VICTORIA BALLARD, PhD
PE (AL), MSE², CSP, CHFP, WACH
Forensic Human Factors, LLC
www.FHFexperts.com

Forensic Human Factors, LLC
There's a Human Factor in every case.

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.

EDUCATION

Doctor of Philosophy in Industrial & Systems Engineering 2024
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 (PE) (AL PE53572) 2024-current
Board Certified Safety Professionals (BCSP):
Certified Safety Professional (CSP) (CSP-47643) 2025-current
Associate Safety Professional (ASP- 40247) 2025-current
Board of Certification in Professional Ergonomics (BCPE):
Certified Human Factors Professional (CHFP) (#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
National Association of Safety Professionals (NASP):
ADA Compliance Certificate (NASP-662428) 2026-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, Dr. Brian Mar, and Dr. David Stensel 1996-1998
University of Washington, Seattle, Washington

Conducted interdisciplinary research across civil, environmental, and systems engineering under multiple faculty advisors. Contributed to watershed modeling and public risk communication related to water scarcity (Devil's Lake project), participated in systems engineering research under a Boeing-sponsored grant with Dr. Brian Mar (INCOSE), and performed thermal and process experiments supporting the development of anaerobic digestion methods for wastewater treatment. Work included data analysis, modeling, experimental design, and collaboration across technical teams.

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 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.

National Council of Examiners for Engineering and Surveying, *Exam Committee Member* 2025-present

Contribute to the national review and item-writing process for the Fundamentals of Engineering (FE) Industrial Engineering Professional Licensing Exam. Participate in reviewing, editing, and developing new exam questions as part of the National Council of Examiners for Engineering and Surveying (NCEES) exam revision cycle, every 6–8 years.

Board of Certification in Professional Ergonomics (BCPE), *Contributor* 2025-present

Serve as a subject matter expert for the BCPE exam system, contributing to the development of exam content for the Certified Professional Ergonomist (CPE) and Certified Human Factors Professional (CHFP) certification pathways.

ANSI/ASSP Z590.3 Prevention Through Design (PtD) Committee, *Member/Contributor* 2026-present

Serve as a contributor to a national consensus standards committee responsible for advancing PtD principles. Provide technical input on the integration of hazard analysis, human factors, and risk reduction into system and equipment design, with emphasis on foreseeable use and human–system interaction in occupational settings.

IISE Applied Ergonomics Conference, *Planning (Networking) Committee Co-Chair* 2023-present

Oversee venue selection and networking events to foster collaboration.
Coordinate logistics and scheduling to enhance engagement and participant experience.

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PROFESSIONAL EXPERIENCE (CONTINUED)

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 2024-2025

Engineer Together Fellow, Auburn University, Samuel Ginn College of Engineering 2023-2024
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.

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 2018-2022

Online College Course Peer Reviewer, Quality Matters 2017-2019

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.

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PROFESSIONAL EXPERIENCE (CONTINUED)

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.

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 2014-2017

Girl Scouts of the USA – Troop Leader and Service Unit Manager 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:

American Society of Safety Professionals (ASSP). (2026, April 3). **Auburn University ASSP Safety Convention**. Auburn, AL.

Institute of Industrial & Systems Engineers (IISE). (2026, March 9-12). **Applied Ergonomics Conference**. Arlington, TX.

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

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.

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PROFESSIONAL DEVELOPMENT (continued)

Conferences (continued)**:**

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

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. (2026, March). Slips, Trips, and Systems: Rethinking Falls as a Cross-Disciplinary Challenge [Conference Panel Moderator]. Applied Ergonomics Conference, Institute of Industrial and Systems Engineering, Arlington, TX.
2. Ballard, V. (2026, March). Human Error or System Failure? A Human Factors Look at Fall Incidents [Conference Presentation]. Applied Ergonomics Conference, Institute of Industrial and Systems Engineering, Arlington, TX.
3. Ballard, V. (2025, March 18). 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.
4. Ballard, V. (2025, March 20). 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.

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PUBLICATIONS & PRESENTATIONS (continued)

5. Ballard, V. (2025, March 18). 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.
6. Ballard, V. (2024, December 6). Unlocking Potential: Redefining Workspaces through Inclusivity and Innovative Universal Design. [Keynote Speaker]. Cintas Wellness Series, Webinar.
7. 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.
8. Ballard, V., & Pantazes, R. (2023). Neurodiversity. [Seminar]. Auburn University College of Engineering Faculty DEI Colloquium.
9. Ballard, V. (2023g, October 19). Bloom Where You Are Planted [Keynote Speaker]. College of Engineering Lunch and Learn, Auburn University, Auburn, AL.
10. 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.
11. Ballard, V. (2023e, September 19). Unlocking Potential: Redefining Workspaces through Inclusivity and Innovative Universal Design. [Keynote Speaker]. Cintas Ergonomics Competition Innovation Webinar Series, Webinar.
12. Ballard, V. (2023d, August 18). How do you Engineer Together? [Table Talk]. Student Welcome Student Browse, Auburn University, Gavin Gardens, Auburn, AL.
13. Ballard, V. (2023c, July 12). How do Industrial Engineers Support Sustainability? [Educational Session]. Minority Introduction to Engineering (MITE) Camp, Brown-Kopel.
14. 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.
15. 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.
16. 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.
17. Ballard, V. (2022d, October 21). Augmented Reality in Manufacturing: A help or a hindrance? [Poster Presentation]. Graduate Engineering Research Showcase, Auburn University, Auburn, AL.
18. 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.
19. 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.
20. 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.

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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

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, volunteer 2021-present
- **Institute of Industrial and Systems Engineers (IISE)**, mentor, student member, volunteer 2022-present
- **Daughters of the American Revolution (DAR),** Treasurer, Serv. to Vets Chair, member 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, club leader, international exchange host, youth mentor 2011-2021
- **Five Flags Arabian Horse Assoc. 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- lifetime member

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