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2024

PROFESSIONAL SUMMARY

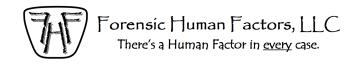
Human factors and occupational safety consultant providing scientific and engineering forensic analysis, safety training, and prevention strategies in workplace and environmental safety, walkway auditing, and system design. Experienced in incidents involving human—system interaction, machinery operation, equine and farm safety, and slips/trips/falls. Skilled communicator and educator able to translate complex technical concepts into clear, practical guidance for diverse audiences.

Doctor of Philosophy in Industrial & Systems Engineering

EDUCATION

Samuel Ginn College of Engineering, Auburn University, Auburn, Alabama National Institute for Occupational Safety and Health (NIOSH) Fellow Specializing in occupational safety, human factors, reliability, systems, and ergonomics. Advisor: Dr. Richard Sesek Dissertation on quantifying the effects of technology on neurodiverse manufacturing workers. Master of Science in Industrial & Systems Engineering 2023 Samuel Ginn College of Engineering, Auburn University, Auburn, Alabama Specific coursework in human factors, reliability, systems safety, advanced safety, STF prevention, biomechanics, ergonomics, systems engineering, Lean systems, Six Sigma, manufacturing process improvement, and linear programming. Graduate Certificate in Occupational Safety and Ergonomics (Human Factors) 2023 Samuel Ginn College of Engineering, Auburn University, Auburn, Alabama **Post-Graduate Teacher Certification** 2002 Hardin-Simmons University, Abilene, Texas Master of Science in Civil Engineering 1998 University of Washington, Seattle, Washington **Bachelor of Science in Chemical Engineering** 1997 University of Washington, Seattle, Washington LICENSES AND CERTIFICATIONS Alabama Board for Engineers and Land Surveyors (BELS): **Professional Engineer License** (AL PE53572) 2024-current Board Certified Safety Professionals (BCSP): Certified Safety Professional (CSP-47643) 2025-current Associate Safety Professional (ASP- 40247) 2025-current Board of Certification in Professional Ergonomics (BCPE): Certified Human Factors Professional (CHPF) (#2696) 2025-current Associate Human Factors Professional (AHFP) 2024 Occupational Safety and Health Administration (OSHA): Authorized OSHA Outreach Trainer - General Industry – OSHA 501 (#35-0079915) 2025-current Walkway Auditor Certificate Holder (WACH) (#00270) National Flooring Safety Institute 2024-current Alabama Professional Educator Certificate 2024-current Class B. Secondary (16A) Mathematics and Chemistry, Grades 6-12 (VVB-0128-7992) Texas Educator Certificate Secondary Chemistry and Math, Grades 6-12 (TEA ID 1110242) 2002-current Lean Six Sigma Green Belt, Auburn University 2021

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RESEARCH EXPERIENCE

Tiger Motors Research advised by Dr. Richard Sesek, Dr. John Evans, Dr. Greg Purdy 2022-2024 Samuel Ginn College of Engineering, Auburn University, Auburn, Alabama

Collaborating with a team of three researchers in three investigations related to I4.0 technology, Lean, Neurodiversity, Human Factors, and Augmented Reality in manufacturing work environments.

Research Assistant for Dr. Richard Palmer

1997-1998

University of Washington, Seattle, Washington

Collaborated in modeling the Devil's Lake watershed and addressing issues related to communicating water scarcity to the local population.

Boeing Systems Engineering Researcher under Dr. Brian Mar

1997-1998

University of Washington, Seattle, Washington

Collaborated with Dr. Brian Mar, a founding member of INCOSE (International Council on Systems Engineering), as a research assistant under his Boeing Systems Engineering Grant.

Research Assistant for Dr. David Stensel

1996-1998

University of Washington, Seattle, Washington

Mentored by Dr. David Stensel, performed heat experiments as part of the team that developed what is now the globally preferred method of anaerobic bacterial digestion for sewage treatment facilities.

Laboratory Researcher/Process Engineer

1996

Penford Products, Cedar Rapids, Iowa

Developed and implemented a comprehensive calibration protocol for the moisture analyzers used in the starch plant's laboratory. Efforts not only increased the accuracy and precision of testing results but also had a positive impact on the entire plant's quality control measures.

NASA Space Grant Summer Research with Dr. G.G. Allan

1995

University of Washington, Seattle, Washington

Designed experiments, set up testing protocol, supervised research assistants, performed data analysis, and reported on results for fiber modification research on fire resistance of paper fibers.

PROFESSIONAL EXPERIENCE

Forensic Human Factors, Human Factors and Occupational Safety Consultant

2024-present

Provide technical expertise and engineering analysis for incidents involving occupational safety, human factors, farming and ranching operations, and industrial, civil, and chemical engineering. Deliver OSHA 10- and 30-hour training courses and conduct facility audits, including walkway and floor safety assessments. Work includes identifying strengths and deficiencies in safety systems to support both prevention and post-incident evaluation.

Applied Ergonomics Conference Planning (Networking) Committee Co-Chair, IISE

2023-present

Oversee venue selection and networking activities to ensure engaging opportunities for collaboration among attendees. Coordinate logistics and integrate events into the conference schedule to enhance professional connections and the overall participant experience.

Applied Ergonomics Journal Peer Reviewer, Elsevier Publications

2024-2025

Served as a peer reviewer for Applied Ergonomics, assessing manuscripts for rigor, methodology, and relevance. Provided constructive feedback to authors and editors, drawing on expertise in ergonomics, human factors, neurodiversity, and workplace design.

Substitute Teacher, St. Michael Catholic School, Auburn, AL

2024-present

Engineer Together Fellow, Auburn University, Samuel Ginn College of Engineering

Furthered the promotion of belonging in the Auburn College of Engineering, on the Engineering

Inclusion and Diversity Leadership Committee, the Inclusive Design Committee, and the Engineer

Together Branding Committee, offering insight and support.

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PROFESSIONAL EXPERIENCE (CONTINUED)

Graduate Research Assistant, Auburn University

2022-2024

Conducted all aspects of research for three studies, including experimental design, participant recruitment, data collection, statistical design, and analysis. Coordinated research teams to ensure smooth project execution and adherence to timelines. Assisted fellow graduate students with their research, providing guidance on methodology, analysis, and troubleshooting. Applied advanced research techniques to address key questions, contributing to the development of innovative findings in the field.

Graduate Teaching Assistant, Auburn University

2021-2024 Maghsoodloo Outstanding Graduate Teaching Assistant Award

Private Tutor & Owner, Victoria Ballard Tutoring, LLC

2017-2019

Online College Course Peer Reviewer, Quality Matters

2018-2022

Camp Invention Director, Holly-Navarre Intermediate School, Invent.org

2012-2014

Led implementation of a national STEM enrichment program.

Owner, Trainer, Horsemanship Lesson Instructor, Ballard Ranch, LLC

2012-2018

Operated horsemanship and safety training programs; managed community partnerships and youth outreach events.

Substitute Teacher, Abilene Independent School District, Abilene, TX

2010-2011

Adjunct Faculty & Course Designer, Skagit Valley College, Chapman University, Columbia College (NAS Whidbey Island Campus), Embry-Riddle Aeronautical University (NAS Whidbey Island and Worldwide Campus), South Seattle College

2004-2018

Held adjunct appointments at several institutions during this period, during which I taught 72 undergraduate courses in engineering fundamentals, mathematics, and applied sciences, and was responsible for the complete design or redesign of 56 of those courses.

Advisory Council Member, Northwest Clean Air Agency, Mount Vernon, WA

2004-2006

Provided technical and project support to the Northwest Clean Air Agency, as a volunteer on the advisory council. Served as Council Chairperson responsible for leading council meetings, providing direct communication contact for projects, and reporting to the NWCAA Board.

Plant Engineer, Plasmine Technology, Inc., Pensacola, FL and Bay Minette, AL

1999-2000

Provided technical, computer, training, research, and project support to this specialty paper chemical manufacturing company. Established standardized documentation for company procedures, leading to ISO9000 certification. Led management and continuous improvement activities as a member of a quality team.

Inspection Engineer, Dunn & Associates, Civil and Environmental Engineering, Easley, SC 1998 Inspected a water tower installation requiring skillful coordination of engineers, water district, and multiple contractors and subcontractors.

Process Engineer Intern, Penford Products, Cedar Rapids, IA

1996

Contributed research, data gathering, and analysis to a process-improvement project as a member of a team in this industrial starch plant

System Designer, Option Care, Tukwila, WA

1994

Designed a healthcare provider tracking system in Microsoft Access and created a company-wide reporting system.

Manufacturing Lineperson, Redmond Futons, Redmond, WA

1993

Optimized the manufacturing line as a wood-product futon factory's only female floor worker.

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NON-PROFIT & COMMUNITY LEADERSHIP (selected and most relevant)

4-H Club Leader (Leadership, STEM, Robotics, Poultry, Photography, Horsemanship)

2011-2021

Managed multi-year youth education programs focused on leadership, STEM engagement, and animal science. Recruited and trained volunteers, coordinated project budgets, and ensured program quality.

Parent-Teacher Association & Organization Leadership Roles

2006-2015

Served in executive leadership positions to improve school–community communication, safety initiatives, and fundraising.

Co-Op Teacher, Navarre Homeschool Co-Op, FL

Girl Scouts of the USA - Troop Leader and Service Unit Manager

2014-2017

1999-2013

Led multi-level Girl Scout troops for over a decade and periodically held higher-level volunteer leadership roles, including Service Unit Manager, Event Coordinator, and Product Sales Manager. Oversaw youth programming, volunteer training, and regional event coordination for 300+ participants.

PROFESSIONAL DEVELOPMENT (selected and most relevant)

Conferences:

Institute of Industrial & Systems Engineers (IISE). (2025, March 17–20). **Applied Ergonomics Conference**. Orlando, FL.

Academy of Truck Accident Attorneys (ATAA). (2024, September 25–27). **ATAA Annual Symposium.** Nashville, TN.

Society of Manufacturing Engineers (SME). (2023, October 24–25). **SOUTHTEC Conference**. Greenville Convention Center, Greenville, SC.

Human Factors and Ergonomics Society (HFES). (2023, October 23–24). **HFES 67th International Annual Meeting**. Washington, DC.

Institute of Industrial & Systems Engineers (IISE). (2023, September 19–21). Lean Six Sigma & Data Science Conference. Atlanta, GA.

American Society of Safety Professionals (ASSP). (2023, June 4–7). **Safety Conference & Exposition**. San Antonio, TX.

Institute of Industrial & Systems Engineers (IISE). (2023, March 27–30). **Applied Ergonomics Conference**. New Orleans, LA.

Human Factors and Ergonomics Society (HFES). (2022, October 10–14). **HFES 66th Annual Meeting. Atlanta**, GA.

Institute of Industrial & Systems Engineers (IISE). (2022, March 21–24). **Applied Ergonomics Conference**. Dallas, TX.

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PROFESSIONAL DEVELOPMENT (continued)

Courses and Seminars:

OSHA Standards for General Industry- OSHA 511 (2024) #SS-2411-SHO511-10

OSHA Standards for Construction- OSHA 510 (2024) #SS-2410-SHO510-08

Huntington, D. (2025, October 2). Simplifying OSHA Rooftop Fall Protecting Requirements [Live Seminar]. National Safety Council, Safety and Health Seminar.

Nasser Donovan, N., & Mangraviti, Jr., J. (2025, September 18). How to be an Effective Expert Witness at Deposition and Trial [Live Professional Training]. SEAK Excellence in Education. www.SEAK.com.

Pauley, COSS, COHC, C., & Proulx, MS, CSP, J. (2025, July 29). Lockout/Tagout: How to Put OSHA's Requirements Into Practice [Live Seminar]. Board Certified Safety Professionals Seminars, Sponsored by J.J. Keller & Associates.

Hoekstra, J., & Sauve, E. (2024, June 26). Slips, Trips, and Falls: Don't Let Success Slip Away [Seminar]. National Safety Council, Safety and Health Seminar.

PUBLICATIONS & PRESENTATIONS (selected and most relevant)

Publications:

Ballard, V. (2024). Manufacturing Workplace Support Structures and Technology: Effects on Mental Workload, Performance, Self-Efficacy, and Social Anxiety on Both Neurotypical and ADHD Workers [Doctoral Thesis]. Auburn University.

Ballard, V. (1998). M.S. Project, Civil & Environmental Engineering, University of Washington (1997–1998) — Contributed to Shared Vision Modeling for Devils Lake (ND) with R.N. Palmer; scenario development and stakeholder communication materials. See: Palmer et al., 1999.University of Washington.

Ballard, V. (2025). Designing for Neurodiversity (Chapter). In B. Watts (Ed.), Ergonomics and Diversity, Equity, and Inclusion: Theory and Practice (p. 500). CRC Press -Taylor & Francis Group.

Presentations:

- 1. Ballard, V. (2025, March Invited). Integrating Surface Safety and Ergonomics: Enhancing Worker Health, Safety, and Reducing Workplace Liability [Conference Panel Moderator]. Applied Ergonomics Conference, Institute of Industrial and Systems Engineering, Orlando, FL.
- 2. Ballard, V. (2025, March Invited). Ergonomics and ADHD: Addressing Psychosocial Stress, Self-Efficacy, and Support Systems in Manufacturing Workers [Conference Presentation]. Applied Ergonomics Conference, Institute of Industrial and Systems Engineering, Orlando, FL.
- 3. Ballard, V. (2025, March Invited). Cognitive Ergonomics in Manufacturing: The Impact of a Lean Tool and an Industry 4.0 Technology on Neurodivergent Workers with ADHD [Poster Presentation]. Applied Ergonomics Conference, Institute of Industrial and Systems Engineering, Orlando, FL.
- 4. Ballard, V. (2024, December 6 Invited). Unlocking Potential: Redefining Workspaces through Inclusivity and Innovative Universal Design. [Keynote Speaker]. Cintas Wellness Series, Webinar.
- 5. Ballard, V. (2024, July 3). Manufacturing Workplace Support Structures and Technology: Effects on Mental Workload, Performance, Self-Efficacy, and Social Anxiety on Both Neurotypical and ADHD Workers [Dissertation Defense]. Auburn University, Auburn, AL.
- 6. Ballard, V., & Pantazes, R. (2023). Neurodiversity. [Seminar]. Auburn University College of Engineering Faculty DEI Colloquium.

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PUBLICATIONS & PRESENTATIONS (continued)

- 7. Ballard, V. (2023g, October 19). Bloom Where You Are Planted [Keynote Speaker]. College of Engineering Lunch and Learn, Auburn University, Auburn, AL.
- 8. Ballard, V. (2023f, October 12). Assessing the Cognitive Load and Learning of ADHD Workers in Manual Assembly Manufacturing Tasks with and without Augmentation [Poster Presentation]. Graduate Engineering Research Showcase, Auburn University, Auburn, AL.
- 9. Ballard, V. (2023e, September 19). Unlocking Potential: Redefining Workspaces through Inclusivity and Innovative Universal Design. [Keynote Speaker]. Cintas Ergonomics Competition Innovation Webinar Series, Webinar.
- 10. Ballard, V. (2023d, August 18). How do you Engineer Together? [Table Talk]. Student Welcome Student Browse, Auburn University, Gavin Gardens, Auburn, AL.
- 11. Ballard, V. (2023c, July 12). How do Industrial Engineers Support Sustainability? [Educational Session]. Minority Introduction to Engineering (MITE) Camp, Brown-Kopel.
- 12. Ballard, V. (2023b, April 28). How can we all make the world a better place? [Award Recipient Speaker]. Industrial & Systems Engineering Alumni Council Annual Meeting, Auburn University, Auburn, AL.
- 13. Ballard, V. (2023a, April 6). How can we all make the world a better place? [Featured Speaker]. 100+ Women Strong Annual Meeting, Auburn University, Auburn, AL.
- 14. Ballard, V. (2022e, November 18). What is Industrial Engineering [Informational Session]. SHEroes K-12 STEM Recruitment Activity, Tiger Motors Lean Education Center, Auburn University, Auburn, AL.
- 15. Ballard, V. (2022d, October 21). Augmented Reality in Manufacturing: A help or a hindrance? [Poster Presentation]. Graduate Engineering Research Showcase, Auburn University, Auburn, AL.
- 16. Ballard, V. (2022c, October 11). Tiger Motors Lean Education Center, Lean | Human Factors | Ergonomics | Safety | Technology [Poster Presentation]. HFES 66th International Annual Meeting, Atlanta, GA.
- 17. Ballard, V. (2022b, September 21). Evaluation of an Augmented Reality System in Tiger Motors Lean Education Center [Poster Presentation]. IISE Lean Six Sigma Data Science Conference, Atlanta, GA.
- 18. Ballard, V. (2022a, September 21). Augmented Reality in Manufacturing: A help or a hindrance? [Session Presentation]. IISE Lean Six Sigma Data Science Conference, Atlanta, GA.

RESEARCH & EDUCATIONAL FUNDING AWARDS 2022-2024

- National Institute for Occupational Safety and Health Fellowship
- Samuel Ginn College of Engineering Engineer Together Fellowship
- Human Factors and Ergonomics Society Augmented Cognition Research Funding
- American Society of Safety Professionals
 – Amazon
- Society of Women Engineers Intel Diversity Scholar
- Institute of Industrial and Systems Engineers Gilbreth Memorial Fellowship
- SME Education Foundation E Wayne K Graduate Award

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AWARDS & HONORS (selected and most relevant)

•	IISE AEC Occucare Injury Prevention Practitioner of the Year Nominee	2025, 2026
•	IISE AEC CNA Student of the Year Award	2024
•	HFES National Student Chapter Award (as Chapter President) – Gold Level	2023
•	Auburn College of Engineering 100+ Women Strong Graduate Student Leadership Award	2022-2023
•	Auburn College of Engineering 100+ WS ISE Outstanding Graduate Student Award	2022-2023
•	Auburn ISE Department Maghsoodloo Outstanding Teaching Assistant Award	2022-2023
•	J.T. Black Lean Manufacturing Student of the Year	2021-2022
•	Santa Rosa County 4-H Volunteer of the Year	2014, 2016
•	Girl Scouts of the USA Appreciation Pin, Girl Scouts Texas Oklahoma Plains	2009
•	Military Family of the Year, Abilene, Texas/Dyess AFB	2008
•	Outstanding Volunteer Award, Girl Scouts Caprock Council	2007
•	NASA Space Grant Scholar	1993-1997
•	Girl Scout Gold Award	1993

MEMBERSHIPS & AFFILIATIONS (selected and most relevant, with current and past positions held)

•	Human Factors Ergonomics Association (HFES), AU president, club mentor	2021-present
•	American Society of Safety Professionals (ASSP), AU president, club mentor	2021-present
•	Institute of Industrial and Systems Engineers (IISE), mentor, student member	2022-present
•	Daughters of the American Revolution (DAR)	2020-present
•	100+ Women Strong at Auburn University, member, mentor	2022-2024
•	Society of Manufacturing Engineers (SME) founding AU student chapter president	2022-2024
•	Council of Engineering Graduate Students (CEGS), Ambassador, Exec Board Officer	2021-2024
•	4-H volunteer, coach, international exchange host, youth mentor	2011-2021
•	Five Flags AHA and Blackwater Saddle Club, member, volunteer	2014-2018
•	US Air Force Key Spouse, Dyess AFB, NAS Whidbey Island, volunteer, mentor	2004-2011
•	Silver Wings, Det 910 University of Washington, past Commander, member, volunteer	1994-1997
•	Girl Scouts of the United States of America, Gold Award scout, leader, member 1980-life	fetime member