting Technology and Distracted Driving. Proceedings of the Industrial and Systems Engineering Research Conference Proceedings, Puerto Rico, 2013.

26. *Page, L.,* **Stanley, L.,** & *Sharma, J.* Teen drivers' hazard perception – are we using crash-representative testing scenarios? Proceedings of the Industrial and Systems Engineering Research Conference Proceedings, Orlando, FL, 2012.

27. **Stanley, L.** & *Hoyt, T.* A Service-Learning Case Study for the Ergonomics Classroom. Human Factors and Ergonomics Society Conference Proceedings, September 2011. Vol. 55 no. 1525-1529.

28. **Stanley, L.**, *Page, L.,* & Plumb, C. Designing for the Disabled in the Engineering Classroom, Frontiers in Education Conference/American Society of Engineering Education Proceedings, October, 2010. 978-1-4244-6262-9/10.

29. *Mueller, J.* & **Stanley, L.** Differences in Self-Reported versus Department of Motor Vehicle in Citation History for Teen Drivers, National Institute for Occupational Safety and Health (NIOSH)'s National Occupational Research Agenda (NORA) Proceedings, April 2009.

30. **Stanley, L.** & *Mueller, J.* Effectiveness of a Multistage Driver Education Program for Novice Drivers. Human Factors and Ergonomics Society Annual Meeting Proceedings, October 2009 vol. 53 no. 181348-1352.

31. Marley, R., **Stanley, L.** & *Muthumani, A.* Recent evolutions in the curricula of leading industrial engineering programs within the United States. Proceedings of the Annual Conference on Industrial Engineering—Theory, Applications and Practice, Las Vegas, NV, 2008, pp 330-334.

32. **Stanley, L**. & Kelly, M. Validating Transportation Safety Deployments and Highway Design Elements in Simulated Environments. Canadian Multidisciplinary Road Safety Conference Proceedings, June 2008.

33. **Stanley, L.** Human Factors in Transportation Safety. National Science Foundation Women in IE Academia Workshop, poster, U.S., Turkey, and the Middle East, July 2008.

34. **Stanley**, **L**., Marley, Robert, J. & Kelly, M. Design of Interfaces for Advanced Crash Avoidance Systems. Proceedings of the Annual Conference on Industrial Engineering—Theory, Applications and Practice, November 2007, pp. 767-773.

35. Kelly, M., Lassacher, S., & **Stanley**, **L**. Formative Evaluation of Engineering Designs using Driver Performance in an Immersive Driving Simulator. Fourth International Driving Symposium on

Human Factors in Driver Assessment Training and Vehicle Design Proceedings, July 2007, pgs. 431- 437.

36. **Stanley**, **L** ., Marley, R., & Kelly, M. Haptic and Auditory Cues for Roadway Departure Warnings. Human Factors and Ergonomics Society Annual Meeting Proceedings, October 2006, vol. 50 no. 222405-2408.

37. **Stanley**, **L.**, Kelly, M., & Lassacher, Suzanne. Driver Performance While Interacting with the 511 Travel Information System in Urban and Rural Traffic. Third International Driving Symposium on Human Factors in Driver Assessment Training and Vehicle Design Proceedings, June 2005, pages 486-492.

38. **Stanley**, **L.**, Carson, Jodi L., & Marley, R. Shifting the Design Paradigm to Accommodate Older Drivers at Intersections & Work Zones. Annual Regional National Occupational Research Agenda (NORA) Symposium Proceedings, April 2004.

Journals, Supplements, and Book Chapters

1. Jeong, H., Chen, K. B., Jeon, M., & **Stanley, L.** Human-Centered eXtended Reality for Occupational Applications in the Era of Industry 5.0: Introduction to the Special Issue. IISE Transactions on Occupational Ergonomics and Human Factors, June, 2025, 13(2), 75–78. https://doi.org/10.1080/24725838.2025.2512681.

2. *V. G. Prabhu*, **Stanley L.**, Morgan R., and Shirley, B. Designing and developing a nature-based virtual reality with heart rate variability biofeedback for surgical anxiety and pain management: evidence from total knee arthroplasty patients, Aging & Mental Health, 2023, *Impact Factor = 3.8*

3. *V. G. Prabhu*, **Stanley L.**, and Morgan R., A Biofeedback Enhanced Adaptive Virtual Reality Environment for Managing Surgical Pain and Anxiety. In International Journal of Semantic Computing Vol. 14, No. 03, pp. 375-393, 2020. *Impact Factor = 1.65*

4. Cull E., Saha, A, **Stanley L.**, *Prabhu, V. G. and Biro, J.* "Analyzing the Efficacy and Design Considerations of VR Environments to Manage Anxiety & Depression in AYA Cancer Patients," Blood, vol. 134, no. Supplement_1, pp. 3441–3441, Nov. 2019. *Impact Factor = 22.1*

5. *Agnisarman,* S., Madathil, K., & **Stanley, L.,** A Survey of Empirical Studies on Persuasive Technologies to Promote Sustainable Living. Sustainable Computing: Informatics and Systems Journal, 2018. *Impact Factor = 4.02*

6. *Manlove, K.,* **Stanley, L**., and *Peck, A.* A quantitative approach to assessing the efficacy of occupant protection programs: A case study from Montana, Accident Analysis and Prevention Journal, October, 2015. *Impact Factor = 4.99*

7. *Page, L.* & **Stanley, L.** Ergonomics Service-Learning Project: Implementing an Alternative Educational Method in an Industrial Engineering Undergraduate Ergonomics Course. Journal of Human Factors and Ergonomics in Manufacturing & Service Industries 00 (0) 1–13 (2014). 2014. *Impact Factor = 1.27*

8. *Mueller, J.* & **Stanley, L.** Contributors toward Ambulance Use of Lights and Sirens from Patient Records. Open Journal of Safety Science and Technology, Vol 3., No. 3, 2013, pp 63-68. *Impact Factor = 1.30*

9. Antin, J., Lockhart, T., **Stanley, L**. & Guo, F. Comparing the Impairment Profiles of Older Drivers and Non-Drivers. Journal of Safety Science, Volume 50, Issue 2, February 2012, pp 333-341. *Impact Factor = 4.87*

10. *Mueller*, J., **L. Stanley** and *Manlove, K.* "Multi-Stage Novice Defensive Driver Training Program: Does It Create Overconfidence?," Open Journal of Safety Science and Technology, Vol. 2 No. 4, 2012, pp. 133-139. Doi: 10.4236/ojsst.2012.24017. *Impact Factor = 1.30*

11. McGowen, P., & **Stanley, L**. An Alternative Methodology for Determining Gap Acceptance, Journal of Transportation Engineering, doi:10.1061/(ASCE)TE.1943-5436.0000358. 2011. *Impact Factor = 1.60*

12. **Stanley, L.**, Angell, L., Perez, M., Deering, R., Llaneras, R, and Green, C. Modeling/Analysis of Pedestrian Back-Over Crashes from NHTSA's SCI Database. SAE International Journal of Passenger Cars– Mechanical Systems, Volume 4, pgs 562-571, 2011. *Impact Factor = 1.10*

13. Sanddal T., Sanddal N., Ward N. & **Stanley L**. Ambulance Crash Characteristics in the U.S. Defined by the Popular Press: A Retrospective Analysis. Emergency Medicine International, vol. 2010, Article ID 525979, 7 pages, 2010.

14. **Stanley, L.** and Ward, N. An Evaluation of Cooperative Avoidance Warning System. International Journal of Vehicle Safety, Volume 5, Number 1, 2010, pages 86-99. *Impact Factor = .83*

15. Antin, J., **Stanley, L.,** and Cicaro, K. Conventional vs. Moving-Map Navigation Methods: Efficiency and Safety Evaluation. Transportation Research Record, No 2138, 34-41, 2009. *Impact Factor = 1.03*

16. **Stanley, L.**, Hardy, A., and Lassacher S. Driver Responses to Enhanced Wildlife Advisories in a Simulated Environment. Transportation Research Record: Journal of the Transportation Research Board, 2006, No. 1980, pp 126-133. *Impact Factor = 3.69*

17. **Stanley**, **L**., Marley, R. Whole Body Vibrations on the Low Back Using a Suspension Versus Non-Suspension Seat Post During Off-Road Cycling. Medicine and Science in Sports and Exercise Journal, Volume 38(5), May 2006. *Impact Factor = 5.41*

B1. *Prabhu, V.G* **& Stanley, L**. Book Chapter on *Realizing Complex Integrated Systems.* Volume 4: Chapter 10 - Human System Interaction - Interface Design, (in press, 2024)

Posters/Abstracts

1. **Stanley, L.**, Bartowiak, A., & Harrington, B. Leveraging Mixed Reality in Human-Computer Interaction: Enhancing Empathy in Counseling Education. 13th International Conference on Human Interface, Emerging Technologies, & Artificial Intelligence, Costa Del Sol, Universidad de Malaga, Spain, April 24-25, 2025 (poster).

2. *Kalatzis A.*, & **Stanley L.,** *Human Factors Consideration in Mixed Reality Interface Design for Collaborative Robots.* 15th International Conference on Applied Human Factors and Ergonomics (AHFE 2024) and its affiliated conferences to be held at the Université Côte d'Azur, Nice, France, July 24-27, (Abstract), 2024.

3. *Kalatzis A., Teotia A.,* **Stanley L.,** & *Prabhu V*. Affective State Classification in Virtual Reality Environments Using Physiological Signals. IEEE International Conference on Artificial Intelligence and Virtual Reality. (Abstract & Poster), 2021.

4. *Prabhu, V. G.,* **Stanley, L.**, Newcomb, R., Morgan, R., & Shirley, B. Evaluating the Efficacy of Video and Virtual Reality in Mitigating Pain and Anxiety among Total Knee Arthroplasty Patients. In Proceedings of Annual American Association of Hip and Knee Surgeons (AAHKS), (Abstract & Poster), 2021.

5. **Stanley, L.** & Coziahr, K., 2021 National Science Foundation: " Smart Health in the AI and COVID Era Virtual Workshop", SCH: INT: Collaborative Research: An intelligent Pervasive Augmented reaLity therapy (iPAL) for Opioid Use Disorder and Recovery, (Poster), 2021.

6. *Rahman, S.,* Wittie, M., **Stanley, L.,** & Patterson, S. MicroLambda Packetized Computation for 5G Mobile Edge Computing. In the proceedings of USEnix, USENIX Association HotEdge 20 3rd USENIX Workshop on Hot Topics in Edge Computing, (Abstract), 2020.

7. *Biro, J., Linder, C.,* & **Stanley, L**. Applications of Virtual Environments in Human Factors Research and Practice: Utilizing Virtual Reality and Biofeedback as an Adjunct Treatment in Addressing the Opioid Crisis. Human Factors & Ergonomics Society Annual Conference, (Poster), Washington, DC., October 2019.

8. *Hines, A., Biro, J.,* & **Stanley, L.** Analyzing the Mood-Improvement Effects of Exposure to Virtual Reality Dogs, National Conference on Undergraduate Research, Kennesaw, Georgia, April 10-13, (Poster), 2019.

9. *Rickert, A., Walter, T., Linder, C.,* & **Stanley, L.** Examination of Presence in VR Through Haptically Delivered Thermal Stimuli, National Conference on Undergraduate Research, Kennesaw, Georgia, April 10-13, (Poster), 2019.

10. *Prabhu, V. G.* & **Stanley, L.** Analyzing the Efficacy of VR to Mitigate Acute Pain and Anxiety in Operative Settings, Institute of Industrial and Systems Engineering Research Conference, (Poster) Orlando, FL, 2019.

11. *Barry, J., Schiff, S., Biro, J., Ghalayani, M.*, & **Stanley, L.** Personas to Improve the Development of Healthcare Focused Virtual Reality Applications, Southeastern Human Factors Applied Research Conference, (Poster), 2018.

12. *Prabhu, V. G.*, Shvorin, D., **Stanley, L**., & Pirrallo, R. A Comparative Study Between Resident and Attending Physicians in the Emergency Department to Analyze Stress and Burnout, Southeastern Human Factors Applied Research Conference (Poster), 2018.

13. *Prabhu, V. G.,* Shvorin, D., **Stanley, L**., & Coldebella, R. Physician Distraction in the Emergency Department, Southeastern Human Factors Applied Research Conference, (Poster), 2018.

14. *Biro, J.*& **Stanley, L.** Evaluating the Efficacy of VR for Managing the Pain and Anxiety of AYA Cancer Patients, Southeastern Human Factors Applied Research Conference, (Poster), 2018.

15. *Ghalayani, M.*, *Schiff, S.* & **Stanley, L.** The Use of VR for Acute Pain Management in Operative Care Environments, Southeastern Human Factors Applied Research Conference, (Poster), 2018.

16. Mears, L., *Niaki, F.*, Muth, R., & **Stanley, L**. Personalized Manufacturing: Sociology and Psychology as Fundamental Design Elements for Future Advanced Production Systems. David Dornfeld Manufacturing Vision Award and Blue Sky Competition (NSF sponsored), (Abstract), 2018.

17. **Stanley, L.** Fatigue Monitoring and Management across Different Industries: Fatigue Monitoring Technologies for Detecting Driver Drowsiness. Human Factors & Ergonomics Society Annual Conference, (Abstract and Panel Presentation), Washington, DC., September 2016.

18. *Mueller, J.,* & **Stanley, L.** Multivariate Analysis of Driver Responses in Simulator and On-Road, Industrial and Systems Engineering Research Conference, (Poster), Anaheim, CA, 2016.

19. *Young, K.,* & **Stanley, L.** Teen Driving Attitudinal and Behavioral Differences Across Two States, Industrial and Systems Engineering Research Conference Proceedings, (Poster), Anaheim, CA, 2016.

20. *Imtiaz, A.,* & **Stanley, L.** On-Road Study Assessing the Effect of Age and Experience on Hazard Perception, Industrial and Systems Engineering Research Conference, (Poster), Anaheim, CA, 2016.

21. **Stanley, L** & *Young, K.* Validity Assessment of Virtual Reality through Geo-Specific Scenarios. Applied Ergonomics Conference, (Poster), March 21-24, 2016.

22. **Stanley, L**. Addressing the Need for Effective Communications across the Engineering Curricula-Distinguished Speakers Series at the International Conference on Operations Excellence & Service Engineering, (Abstract and Presentation), Orlando, FL, September 10-11, 2015.

23. **Stanley, L**. A Peer-to-Peer Public Health Intervention-A Case Study in Transportation Safety. International Conference on Operations Excellence & Service Engineering, (Abstract and Presentation), Orlando, FL, September 10-11, 2015.

24. *Young, K. &* **Stanley, L.**, Human Factors Design of a Low-Cost Adjustable Wheel Locking System for a Child's Wheelchair, 6th International Conference on Applied Human Factors and Ergonomics, (Poster), Las Vegas, USA July 26-30, 2015.

25. *Mueller, J., Young, K.,* & **Stanley, L**. Validating a Driving Simulator: Effect of Increased Mental Effort While Driving on Real Roads and in Simulators. Transportation Research Board 2015 Annual Meeting. Transportation Research Board: (Abstract and Poster), Washington, D.C., January 2015.

26. *Mueller, J., Young, K.,* & **Stanley, L**. Driver Characteristics: Simulated and On-Road Driver Stopping Behaviors. Transportation Research Board 2015 Annual Meeting. Transportation Research Board: (Abstract and Poster), Washington, D.C., January 2015.

26. *Imtiaz, A.* & **Stanley, L**. Characterizing Eye Movement Behavior of Teen Drivers while Following a Left Turning Truck at Stop Controlled Intersection. 12th Annual Regional National Occupational Research Agenda Symposium Proceedings. (Abstract and Presentation), Salt Lake City, UT. April 2014.

27. **Stanley, L.,** *Manlove K., Peck, A.* Evaluating the Effectiveness of Occupant Protection Programs. Conference on Statistical Practice Proceedings, (Abstract & Presentation), Tampa, FL. February 20-22, 2014.

28. **Stanley, L**. Complexity of Instrumentation in Assessing Virtual vs Real World Hazard Perception Environments. Proceedings 1st Annual International Conference on Industrial & Systems Engineering, (Abstract and Presentation), Athens, Greece, June 24-27, 2013.

29. Ward, N., *Durkee, S*., & Stanley, L. An Objective Evaluation of an Education-Based Distracted and Drowsy Driving Intervention for Rural Teen Drivers. 5th International Conference on Traffic and Transport Psychology, (Abstract), Groningen, The Netherlands, August 29 – 31, 2012.

30. *Young, K.,* & **Stanley, L**. Voice Activated Texting-Is It Safer than Conventional Texting While Driving? National Council for Undergraduate Research Annual Conference Proceedings, Ogden, (Abstract and Presentation), Utah 2012.

31. **Stanley, L.**, Angell, L., Perez, M., Deering, R., Llaneras, R, & Green, C. Modeling/Analysis of Pedestrian Back-Over Crashes from NHTSA's SCI Database. Society of Automotive Engineers International Proceedings (Abstract and Presentation).

32. *Hoyt, T.,* **Stanley, L.**, & Sanddal, N. Rural EMS Worker Restraint Usage and Feasibility in Emergency Response Vehicles, Annals of Advances in Automotive Medicine, (Poster), 2010.

33. *Atkins, P.* & **Stanley, L.** Design and Evaluation of a Collision Avoidance System for Cyclists. The IMAGE Society Annual Conference Proceedings, (Poster and Presentation), June 2009.

34. Antin, J. F., Lockhart, T., Shi, W., **Stanley, L.**, Haynes, C., Parajit, P., & Guo, F. Why do older drivers give up their keys? The role of functional impairment. International Conference on Traffic & Transport Psychology, Washington, D.C. (Abstract and Presentation), 2008.

35. **Stanley**, **L.**, Hardy, A., & Lassacher, S. Enhanced Wildlife Warnings as a Potential Means of Reducing Wildlife-Vehicle Collision. National Rural ITS Conference Proceedings, (Abstract and Presentation), August 2006.

36. **Stanley**, **L**. & Philip, D. Development of a Web-Based Household Travel Survey. Institute of Transportation Engineers District 6 Meeting Proceedings, (Presentation), July 2005.

37. **Stanley**, **L.** & Sherick, H., Assessing Opinions, Experiences, and Perspectives of Female Engineers Nationwide Via a Web-Based Questionnaire. Women in Engineering Programs & Advocates Networks (WEPAN) Conference, (Abstract), June 2004.

38. **Stanley**, **L.**, Carson, J., & Marley, R. Accommodating Older Drivers. Institute of Transportation Engineers Intermountain Meeting Proceedings, (Abstract), May 2004.

39. *Mueller, J*., Marley, R. & **Stanley, L.** Whole-Body Vibration in Emergency Medical Transportation, National Institute for Occupational Safety and Health (NIOSH)'s National Occupational Research Agenda (NORA) Proceedings, (Abstract), April 2013.

KEYNOTE, TEDx & INVITED PRESENTATIONS

The Next Frontier in Spatial Computing - Digital Mental Health, Arizona State University, Tempe, AZ, April 2024

How to Write a Successful Grant to the National Science Foundation and the National Institutes of Health, MSU Center for Faculty Excellence, February 2024.

Immersive Reality, AI, and Wearables for Mental Health. Center for Counseling & Psychological Services, Montana State University, December 2023.

An Exploration of Immersive Reality, Emotional AI, and Collaborative Robotics in Mental Health, Pain Management, and Addiction, University of Utah, Department of Biomedical Informatics Seminar Series, October, 2023.

NSF Workshop on Industry 4.0 and Collaborative Robotics - National Science Foundation's Future of Work at the Human-Technology Frontier (FW-HTF) Big Ideas Program, Texas A&M University and Society of Manufacturing Engineers, July 2023.

NSF SBIR Funding Panel Proposal Workshop – Montana State University's TechLink, April 2023.

Non-Academic Funding Strategies Panel – Montana State University Research Celebration, January 2023.

Sharing Solutions Panel on Opioid Use Disorder – U.S. Chamber of Commerce Sharing Solutions Broadcast, April 20, 2021.

IISE New Faculty Colloquium Presenter/Panelist Invitation - "Research Program Funding – Strategies and proposal development", May 2021

NSF: " Smart Health in the AI and COVID Era Virtual Workshop", An intelligent Pervasive Augmented reaLity therapy (iPAL) for Opioid Use Disorder and Recovery, March 2021

Mental Health Apps: The Present and the Future, National Alliance on Mental Health, virtually held, November 24, 2020.

NSF Proposal Writing Workshop Targeting Tribal College Faculty, National Council on Undergraduate Research Annual Conference, Montana State University, Bozeman, MT, 2020 (not held due to COVID).

NSF Graduate Research Fellowship Program and Sloan Scholars Student Workshop, National Council on Undergraduate Research Annual Conference, Montana State University, Bozeman, MT, 2020 (not held due to COVID).

Virtual Reality in the Classroom: Teaching and Resources, MSU Library, November 19, 2019.

Funding Agency Experts Roundtable, MSU Center for Faculty Excellence, Bozeman, MT, September 20, 2019.

Immersive Technologies for Addiction, The Center for Addiction Research Collaborative, Prisma Health, Greenville, SC, May 15, 2019.

Talking to Your Program Official, MSU Center for Faculty Excellence-New Faculty Writing Boot-Camp Series, Bozeman, MT, September, 2019.

TEDx Talk - *Transforming Your Mental Health Journey using Immersive Technologies*, TEDx Bozeman, MT, April 13, 2019.

The Role Immersive Technologies May Play as Primary or Adjunct Technique for Pain and Anxiety. Featured Speaker, Prisma Health, Greenville, SC, February, 2019.

Know Your Agency (NSF), University of Colorado-Colorado Springs, Office of the Vice Chancellor for Research, April, 2019.

Positioning Yourself to be Competitive: Application Strategies and Establishing a Relationship with NSF and Program Managers, NSF CAREER Academy: Clemson University's Office of Research Development, January, 2019.

The Future of Immersive Technologies in Healthcare. University of Buffalo-Distinguished Speaker Series, Buffalo, NY, December, 2018

Funding your Graduate School, STEM All in IN, Clemson University, October 2018.

Immersive Technologies in Managing Pain and Anxiety. Texas A&M-Distinguished Speaker Series, College Station, TX, October, 2018

Keynote: *Positioning Yourself for Life Beyond the PostDoc,* National Post Doc Association Annual Meeting - The Office of the Vice President for Research, Clemson University, September 2018.

Navigating the Academic Job Search, Clemson University's 360 Program, September, 2018.

Personalized Manufacturing-Designing Manufacturing Systems around Human Emotion to Give the Most and Get the Most from our People, Blue Sky Competition David Dornfeld Manufacturing Vision Award, sponsored by NSF, SME, ASME, and NAMRI. Team: Laine Mears, June, 2018.

Funding at the National Science Foundation, Office of Research Development, Clemson University, Clemson, SC, October, 2017.

Tips on Applying for Your CAREER at the National Science Foundation , Office of Research Development-CAREER Workshop, Clemson University, Clemson, SC, October, 2017.

Demystifying the Funding Process at the National Science Foundation, MSU Center for Faculty Excellence, Bozeman, MT, April, 2017.

Tips on Developing and Writing Grant Applications, New Faculty Forum -College of Engineering, Montana State University, April, 2017.

Trends in Service Systems Research: Overview of Opportunities for the Human-Technology Frontier Panel, INFORMS Annual Conference, Nashville, November, 2016.

Communicating with Your Program Official, NSF ADVANCE Project TRACS Grant Writing Workshop, Bozeman, MT, October 2016.

Fatigue Monitoring and Management across Different Industries Panel, Human Factors & Ergonomics Society Annual Conference, Washington, DC., September, 2016.

Emerging Frontiers in Industrial Engineering Panel. Industrial and Systems Engineering Research Conference Proceedings, Anaheim, CA, May 2016.

Visual Search Strategies in Low vs. High Fidelity Environments. Enhancing Driving Conference, Gainesville, FL, November 2105.

How to Talk to NSF Program Officers, NSF ADVANCE Project TRACS Grant Writing Boot Camp, Bozeman, MT, October 2015.

Assessing the Peer-to-Peer Approach in Traffic Safety, Montana Department of Transportation State Highway Traffic Safety Assessment in conjunction with the National Highway Traffic Safety Administration, Helena, MT, December 2014

A Peer-to-Peer Traffic Safety Campaign. Montana Traffic Education Association Annual Conference, Bozeman, MT, April 2014.

Evaluation of Montana's Occupant Protection Programs, Montana Department of Transportation State Highway Traffic Safety Assessment in conjunction with the National Highway Traffic Safety Administration, Helena, MT, December 2014

Teen Driver Safety Research, Texas Transportation Institute Conference on Transportation Safety, Austin, TX, March 2011.

What's not Normal? Changing the Design Paradigm of Our Engineering Students through Taking a Human-Centered Design Approach. Distinctive Dialogues. Bozeman, MT, April, 2011.

Naturalistic Safety Evaluation of Medics During Rural Emergency Response, EMS Transportation Safety Webinar, Transportation Research Board Annual Meeting, Washington, DC, January 2011.

Spotlight on Turkey's Rise of Women in Engineering: What Can We Learn? Montana State University International Education Week, Bozeman, MT, November 2010.

Effectiveness of a Multi-Stage Approach to Novice Driver Safety. American Driver and Traffic Safety Association Annual Conference, St. Louis, MO, July 2010.

Risk-Seeking Behaviors and EMS Crash Risk in Rural Ambulance Drivers. EMS Safety Summit, Loveland, CO, October 2009.

EMS Crash Risk in Rural Ambulance Drivers Panel Presenter. EMS Safety Summit, Loveland, CO, October 2009.

Teen Driver Education Research. Montana Traffic Education Association *Conference,* Great Falls, MT, April 2009.
Research Tools for Traffic Safety: Overview and integration of research tools. World Usability Day, Bozeman, MT, November 2008.

National Science Foundation Women in Industrial Engineering Academia – Panel Expert on Conducting Research. National Science Foundation Women in IE Academia Workshop, Ankara, Turkey, July 2008.

NSF's Women in Industrial Engineering Academia - Human Factors in Transportation Safety. National Science Foundation Women in IE Academia Workshop, Ankara, Turkey, July 2008.

CONFERENCE/SEMINAR PRESENTATIONS

Current Challenges and Needs for Affective Computing in Collaborative Robotics Environments. ACM Conference on Human Factors in Computing Systems (CHI) Conference, Honolulu, Hawaii, May 2024.

Human Factors Consideration in Mixed Reality Interface Design for Collaborative Robots. 15th International Conference on Applied Human Factors and Ergonomics (AHFE 2024) and its affiliated conferences to be held at the Université Côte d'Azur, Nice, France, July 24-27, 2024.

Integrating Cognitive Behavioral Therapy and Heart Rate Variability Biofeedback in Virtual Reality, Augmented Reality, and Mixed Reality for Stress Reduction, IEEE Virtual Reality 2024 Demonstrations, Orlando, FL, 2024

Immersive Technology for Mental Health Interventions. 14th AHFE International Conference on Human Factors in Design, Engineering, and Computing for All -Honolulu, Hawaii, USA, December 2023.

Transforming Mental Health through Immersive Technology, Google Developers Conference Women TechMakers, 2021.

Affective Computing in Virtual Reality Environments for Managing Surgical Pain and Anxiety, 2nd International Conference on IEEE Artificial Intelligence and Virtual Reality Conference, San Deigo, CA, 2019.

The Use of Immersive Technologies and Affective Computing Techniques in Healthcare & Collaborative Robotics, Seminar Series for Gianforte School of Computing, Montana State University, Bozeman, MT, 2019.

Multivariate Analysis of Driver Responses in Simulator and On-Road, Industrial and Systems Engineering Research Conference, Anaheim, CA, 2016.

Teen Driving Attitudinal and Behavioral Differences Across Two States, Industrial and Systems Engineering Research Conference, Anaheim, CA, 2016, poster.

On-Road Study Assessing the Effect of Age and Experience on Hazard Perception, Industrial and Systems Engineering Research Conference, Anaheim, CA, 2016, poster.

Validity Assessment of Virtual Reality through Geo-Specific Scenarios. Applied Ergonomics Conference, March 21-24, 2016, poster.

Distinguished Speakers Series - Addressing the Need for Effective Communications across the Engineering Curricula at the International Conference on Operations Excellence & Service Engineering, Orlando, FL, September 10-11, 2015.

A Peer-to-Peer Public Health Intervention-A Case Study in Transportation Safety. International Conference on Operations Excellence & Service Engineering, Orlando, FL, September 10-11, 2015.

Complexity of Instrumentation in Assessing Virtual vs Real World Hazard Perception Environments. Annual International Conference on Industrial & Systems Engineering, Athens, Greece, June 24-27, 2013.

A Service Learning Case Study for the Ergonomics Classroom. Human Factors and Ergonomics Society Conference, Las Vegas, NV, September 2011.

Designing for the Disabled in the Engineering Classroom. Frontiers in Education Conference. Washington, D.C., October 2010.

Human Factors Methods in Transportation Safety. Institute of Industrial Engineers Annual Conference. Cancun, Mexico, June 2010.

Effectiveness of a Multistage Driver Education Program for Novice Drivers. Human Factors and Ergonomics Society Annual Meeting, San Antonio, TX, October 2009.

Blackbox Technologies in Transportation Safety. National Rural Intelligent Transportation Systems Conference, Seaside, OR, August 2009.

Augmented Speed Enforcement. National Rural Intelligent Transportation Systems Conference, Seaside, OR, August 2009.

The Impact of Montana's Changing Demographics on Transportation. Montana's 2008 Joint Engineers Conference, Helena, MT, November 2008.

Psychophysical Methods for Studying Interface Designs in Automotive Crash Avoidance Technologies. 14th Annual International Conference on Industrial Engineering Theory, Applications & Practice, Las Vegas, Nevada, September 2008.

Validating Transportation Safety Deployments and Highway Design Elements in Simulated Environments. Canadian Multidisciplinary Road Safety Conference Proceedings, British Columbia, Canada, June 2008.

Design of Interfaces for Advanced Crash Avoidance Systems. The 13th Annual International Conference on Industrial Engineering Theory, Applications, & Practice, Mexico, November 2007.

Commercial Motor Vehicle Driving Simulator Validation Study Phase2 Peer Review. United States Department of Transportation (USDOT) Headquarters, Washington, D.C., December 2006.

Commercial Motor Vehicle Driving Simulator Validation. Federal Motor Carrier Administration (FMCSA) Headquarters, Washington, D.C., November 2006.

Haptic and Auditory Cues for Roadway Departure Warning. Human Factors and Ergonomics Society Annual Meeting, San Francisco, CA, October 2006.

Whole Body Vibrations on the Low Back Using a Suspension Versus Non-Suspension Seat Post During Off-Road Cycling. American College of Sports Medicine Annual Meeting, Denver, CO, June 2006.

Driver Responses to Enhanced Wildlife Advisories in a Simulated Environment. Transportation Research Board Annual Meeting, Washington D.C., January 2006.

Integrating Land Use and Transportation Planning at a Regional Scale: The Las Vegas Example. ITE Nevada Chapter Annual Meeting, Las Vegas, NV, October 2005

Development of a Web-Based Household Travel Survey. Institute of Transportation Engineers District 6 Meeting, Kalispell, MT July 2005.

Driver Performance While Interacting with the 511 Travel Information System in Urban and Rural Traffic. Third International Driving Symposium on Human Factors in Driver Assessment Training and Vehicle Design, Rockport, MA, June 2005.

Assessing Opinions, Experiences, and Perspectives of Female Engineers Nationwide Via a Web-Based Questionnaire. Women in Engineering Programs & Advocates Networks (WEPAN) Conference Proceedings, Albuquerque, NM, June 2004.

Accommodating Older Drivers-Best Student Paper. Institute of Transportation Engineers Intermountain Meeting. Jackson, WY. May 2004.

Shifting the Design Paradigm to Accommodate Older Drivers at Intersections & Work Zones. Annual Regional National Occupational Research Agenda Symposium. Salt Lake City, UT. April 2004.

PUBLIC MEDIA

- Montana State researchers use technology to help counselors in training become more culturally aware (July 1, 2024) - MSU News Service

- MSU expanding biomedical research capabilities with grant from Murdock Trust (April 28, 2023) – MSU News Service

- Computer science gives MSU undergraduate room to run in unexpected directions (July 20, 2022)– MSU News Service

- MSU graduate student on the frontier of adapting robots to work better with humans (March 30, 2022) – MSU News Service

- Montana State research expenditures hit all-time high (September 1, 2021) - MSU News Service

- Researchers use computer science to treat opioid addiction (October 23, 2020) - NBC
- MSU researchers harness computer science for treating opioid addiction (October 19, 2020) – Montana State University
- MSU researchers win $1.2 million grant to improve worker-robot interaction (January 1, 2019) – KULR NBC Billing News
- MSU researchers win $1.2 million grant to improve worker-robot interaction (December 27, 2019) – Bozeman Daily Chronicle
- MSU researchers win $1.2 million grant to improve worker-robot interaction (December 5, 2019) – Montana State University
- Transforming Your Mental Health Journey using Immersive Technologies - TEDx - Theme: Untapped (April 13, 2019)
- Clemson University -School of Health Researcher Faculty Scholars - 2019
- Virtual reality therapy has real-life benefits for some mental disorders – Science News (November 10, 2018)
- New $3-million program could help close skills gap in advanced manufacturing (September 10, 2018) – Clemson University
- Clemson Announces New Advanced Manufacturing Program (September 12, 2018) – Greenville Business Magazine
- Clemon program to address manufacturing skills gap (September 10, 2018)- GSA Business Report
- Relieving Pain and Anxiety Virtually (February 26, 2018) – Clemson University
- 2017's Greenest States (April 18, 2017) – WalletHub
- Cover story on Virtual Reality in 30 years (Fall Quarterly, 2016) – Distinctly Montana
- Best and Worst States for Teen Drivers (June 11, 2015) – WalletHub
- MSU Receives Prestigious Fellowship (June 12, 2014)- MSU News Service
- Growth Opportunity in MSU's College of Engineering (December 6, 2013) – Bozeman Daily Chronicle.
- Safer Roads: A Montana State University study focuses on the training of young drivers. Montana State University News Service. Video http://vimeo.com/63782471.
- MSU Study Focuses on Young Drivers (May 6, 2013). Bozeman Daily Chronicle.
- Big Timber Pioneer News. Changing a Driving Culture. (February 21, 2013).
- MSU study focuses on young drivers (April 26, 2013)- Montana State University News Service.
- Reach for the Stars (January 27, 2012)- Bozeman Daily Chronicle.
- WTI Lands Grant to Study Hazard Perception (December 8, 2011)- MSU News Service.
- Hey Driver's Put that Cell Phone Down (December 4, 2011)- Bozeman Daily Chronicle.

- KBZK-Montana (April 15, 2011) - MSU Student Project Looks at Texting and Driving.
- Most Valuable Professor (October 1, 2011) – MSU Homecoming. Radio interview on MSU's IE program.
- MSU Students, Adults with Disabilities Work Together to Find Ways to Work Independently, Billings Gazette, December 29, 2010; Bozeman Daily Chronicle December 25, 2010; and MSU News Service
- Bicycle and Pedestrian Safety Research at Montana State University, *Surface Transportation Technical Group Newsletter Human Factors & Ergonomics Society*, September, 2010 Volume 17, Issue 2.
- Public Roads Cover Story on Naturalistic Evaluation of Emergency Medical Service Providers During Emergency Transport – October, 2010.
- National Public Radio – Yellowstone Interview by Jackie Yamanke on Texting and Driving – NPR Distracted Driving, Part 1 of 3 (aired February 22, 2010).
- The Key to Saving Cyclists (September, 2010) – Video Feature on Discoveries and Breakthroughs in Science
- Role of Blackbox Technology in Transportation Safety – Published in *IntelliDrive Update*, October 2009, Vol. 3, No. 2
- Institute to Study Drowsy and Distracted Driving (August 26, 2008). Bozeman Daily Chronical.
- Western Transportation Institute to Study Drowsy and Distracted Driving Teen Study (August 25, 2008). MSU News Service
- Driving simulator comes to Bozeman. KTVM (October 10, 2008).
- WTI Installs One of the Country's Largest Driving Simulators (November 10, 2008). MSU News Service.
- Life in the simulated fast lane (November 20, 2008). Great Falls Tribune
- Federal Focus on Rural Road Safety Brings High-level Visitors to WTI (October 21, 2008). MSU News Service
- Skid Monsters Train Teen Drivers (August 1, 2005). MSU News Service
- Rural Drivers Using Cell Phones are Likely to Cause Accidents (June 23, 2005). MSU News Service

INDUSTRY CONSULTING & ADVISORY BOARDS

- Immersive Reality Group, LLC, Bozeman MT & Charlotte, NC
- G.C. Wallace Companies Transportation Engineers, Surveyors, & Planners, Las Vegas, NV
- Ortho-Rodgers & Associates Transportation Engineering & Planning, Las Vegas, NV
- Marley & Associates Ergonomics & Human Factors Consulting, Bozeman, MT
- IntelligHealth, Chief Scientific Officer, Bozeman, MT
- Advisory Board National Institutes of Health, National Center for Advancing Translational Sciences - Early Stage Product Development Award (pending)

TEACHING

Associate Professor, Gianforte School of Computing, Montana State University, Bozeman, Montana
Average Student Evaluation scores for HCI & UX School of a Computing course at **MSU = 4.6/5**

- **Human-Computer Interaction** (**CSCI 494**)
    - Student Evaluations Spring 2024 – **4.4/5** (1-poor to 5-excellent)

- **User Interface Design (CSCI 443)**
    - Student Evaluations Fall 2023 – **4.3/5** (1-poor to 5-excellent)
- **Human-Computer Interaction** (**CSCI 494**)
    - Student Evaluations Spring 2023 – **4.6/5** (1-poor to 5-excellent)
- **User Interface Design (CSCI 443)**
    - Student Evaluation Fall 2022 **– 4.5/5** (1-poor to 5-excellent)
- **Human-Computer Interaction** (**CSCI 494**)
    - Student Evaluations Spring 2022 – **4.4/5** (1-poor to 5-excellent)
- **User Interface Design (CSCI 443)**
    - Student Evaluation Fall 2021 – **4.8/5** (1-poor to 5-excellent)
- **Seminar: Advanced Human-Computer Interaction** (**CSCI 494**)
    - Student Evaluations Spring 2021 – **5/5** (1-poor to 5-excellent)
- **Human-Computer Interaction** (**CSCI 494**)
    - Student Evaluations Spring 2021 – **5/5** (1-poor to 5-excellent)
- **UX Research & Design/User Interface Design (CSCI 443)**
    - Student Evaluation Fall 2020 – **4.6/5** (1-poor to 5-excellent)
- **Social and Ethical Issues in Computer Science (CSCI 215)**
    - Student Evaluation Fall 2019 – **3/5** (1-poor to 5-excellent)
- **Human-Computer Interaction** (**CSCI 494**)
    - Student Evaluations Spring 2020 – **4.6/5** (1-poor to 5-excellent)

Associate Professor, Industrial Engineering Department, Clemson University, Clemson, South Carolina

- **Teaching Evaluations: Department Faculty Ranking Top 95%**
- **Human-Centered Design & Engineering (IE 4910)**
    - Student Evaluation – 4.5/5 (1-poor to 5-excellent)

Assistant & Associate Professor, Mechanical & Industrial Engineering Department, Montana State University, Bozeman, Montana

- **Introduction to Systems Engineering (EIND 142)**
    - Student Evaluation – 4.1/5 (1-poor to 5-excellent
- **Advanced Methods in Ergonomics and Human Factors (EIND 514 – Graduate Course)**
    - Student Evaluation – 4.8/5 (1-poor to 5-excellent)
- **Occupational Biomechanics (EIND 511 – Graduate Course)**
    - Student Evaluation – 4.4/5 (1-poor to 5-excellent)

Adjunct Instructor, Industrial & Systems Engineering Department, Virginia Tech, Blacksburg, Virginia

LICENSES/SECURITY CLEARANCE/INTELLECTUAL PROPERTY

- Board Certified Professional Ergonomist #1449
- U.S. Public Trust Security Clearance
- International Application No. PCT/US23/26187, 26-June-2023, *System & Method of Respiratory Disease Detection*