

Richard Thomas Stone Vita

Date: June 3, 2024

Name: Richard T. Stone

Department: Industrial and Manufacturing Systems Engineering

2nd Department: Mechanical Engineering

Current Rank: Associate Professor

I. PERSONAL HISTORY AND PROFESSIONAL EXPERIENCE

A. Educational Background

Ph.D. Industrial Engineering, University at Buffalo, State University of New York, 2008

M.S. Information Technology, Rochester Institute of Technology, 2001

B.S. Management Information System, Rochester Institute of Technology, 1999

Adv. Cert. Robotics and Computer Aided Manufacturing, Rochester Institute of Technology, 2001

Adv. Cert. Environmental Management Science, Rochester Institute of Technology, 2002

B. List of Academic Positions since Final Degree

Associate Professor, Industrial and Manufacturing Systems Engineering, Iowa State University, 2014-present

Associate Professor (by courtesy joint appointment), Mechanical Engineering, Iowa State University, 2014-present

Director: Diversity and Inclusion Officer, Industrial and Manufacturing Systems Engineering, Iowa State University, 2020-present.

Research Collaborator, Kern Center for the Science of Healthcare Delivery, Mayo Clinic, 2021- present.

Assistant Professor, Industrial and Manufacturing Systems Engineering, Iowa State University, 2008-2014

Assistant Professor (by courtesy joint appointment), Mechanical Engineering, Iowa State University, 2008-2014

C. Other Professional Employment

Reserve Deputy Sheriff, Story County Sheriff's Office, Story County, Iowa, 2015- present

Rescue and Recovery Diver, Story County Sheriff's Office, Story County, Iowa, 2015- 2021

Board Member, CyncHealth - Iowa Board, Omaha, Nebraska, 2021-present

Member of the Footwear Intelligence Development Group (FIDG), NIJ, 2022-present

Graduate Research Assistant, Industrial and Systems Engineering, State University of New York at Buffalo, 2004-2008

Visiting Professor, Information Technology, Rochester Institute of Technology, 2001-2004

Graduate Research Assistant and Lab Manager, Information and Computer Science, Rochester Institute of Technology, 2000-2001

Interface Architect and Systems Designer, Eastman Kodak Company, 1999-2000

D. Honors, Recognitions, and Outstanding Achievements

- 2022 Engineering Faculty of the year 2022, Engineering Student Council, ISU, Ames
- 2021 HFES Best Paper Student, Human Performance Modeling TG Award
- 2018 IISE Annual Conference Best Paper Award (Engineering Education)
- Excellence in Mentoring Award (Louis Stokes Alliance for Minority Participation (LSAMP) award spans 20 colleges/universities over 3 States and is given to an outstanding mentor across those universities/collages), Feb 2017
- Don Grant Faculty Award (IE department award for undergraduate teaching excellence), May 2016.
- Plummer Memorial Education Lecture Award (National Education award given to one person per year by the American Welding Society), November 2015
- Distinguished Manuscript 1st place Award 2014 at Western Region American Association for Agricultural Education Conference - Kona, HI.
- Distinguished Manuscript 2nd place Award 2014 at National Agricultural Mechanics Professional Development Conference – Louisville, KY.
- Distinguished Manuscript 3rd place Award 2014 at National Agricultural Mechanics Professional Development Conference – Louisville, KY.
- Distinguished Research Poster Award 2014 at American Association for Agricultural Education Conference – Salt Lake City, UT.
- ISU Award for Early Achievement in Teaching 2013 (University level award in teaching)
- Big 12 Fellowship Award 2009
- Certified Associate Ergonomics Professional by BCPE, October 2008

- 1st place E-Prize (National Ergonomics Competition) March 2007 Awarded by IIE to the best university team at the Applied Ergonomics Conference.
- 3rd place IIE Industrial Engineering Research Conference (IERC) Doctoral student research poster competition May 2007
- Tau Beta Pi Engineering Honor Society 2006-present
- Tau Beta Pi Faculty Mentor and Advisor 2008-present
- Alpha Phi Mu Industrial Engineering Honor Society 2006-present
- Alpha Phi Mu Industrial Engineering Honor Society Faculty Mentor 2013-present
- Alpha Sigma Lambda Honor Society 1999-present
- Nathaniel Rochester Honor Society 1999-present
- Golden Key National Honor Society 1998-present
- Phi Kappa Phi National Honor Society 2001-present
- Beta Gamma Sigma National Honor fraternity 1998-present
- Inroads Award of Excellence 1999
- Deans Advisory Board (RIT) 1997-1999
- 1st place Master Cup (Tae Kwon Do) 1999
- Presidential Sports Award, Martial Arts 1994
- Graduate Assistantships (RIT/UB) 2000-2001/2004-2008
- Presidential Fellowship (UB) 2004
- Order of the Engineer 2007

E. Formally Invited Lectures and Invited Conference Presentations

Richard T. Stone, Susan VanderPlas, “Local Population Footwear Class Characteristics – End-to-End Pipeline for Automatic Data Acquisition and Analysis.”, Workshop W136 International Association for Identification Annual Educational Conference, Omaha, NE, August 3, 2022.

Richard T. Stone, “Talking about Inclusion in Times of Isolation”, ASEE North Midwest Section Annual Virtual Conference, Iowa State University (and Online due to COVID), Ames, IA, October, 16th, 2020.

Richard T. Stone, “Human Performance Engineering” Invited Speaker, University of Texas at Arlington, Arlington, TX, November, 1, 2018.

Richard T. Stone, “Ergonomics, Efficiency and Leadership” Invited Speaker and Workshop Director, Danfoss Power Solutions, Safety and Leadership Summit, December 7, 2016.

Richard T. Stone, “Physiological and Cognitive Effect of VRIT” Invited Speaker (Plummer Memorial Lecture), Fabtech 2015, Chicago IL, November 16, 2015.

Richard T. Stone, “Virtual Reality Development for Advanced Weld Training” Invited Lecture at Lincoln Electric Welding Training Conference, Chicago IL, June 20-21, 2013.

Richard T. Stone, “Virtual Reality and Its Impact on Industrial Training”
Invited Lecture at John Deere Global Ergonomics Conference, Cedar Falls, IA,
June 18-19, 2013.

Richard T. Stone, “Physical and Cognitive Effects of Virtual Reality Integrated
Training” Invited Lecture at University of Iowa, Iowa City, IA, March 14, 2013.

Richard T. Stone, “How Do You Assess the Capability of an Employee for the Visual
Inspection Process? What Affects Performance?”
Invited Lecture at Steel Foundry Society of America (SFSA) Human Resources Safety
Meeting, Hammond, LA, February 22-24, 2011.

Richard T. Stone, “Cybernetic and Wearable Systems Design: Issues and Solutions,”
Invited Lecture at Texas A&M University, College Station, TX, July 7, 2009.

F. Offices Held in Professional Societies

President for the Forensics Technical Group at HFES 2023-present.

Board of Directors, Member, CyncHealth 2021-present

President for Society of Augmented Engineers and Scientists (SAES) 2018 – 2021

Communications Officer for Human Factors and Ergonomics Society (HFES) Technical
Group (TG) Virtual Environments 2012 - 2013

H. Grants and Contracts Received Since Last Promotion at ISU

H37: Investigators: Richard T. Stone

Title of Grant: VR Development for Emergency Medical Intervention

Granting Agency: VRSim

Dates of beginning and end of grant: 3/15/24-12/15/24

Total dollar amount of grant: \$59,915

Dollar amount allocated to this candidate: \$59,915

Role or responsibilities of the candidate: PI

H36: Investigators: Richard T. Stone, Lizhi Wang

Title of Grant: Mealworm Genomics

Granting Agency: Plant Science Institute

Dates of beginning and end of grant: 5/31/24-8/31/24

Total dollar amount of grant: \$101,000

Dollar amount allocated to this candidate: \$101,000

Role or responsibilities of the candidate: Collaborator

H35: Investigators: Richard T. Stone
Title of Grant: NIST Forensic Science Center of Excellence
Grant Agency: National Institute of Standards and Technology
Award 70NANB20H019
Dates of beginning and end of grant: 1/15/24-12/25/24
Total dollar amount of grant: \$19,990,375
Dollar amount allocated to this candidate: \$87,000
Role or responsibilities of the candidate: Collaborator, Design 2nd Generation Advanced
Footwear forensic technology

H34: Investigators: Richard T. Stone
Title of Grant: Healthcare: Face Mask Compliance and Risk Assessment
Granting Agency: Heartland Center Pilot Proposal NIH
Dates of beginning and end of grant: 5/15/23-7/15/24
Total dollar amount of grant: \$19,915
Dollar amount allocated to this candidate: \$19,915
Role or responsibilities of the candidate: PI

H33: Investigators: Richard T. Stone
Title of Grant: Triton Roofing Material Slippage Study/Comparison
Granting Agency: Triton Incorporated
Dates of beginning and end of grant: 10/15/22-7/15/24
Total dollar amount of grant: \$78,676
Dollar amount allocated to this candidate: \$78,676
Role or responsibilities of the candidate: PI

H32: Investigators: Richard T. Stone
Title of Grant: Modular Physical Twin system for Energy efficient, consistent growth of
hydroponic systems
Granting Agency: ERP from IMSE
Dates of beginning and end of grant: 5/15/23-8/04/23
Total dollar amount of grant: \$16,000
Dollar amount allocated to this candidate: \$16,000
Role or responsibilities of the candidate: PI

H31: Investigators: Richard T. Stone, Lizhi Wang
Title of Grant: Hydroponic Bay Equipment
Granting Agency: Plant Science Institute
Dates of beginning and end of grant: 3/9/23-5/31/23
Total dollar amount of grant: \$100,000
Dollar amount allocated to this candidate: \$100,000
Role or responsibilities of the candidate: Collaborator

H30: Investigators: Richard T. Stone
Title of Grant: VR CNA Training Development
Granting Agency: VRsim
Dates of beginning and end of grant: 07/31/22-1/09/23

Total dollar amount of grant: \$40,730
Dollar amount allocated to this candidate: \$40,730
Role or responsibilities of the candidate: PI

H29: Investigators: Richard T. Stone, Susan Vanderplas
Title of Grant: Automatic Acquisition and Identification of Footwear Class Characteristics
Granting Agency: NIJ
Dates of beginning and end of grant: 01/01/21-5/31/23
Total dollar amount of grant: \$380,405
Dollar amount allocated to this candidate: \$143,696
Role or responsibilities of the candidate: PI (for ISU), Susan Vanderplas (PI for UNL)

H28: Investigators: Richard T. Stone, Gary Mirka
Title of Grant: Variable Wing Stabilization Device design and Anthropometric review
Granting Agency: Collins Aerospace
Dates of beginning and end of grant: 8/15/20-3/27/21
Total dollar amount of grant: \$52,928
Dollar amount allocated to this candidate: \$52,928
Role or responsibilities of the candidate: PI

H27: Investigators: Richard T. Stone
Title of Grant: NIST Forensic Science Center of Excellence
Grant Agency: National Institute of Standards and Technology
Award 70NANB20H019
Dates of beginning and end of grant: 1/15/20-12/25/20
Total dollar amount of grant: \$19,990,375
Dollar amount allocated to this candidate: \$48,000
Role or responsibilities of the candidate: Collaborator, Design Footwear forensic technology

H26: Investigators: Richard T. Stone
Title of Grant: Evaluation of new product design and setup/teardown for AAI sponsored meets
Granting Agency: American Athletic, Inc. (AAI)
Dates of beginning and end of grant: 1/15/19-9/15/20
Total dollar amount of grant: \$56,042
Dollar amount allocated to this candidate: \$56,042
Role or responsibilities of the candidate: PI

H25: Investigators: Richard T. Stone
Title of Grant: EOL Course Development Grant for IE 537 / 437X
Dates of beginning and end of grant: 8/15/19-12/15/19
Total dollar amount of grant: \$9,000
Dollar amount allocated to this candidate: \$9,000
Role or responsibilities of the candidate: PI

H24: Investigators: Leslie Potter, Richard T. Stone, Devna Popejoy-Sheriff
Title of Grant: Curriculum Development Program Proposal for the Iowa Space Consortium
Granting Agency: NASA
Dates of beginning and end of grant: 8/27/18-8/26/19

Total dollar amount of grant: \$22,950
Dollar amount allocated to this candidate: \$18,450
Role or responsibilities of the candidate: Co-PI

H23: Investigators: Richard T. Stone
Title of Grant: Weapon and Safety Protocol
Granting Agency: Sheepdog
Dates of beginning and end of grant: 7/15/18-7/14/19
Total dollar amount of grant: \$24,284
Dollar amount allocated to this candidate: \$24,284
Role or responsibilities of the candidate: PI

H22: Investigators: Gul E. Okudan-Kremer, Richard T. Stone
Title of Grant: EAGER: MAKER: Industrial Experience and Disciplinary Knowledge Impact on Creative Outcomes in a Making Context
NSF-EAGER 173736
Granting Agency: NSF
Dates of beginning and end of grant: 8/15/17-8/15/19
Total dollar amount of grant: \$300,000
Dollar amount allocated to this candidate: \$150,000
Role or responsibilities of the candidate: Co-PI

H21: Investigators: Richard T. Stone
Title of Grant: Tool Testing and Engineering Standards
Granting Agency: Greenlee
Dates of beginning and end of grant: 7/30/17-7/29/18
Total dollar amount of grant: \$32,779
Dollar amount allocated to this candidate: \$32,779
Role or responsibilities of the candidate: PI

H20: Investigators: Richard T. Stone, Leslie Potter, Devna Popejoy-Sheriff
Title of Grant: Finding a CURE: Course-based Undergraduate Research Experiences for Industrial Engineering Students as a Model for the College of Engineering
Granting Agency: Miller Faculty Fellowship
Dates of beginning and end of grant: 7/15/17-7/15/18
Total dollar amount of grant: \$15,000
Dollar amount allocated to this candidate: \$12,000
Role or responsibilities of the candidate: PI

H19: Investigators: Richard T. Stone, Leslie Potter, Devna Popejoy-Sheriff
Title of Grant: IMSE Course-Based Undergraduate Research Experience (CURE) Initiative
Granting Agency: John Deere
Dates of beginning and end of grant: 6/5/17-6/5/18
Total dollar amount of grant: \$2,500
Dollar amount allocated to this candidate: \$1,500
Role or responsibilities of the candidate: PI

- H18: Investigators: Richard T. Stone
Title of Grant: ICUEE Ergonomics and Tooling Scientific Demo
Granting Agency: Textron
Dates of beginning and end of grant: 10/1/17-10/31/17
Total dollar amount of grant: \$4,400
Dollar amount allocated to this candidate: \$4,400
Role or responsibilities of the candidate: PI
- H17: Investigators: Richard T. Stone, Michael Dorneich, Caroline Krejci,
Title of Grant: Workflow Optimization for Iowa Regional Food Hubs
Granting Agency: Leopold Center
Dates of beginning and end of grant: 2/15/16-12/31/17
Total dollar amount of grant: \$50,000
Dollar amount allocated to this candidate: \$35,000
Role or responsibilities of the candidate: PI
- H16: Investigators: Richard T. Stone
Title of Grant: Partnering in Animal Welfare Service 2 (PAWS2) (an updated continuation)
Granting Agency: Private Donation
Dates of beginning and end of grant: 1/1/16-12/15/16
Total dollar amount of grant: \$25,000
Dollar amount allocated to this candidate: \$25,000
Role or responsibilities of the candidate: PI
- H15: Investigators: Richard T. Stone, Alex Zurlinden (Waterloo University, Ontario, Canada)
Title of Grant: Assessment of the safety and clinical utility of a cat imaging and oxygen chamber
Granting Agency: Winn Feline Foundation / Miller Trust
Dates of beginning and end of grant: 12/08/15-10/08/15
Total dollar amount of grant: \$3,133
Dollar amount allocated to this candidate: \$2,133
Role or responsibilities of the candidate: PI
- H14: Investigators: Iris Rivero, Richard T. Stone
Title of Grant: ISU COE- Pursuit Funding Support for Large Competitive Proposal Submission
Granting Agency: ISU
Dates of beginning and end of grant: 09/14-10/14
Total dollar amount of grant: \$15,000
Dollar amount allocated to this candidate: \$7,500
Role or responsibilities of the candidate: Co-PI
- H13: Investigators: Richard T. Stone, Iris V. Rivero
Title of Grant: Intubation Medical Device Development Project (ITMDDP)
Granting Agency: Sparks Instruments, LLC
Dates of beginning and end of grant: 9/16/13-9/15/15
Total dollar amount of grant: \$139,688
Dollar amount allocated to this candidate: \$70,000
Role or responsibilities of the candidate: PI

H12: Investigators: Paul Componation, Richard T. Stone
Title of Grant: Assessment of Formative Assessment Impacts on Learning in F2F, Hybrid and Online Environments
Granting Agency: The Deming Institute
Dates of beginning and end of grant: 8/15/13-8/15/14
Total dollar amount of grant: \$50,000
Dollar amount allocated to this candidate: \$20,000
Role or responsibilities of the candidate: Co-PI

H11: Investigator: Richard T. Stone
Title of Grant: Design Evaluation and Concepts for the Virtual Reality Arc Welding Trainer (VRTEX) System
Granting Agency: Lincoln Electric
Dates of beginning and end of grant: 5/15/13-5/15/14
Total dollar amount of grant: \$158,890
Dollar amount allocated to this candidate: \$88,890 + 70,000 (in kind donation)
Role or responsibilities of the candidate: PI

H10: Investigators: Stephen Gilbert, Richard T. Stone, Janis Terpenney, Seda Yilmaz, Judy Vance
Title of Grant: Evaluation of Virtual Reality Education Pathfinders (VREP) High School Engineering Intervention
Granting Agency: NSF-Center for E-Design
Dates of beginning and end of grant: 1/1/13-1/1/14
Total dollar amount of grant: \$48,000
Dollar amount allocated to this candidate: \$9,600
Role or responsibilities of the candidate: Co-PI

H9: Investigators: Stephen Gilbert, Richard T. Stone
Title of Grant: VREP Evaluation & IMSE Pipeline
Granting Agency: ISU IMSE Innovation Initiative
Dates of beginning and end of grant: 8/1/12-5/15/13
Total dollar amount of grant: \$36,000
Dollar amount allocated to this candidate: \$18,000
Role or responsibilities of the candidate: Co-PI

H8: Investigators: Richard T. Stone, Stephen Gilbert
Title of Grant: Embracing Challenges and Opportunities: Human Factors Life Support Proposal
Granting Agency: ISU IMSE Innovation Initiative
Dates of beginning and end of grant: 9/1/12-10/28/12
Total dollar amount of grant: \$16,574
Dollar amount allocated to this candidate: \$8,500
Role or responsibilities of the candidate: Co-PI

H7: Investigator: Richard T. Stone
Title of Grant: OSHA Challenge and Ergonomic Review
Granting Agency: Wady Industries

Dates of beginning and end of grant: 7/23/12-8/1/12
Total dollar amount of grant: \$2,887
Dollar amount allocated to this candidate: \$2,887
Role or responsibilities of the candidate: PI

H6: Investigators: Richard T. Stone, Janis Terpenney
Title of Grant: Partnering in Animal Welfare Service (PAWS)
Granting Agency: Private Donation
Dates of beginning and end of grant: 1/1/12-5/15/13
Total dollar amount of grant: \$35,000
Dollar amount allocated to this candidate: \$17,500
Role or responsibilities of the candidate: Co-PI

H5: Investigators: Richard T. Stone, Alex Zurlinden (Waterloo University, Ontario, Canada)
Title of Grant: Design and Assessment of the Safety and Clinical Utility of a Cat Imaging Tube and Oxygen Chamber
Granting Agency: Winn Feline Foundation / Miller Trust
Dates of beginning and end of grant: 12/15/11-12/15/12
Total dollar amount of grant: \$11,408
Dollar amount allocated to this candidate: \$9,500
Role or responsibilities of the candidate: PI

H4: Investigator: Richard T. Stone
Title of Grant: Ergonomic Evaluation Project
Granting Agency: P B Leiner
Dates of beginning and end of grant: 8/15/11-4/15/12
Total dollar amount of grant: \$13,600
Dollar amount allocated to this candidate: \$13,600
Role or responsibilities of the candidate: PI

H3: Investigators: Frank Peters, Richard T. Stone
Title of Grant: Casting for Superior Weapon Systems
Granting Agency: US Army Contracting Command Joint Munitions & Lethality Contracting Center
Dates of beginning and end of grant: 3/2/10-3/2/12
Total dollar amount of grant: \$280,000
Dollar amount allocated to this candidate: \$139,680
Role or responsibilities of the candidate: Co-PI

H2: Investigator: Richard T. Stone
Title of Grant: Adaptive Equipment Center
Granting Agency: Woodward Resource Center
Dates of beginning and end of grant: 8/1/09-8/1/16
Total dollar amount of grant: \$43,900 (per year)
Dollar amount allocated to this candidate: \$306,900
Role or responsibilities of the candidate: PI

H1: Investigator: Richard T. Stone
Title of Grant: VR Weld Training Study
Granting Agency: Lincoln Electric (in kind donation)
Dates of beginning and end of grant: 1/18/10-8/1/10
Total dollar amount of grant: \$94,946
Dollar amount allocated to this candidate: \$94,946
Role or responsibilities of the candidate: PI

II. PUBLICATIONS AND CREATIVE WORKS

#: publication derived from my thesis
*: publication undergone stringent peer review
†: student under my supervision
‡: student not under my supervision

A. Doctoral Thesis Title

Augmented Multisensory Interface Design: Performance Enhancement Capabilities and Training Potential.

F. Articles in Journals (in print or accepted)

- F51: Stone, R. T., Mgaedeh, F. Z., & Pulley, A. N. (2024). Cognitive and physiological evaluation of virtual reality training in nursing. *Ergonomics*, 1–13. <https://doi.org/10.1080/00140139.2024.2337842>
- F50: Baumann S, Stone R, Kim JY-M. Introducing the Pi-CON Methodology to Overcome Usability Deficits during Remote Patient Monitoring (2024). *Sensors*. 2024; 24(7):2260. <https://doi.org/10.3390/s24072260>
- F49: Schnieders, T. M., Mumani, A. A., Stone, R. T., & Westby, B. (2024). An analytic network process model for ranking exoskeleton evaluation criteria. *Theoretical Issues in Ergonomics Science*, 1–11. <https://doi.org/10.1080/1463922X.2024.2337674>
- F48: Yrjo, T., Keren, N., Cena, L., Simpson, S., Stone, R.T., (2024) Enhancing risk assessment skills in hazardous environments: Priming with a serious game approach, *Safety Science*, Volume 172, 2024, 106402, ISSN 0925-7535, <https://doi.org/10.1016/j.ssci.2023.106402>.
- F47: Ameen, M., Stone, R., (2023) “Human Security Interactions” *International Journal of Network Security & Its Applications* (Accepted).

- F46: Baumann, S., & Stone, R. T. (2023). Applying user-centered design and the Pi-CON methodology for vital signs sensor development. *Journal of Medical Engineering & Technology*, 47(5), 277–287. <https://doi.org/10.1080/03091902.2024.2325964>
- F45: Baumann, S., Stone, R. T., Genschel, U., & Mgaedeh, F. (2023). The Pi-CON Methodology Applied: Operator Errors and Preference Tracking of a Novel Ubiquitous Vital Signs Sensor and Its User Interface. *International Journal of Human–Computer Interaction*, 1–23. <https://doi.org/10.1080/10447318.2023.2201552>
- F44: Al-Daraghme, M. Y., & Stone, R. T. (2023). A review of medical wearables: materials, power sources, sensors, and manufacturing aspects of human wearable technologies. *Journal of Medical Engineering & Technology*, 47(1), 67–81. <https://doi.org/10.1080/03091902.2022.2097743>
- F43: Wilson, G., Stone, R. T., Schaffhausen, K.M., (2023) “Analysis of situation awareness-related incidents in the food manufacturing industry”, *International Journal of Industrial and Systems Engineering (IJISE)*, Vol. 45, No. 4, 417-431, 2023 <https://doi.org/10.1504/IJISE.2023.135772>
- F42: Hariri, M., Stone, R., “Triggered Screen Restriction: Gamification Framework” (2023) *International Journal of Advanced Computer Science and Applications West Yorkshire* Vol. 14, Iss. 11, (2023). DOI:10.14569/IJACSA.2023.01411130
- F41: Hariri, M., Stone, R., “Gamification in Physical Activity: State-of-the-Art” (2023) *International Journal of Advanced Computer Science and Applications West Yorkshire* Vol. 14, Iss. 10, (2023). DOI:10.14569/IJACSA.2023.01410105
- F40: Mgaedeh, F. Z., Stone, R. T., AlZwateen, M., Fales, C., & Abdelall, E. S. (2023). Mask usage: a mechanical investigation of COVID-19 mask design. *International Journal of Human Factors and Ergonomics*, 10(4), 331-349.
- F39: Wasfi, H., & Stone, R. (2023). “Usability and Security of Knowledge-based Authentication Systems: A State-of-the-Art Review.” *International Journal of Advanced Computer Science and Applications*, 14(5).
- F38: Wang, Z., Stone, R. T., Kim J., (2023) “Hand tool evaluation: a review of existing hand tool evaluation and selection studies” *International Journal of Human Factors and Ergonomics*, 10(1).
- F37: Wasfi, H., Stone, R. T., (2022) “The effectiveness of applying different strategies on recognition and recall textual password” *International Journal of Network Security & Its Applications (IJNSA)*, 14(2).
- F36: Wilson G.M, Stone, R. T., Mgaedeh, F.Z., & Kim, J.Y., (2022) “Analysis of Situation Awareness-Related Incidents in the Food Manufacturing Industry.” *International Journal of Industrial and Systems Engineering*. (Accepted)

- F35: Fales, C. W, Stone, R. T., Mgaedeh, F.Z., & Kim, J.Y., (2022) “Know thy user, Know thy tool: A population review and critique of current ergonomic analysis tools for populations.” *International Journal of Human Factor and Ergonomics*, 9(2).
- F34: Wang, Z., Stone, R. T., Danford-Klein, E., Fales, C., Mumani, A. A., & Schnieders, T.M. (2022). Tool Selection, “Ergonomics, and Economics: A Comparison Study Between Information Acquired from Traditional and Broader Ergonomics Hand Tool Evaluation.” *International Journal of Human Factors and Ergonomics*, 9(1).
- F33: Schweiger, D., Stone, R., & Genschel, U. (2021). Nondominant hand computer mouse training and the bilateral transfer effect to the dominant hand. *Scientific reports*, 11(1), 4211. <https://doi.org/10.1038/s41598-021-83770-4>
- F32: Mumani A, Stone RT, Momani AM, (2021) An application of Monte-Carlo simulation to RULA and REBA, *Theoretical Issues in Ergonomics Science*, 22:6, 673-688, DOI: [10.1080/1463922X.2021.1893406](https://doi.org/10.1080/1463922X.2021.1893406)
- F31: Abdelall ES, Stone RT, Rajana Nedved L, Fales C. Bend the Tool, Not the Wrist: An Ergonomic Investigation of Medical Suturing Needle Holder Design and Medical Engineering Solution. *Surgical Innovation*. 2020 Aug 17:1553350620950896. doi: 10.1177/1553350620950896. Epub ahead of print. PMID: 32804592.
- F30: Abselall, E., Eagle, Z., Finseth, T., Mumani, A., Wang, Z., Dorneich, M., & Stone, R.T., “The interaction between physical and psychosocial stressors”. *Frontiers in Behavioral Neuroscience*.14, p.63, 2020.
- F29: Schnieders, T. M., Wang, Z., Stone, R. T., Backous, G., Danford-Klein, E., Push, “The Effect of Human-Robot Interaction on Trust, Situational Awareness, and Performance in Drone Clearing Operations”. *International Journal of Human Factors and Ergonomics*. 6(2), 103-123, 2019.
- F28: * Byrd, A., Stone, R., & Anderson, R., “Dexterity: An Indicator of Future Performance in Beginning Welders ”, *The journal of Career and Technical Education Research* 43(2), 195-212, 2018.
- F27: Abdelall, E., Frank, M., Stone R., “A study of design fixation related to Additive Manufacturing “, *ASME. J. Mech. Des.* 2018; 140(4):041702-041702-10. doi:10.1115/1.4039007.
- F26: Abdelall, E., Frank, M., Stone R. “Design for Manufacturability-Based Feedback to Mitigate Design Fixation”. *Journal of Mechanical Designers Skills*, *ASME J. Mech. Des.* 140(9), 2018. doi: 10.1115/1.4040424
- F25: Stone, R.T, Schnieders, T. M., Zhong, P. “Perception Effects in Ground Robotic Tele-Operation” *International Journal of Robotics Applications and Technologies* 6 (2), pp. 42-61, 2018.

- F24: Mumani, A., Stone, R., & Wang, Z. "The effect of scanning technology and UPC placement on supermarket self-checkout". *Packaging Technology and Science*, 31(2), 83-96, 2018.
- F23: * Mumani, A., Stone, R.T. "State of the Art of User-Packaging Interaction (UPI)". *Packaging Technology and Science Journal*. 31 (6), 2018.
- F22: Mumani, A., Stone, R.T., Adbelall, E., (2018)" A design for affordances framework for product packaging: food packaging case study", *Journal of Applied Packaging Research*, (Accepted).
- F21: Wang, Z., Stone R.T., Fales, C., Danford-Klein, E., Momani, A., Schnieders, T., and Richard T Stone. (2018) "Information Acquired from Traditional and Broader Ergonomics Hand Tool Evaluation.", *Theoretical Issues in Ergonomics Science* (Accepted).
- F20: * Schnieders, T. M., Stone, R.T, "Current Work in the Human-Machine Interface for Ergonomic Intervention with Exoskeletons" *International Journal of Robotics Applications and Technologies* 5 (1), pp. 1-19, 2017.
- F19: * Schnieders, T. M., Stone, R.T, Oviatt, T., Danford-Klein, E., "ARCTiC LawE – An Upper Body Exoskeleton for Firearm Training" *Augmented Human* 2 (1), 2017.
- F18: †AbdulMohsen Al-Besher, Richard T. Stone, "The Correlation between Users' Star Rating and Usability on Mobile Applications", *International Journal of Computer and Information Engineering*,v11 (5), 2017.
- F17: * Krejci, C., Stone, R.T, Dorneich, M.C., & Gilbert, S. "Analysis of Food Hub Commerce and Participation using Agent-Based Modeling: Integrating Financial and Social Drivers," *Human Factors* (58) 1 (Special Issue: Human Factors Prize on Sustainability), pp. 58-79, 2016. <http://dx.doi.org/10.1177/0018720815621173>
- F16: † AbdulMohsen Al-Besher, Richard T. Stone, "Current state of M-government research: comparing E-government and M-government research and their effect on civic engagement", *International Journal of Electronic Governance*, 8 (2), 2016. <http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijeg>.
- F15: * Krejci, C., Dorneich, M.C., & Stone, R. "Assessing Values-Based Sourcing Strategies in Regional Food Supply Networks: An Agent-Based Approach" *The Journal on Policy & Complex Systems* 2 (2), 2015.
- F14: Byrd, A., Stone, R., & Anderson, R., "The use of virtual welding simulators to evaluate experienced welders", *Welding* 94(12), pp. 389-402, 2015.

- F13: * Richard T. Stone, † Brandon Moeller, † Robert Mayer, † Bryce Rosenquist, Darin, Van Ryswyk, † Drew Eichorn, “Biomechanical and Performance Implications of Weapon Design: A Comparison Between Bullpup and Conventional Rifle Configurations”, *Human Factors* 56 (4), pp. 684-695, 2014.
- F12: * Frank Peters, Richard Stone, †Kris Watts, † Peihan Zhong, † Alex Clemons, “Visual Inspection of Casting Surfaces”, *AFS Transactions*, 2013.
- F11: * † Peihan Zhong, Richard T. Stone, “Automated Kinesthetic Trainer Enhances Kinesthetic Memory Development”, *International Journal of Industrial Ergonomics* 43 (3), pp. 238-245, 2013.
- F10: * Richard T. Stone, † Elesee McLaurin, † Peihan Zhong, † Kris Watts, “Full Virtual Reality vs. Integrated Virtual Reality Training in Welding”, *Welding* 92(6), pp. 167s-174s, 2013.
- F9: * Richard T. Stone, “Human Power Generation Design Assessment: An Evaluation of Ergonomic Risk, Metabolic Burden, and Overall Design Efficiency”, *International Journal of Human Factors and Ergonomics* 1 (3), pp. 282-297, 2012.
- F8: * Darren Berger, Thomas Lewis, Anthea Schick, Richard T. Stone, "Comparison of Once-Daily Versus Twice-Weekly Terbinafine Administration for the Treatment of Canine Malassezia Dermatitis-A Pilot Study", *Veterinary Dermatology* 23 (5), pp. 419-425, pp. e78-e79, 2012.
- F7: * Anthony Acquaviva, Emily Miller, David Eisenmann, Richard T. Stone, Karl Kraus, “Biomechanical Testing of Locking and Non-Locking Plates in the Canine Scapula”, *Journal of the American Animal Hospital Association* 48 (6), pp. 372-378, 2012.
- F6: * Richard T. Stone, † Kristopher P. Watts, † Peihan Zhong, “Virtual Reality Integrated Weld Training”, *Welding* 90(7), pp. 136-137, 2011.
- F5: * Richard T. Stone, † Kristopher P. Watts, † Peihan Zhong and † Chen-Shuang Wei, “Physical and Cognitive Effects of Virtual Reality Integrated Training”, *Human Factors* 53 (5), pp. 558-572, 2011.
- F4: * Emily Miller, Anthony Acquaviva, David Eisenmann, Richard T. Stone, Karl Kraus, “Perpendicular Pull-Out Force of Locking Versus Non-Locking Plates in Thin Cortical Bone Using a Canine Mandibular Ramus Model”, *Veterinary Surgery* 40 (7), pp. 870-874, 2011.
- F3: * # Richard T. Stone, Ann Bisantz, James Llinas, Victor Paquet, “Augmented Multisensory Interface Design (AMID): A Human Centric Approach to Uni-sensory and Multisensory Augmented Reality Design”, *Journal of Cognitive Engineering and Decision Making* 3 (4), pp. 362-388, 2009.

F2: * Ann Bisantz, Richard Stone, John Pfautz, Adam Fouse, Mike Farry, Emily Roth, Allen L Nagy, Gina Thomas, “Visual Representations of Meta-Information”, *Journal of Cognitive Engineering and Decision Making* 3 (1), pp. 67-91, 2009.

F1: * Collin Drury, Max Atiles, Mohan Chaitanya, James Lin, Clara Marin, Mahyiar Nasarwanji, Doug Paluszak, Chris Russell, Richard T. Stone, Micheal Sunm, “Vicarious Perception of Postural Discomfort and Exertions”, *Ergonomics* 49 (14), pp. 1470-1485, 2006.

G. Books and Book Chapters.

G1: Stone, R.T., Schnieders, T.M., & Zhong, P. (2020). Perception Effects in Ground Robotic Tele-Operation. In (Eds.) *Robotic Systems: Concepts, Methodologies, Tools, and Applications*. p1534-1554. IGI Global.

G2: Schnieders, T.M., & Stone, R.T. (2019). A Current Review of Human Factors and Ergonomic Intervention with Exoskeletons. In Zhang, D., Wei, B. (Eds.) *Novel Design and Applications of Robotics Technologies*. p217-246. IGI Global.

H. Bulletins, Reports, or Conference Proceedings That Have Undergone Stringent Editorial Review by Peers (in print or accepted).

H67: Stone, R. T., Westby, B., Jaskowiak, N., Fales, C., “Forensic Footwear: A Retrospective of the Development of the MANTIS Shoe Scanning System”. Human Factors and Ergonomics Societies 68th Annual Conference, Phoenix, AZ, September 9-13, 2024. (ACCEPTED)

H66: Jaskowiak, N., Stone, R. T., Mgaedeh, F., “A Review of Human Factors Research on People Who Crohet”. Human Factors and Ergonomics Societies 68th Annual Conference, Phoenix, AZ, September 9-13, 2024. (ACCEPTED)

H65: Stone, R. T., Westby, B., Mgaedeh, F., “Harvesting Hope: Innovations in Food Security and Ending Hunger”. Institute of Industrial and Systems Engineering 2024 Annual Conference, Montreal, Quebec Canada, May 18-21, 2024.

H64: Westby, B., Stone, R. T., Mgaedeh, F., “Where has the power gone? A five-year review of rigid powered exoskeletons”. Institute of Industrial and Systems Engineering 2024 Annual Conference, Montreal, Quebec Canada, May 18-21, 2024.

H63: Jaskowiak, N., Stone, R. T., Mgaedeh, F., “An Analysis of Methods for Ergonomics Research in Sports” Institute of Industrial and Systems Engineering 2024 Annual Conference, Montreal, Quebec Canada, May 18-21, 2024.

- H62: Hargrave, C., Sanders, D.H., Gomes, C.L., Soupir, M.L., Stone, R. T., “Engineering Faculty Reflection on the NCORE Experience" Iowa State Conference on Race and Ethnicity 2024 Annual Conference, Ames, Iowa, October 18-21, 2024.
- H61: Kim, J., Stone, R. T., “The Effects of Variable Tension Forces on Exoskeletons’ Effectiveness”. Human Factors and Ergonomics Societies 67th Annual Conference, Atlanta, GA, October 23-27, 2023.
- H59: Westby, B., Stone, R. T., “Law Enforcement Uniforms and Public Perception: An Overview and Pilot Study”. Human Factors and Ergonomics Societies 67th Annual Conference, Atlanta, GA, October 23-27, 2023.
- H58: Mgaedeh. F., Stone, R. T., “The effects of face mask types, athletic levels, and caffeine intake on employee performance, productivity, and perception”. Human Factors and Ergonomics Societies 67th Annual Conference, Atlanta, GA, October 23-27, 2023.
- H57: Stone, R. T., Kim, J., Xu, C., Mgaedeh. F., Fales, C., Westby, B., “Effects of semi-automatic pistol slide pull device on law-enforcement racking process”. Human Factors and Ergonomics Societies 66th Annual Conference, Atlanta, GA, October 10-14, 2022.
- H56: Stone, R., Kim, J., Fales, C., “The effectiveness of active shooter responses for civilians and law enforcement”. Human Factors and Ergonomics Societies 66th Annual Conference, Atlanta, GA, October 10-14, 2022.
- H55: Stone, R., Midhun, V., Mgaedeh, F., Wang, Z., Westby, B., “Evaluation of Latest Computer Workstation Standards”. Human Factors and Ergonomics Societies 66th Annual Conference, Atlanta, GA, October 10-14, 2022.
- H54: Mgaedeh, F., Stone, R., Abdelall, Helton, E., “Retail Workers during COVID-19: Face Mask Effects on Performance, Productivity, and Perception under Different Workloads”. Human Factors and Ergonomics Societies 66th Annual Conference, Atlanta, GA, October 10-14, 2022.
- H53: Stone, R. T., Pujari, S. Mumani, A., Fales, C., Ameen, M., “ Cobot And Robot Risk Assessment (CARRA) method: an Automation Level-Based Safety Assessment Tool to Improve Fluency in Safe Human Cobot/Robot Interaction”. “ Human Factors and Ergonomics Societies 65th Annual Conference, Baltimor, MD, October 4-7, 2021.
- H52: Middelcoop, C., Fales, C., Stone, R. T., Kim, J., Schaffhausen, K., Mgaedeh, F., “Effects of Experience on Gymnasts’ Kinematics and Performances”. “ Human Factors and Ergonomics Societies 65th Annual Conference, Baltimor, MD, October 4-7, 2021.

- H51: Fales, C, Stone, R. T., Abdelall, E.S., Baumann, S., “Development and evaluation of Aricultural Cumulative Risk Evaluation System (ACRES): An ergonomic tool usability study across various lifting and postural assessment system for novice users”. “ Human Factors and Ergonomics Societies 65th Annual Conference, Baltimor, MD, October 4-7, 2021.
- H50: Wang, Z., Stone, R. T., Baumann, S., “Financial Orientated Heuristic Evaluation for Hand Tools”. “ Human Factors and Ergonomics Societies 65th Annual Conference, Baltimor, MD, October 4-7, 2021.
- H49: Stone, R. T., Mgaedeh, F., Fales, C., Xu, C., “Engineering Approach to Unintentional Firearm Discharges”. Human Factors and Ergonomics Societies 64th Annual Conference, Online October 5-9, 2020.
- H48: Fales, C., Stone, R. T., Van Groningen, D., Westby, B., “Tread Patterns and the Effect on Basketball Player Slippage”. Human Factors and Ergonomics Societies 64th Annual Conference, Online October 5-9, 2020.
- H47: Stone, R. T., Schnieders, T., Wang, M., Abdelall, E., “Exploring the Effect of Visual Information Degradation On Human Perception And Performance In A Human-Telerobot System”. Human Factors and Ergonomics Societies 64th Annual Conference, Online October 5-9, 2020.
- H46: Stone, R. T., Schnieders, T., Push, K., Terry, S., Truong, M., Seshie, I., Socha, K. “Human-Robot Interaction with Drones and Drone Swarms in Law Enforcement Clearing Operations”. Human Factors and Ergonomics Societies 63th Annual Conference, Seattle WA. Ocober 28- November 1, 2019.
- H45: Stone, R. T., Sobczak, Z., Fales, C., Mumani, A., Abdelall, E., Schnieders, T. “An ergonomic evaluation of Pop-top can opener design”. Human Factors and Ergonomics Societies 63th Annual Conference, Seattle WA. Ocober 28- November 1, 2019.
- H44: Stone, R. T., Janus, O., Schnieders, T. “Ergonomic Analysis of An Affordance Tool for Modern Kitchen Knives”. Human Factors and Ergonomics Societies 63th Annual Conference, Seattle WA. Ocober 28- November 1, 2019.
- H43: Middelkoop, C., Stone, R. T. “Gymnastics Vault Board Design: A Comparison of Spring Configuration and Style of Spring-Preliminary Study”. Human Factors and Ergonomics Societies 63th Annual Conference, Seattle WA. Ocober 28- November 1, 2019.
- H42: FNUVA, Srikrishnan., Stone, R. T., Xu, C., “An Engineering Approach to Storage and Access in High Priority Scenarios”. Human Factors and Ergonomics Societies 63th Annual Conference, Seattle WA. Ocober 28- November 1, 2019.
- H41: Baumann, S., Stone, R. T., Abdelall, E., Srikrishnan, V., Schnieders, T., Fales, C., “Implementing Blockchain to Enhance Usability of Patient-Generated Data”. Human Factors and Ergonomics Societies 63th Annual Conference, Seattle WA. Ocober 28- November 1, 2019.

- H40: Stone, R. T., Moeller, B., Schnieders, T., Mumani, A. “Vastus and Patellar Protection with Rang of Motion Pad – Advanced Personal Protection Equipment”. Human Factors and Ergonomics Societies 62th Annual Conference, Philadelphia PA. October 1-5, 2018.
- H39: Stone, R. T., Janusz, O, Schnieders, T., “Ergonomic Analysis of Modern Day Kitchen Knives”. Human Factors and Ergonomics Societies 62th Annual Conference, Philadelphia PA. October 1-5, 2018.
- H38: Stone, R. T., Fales, C. W., Jose, D., Schnieders, T., Krejci, C., Wang, Z., Schweiger, D., Hernandez, C. (n.d.). The Impact of Scientific Management Principles on Food Hub”. Human Factors and Ergonomics Societies 62th Annual Conference, Philadelphia PA. October 1-5, 2018.
- H37: Wang, Z., Stone, R. T., & Mumani, A. (2018). How Packaging Characteristics Change the Perception of Product Net Weight. Human Factors and Ergonomics Societies 62th Annual Conference, Philadelphia PA. October 1-5, 2018.
- H36: Schnieders, T. M. & Stone, R. T., “Ranking Importance of Exoskeleton Design Aspects” Human Factors and Ergonomics Societies 62th Annual Conference, Philadelphia PA. October 1-5, 2018.
- H35: Potter, L., Stone, R. T., Fyock, A., Popejoy-Sheriff. D., “Implementing a Course-based Undergraduate Research Experience (CURE) into an IE Curriculum” ASEE Annual Conference 2018, Saltlake City, Utah.
- H34: Fyock, A., Potter, L., Stone, R., Popejoy-Sheriff. D., “Filling the Graduate Pipeline via Course-based Undergraduate Research Experiences (CUREs)”. *Proceedings of the 2018 IISE Annual Conference, Orlando, Florida.* (BEST PAPER AWARD)
- H33: Velineni, A., Gunay, E. E., Park, K., Schnieders, T. M., Stone, R. T., & Okudan-Kremer, G. E., “An Investigation on Selected Factors that Cause Variability in Additive Manufacturing”, *Proceedings of the 2018 IISE Annual Conference, Orlando, Florida.*
- H32: * Richard T. Stone, Peihan Zhong, & Thomas M. Schnieders. “Wayfinding in human-robot collaborated exploration: Orientation awareness and its enhancement” Human Factors and Ergonomics Societies 61th Annual Conference, Austin TX. October 19-13, 2017.
- H31: * Thomas M. Schnieders, Richard T. Stone, & Erik Danford-Klein. “The Effect of Locking out Radial and Ulnar Deviation with an Upper Body Exoskeleton on Handgun Training” Human Factors and Ergonomics Societies 61th Annual Conference, Austin TX. October 19-13, 2017.

- H30: * Thomas M. Schnieders, Richard T. Stone, & Erik Danford-Klein. "The Effect of Locking out Wrist Flexion and Extension with an Upper Body Exoskeleton on Handgun Training" Human Factors and Ergonomics Societies 61th Annual Conference, Austin TX. October 19-23, 2017.
- Esraa Abdelall, Matthew Frank and Richard Stone, "The Effect of Engineering Major on Design Novelty and Constraints Violation", International Conference on Design Creativity, Accepted Oct. 2017.
- H29: * Richard T. Stone, Thomas M. Schnieders, Chen Wei. "The Impact of Inspectors Cognitive Style on Performance in Various Visual Inspection Display Tasks" Human Factors and Ergonomics Societies 60th Annual Conference, Washington DC. September 19-23, 2016.
- H28: * Richard T. Stone, "The Impact of Inspectors cognitive style on performance in various visual inspection display tasks" Human Factors and Ergonomics Societies 60th Annual Conference, Washington DC. September 19-23, 2016.
- H27: * McGrath, K., Rivero, V., & Stone, R.T. (2015). "Measuring the Effectiveness of Team-Based Learning Outcomes in a Human Factors Course," *Proceedings of the Industrial and Systems Engineering Conference*. Anaheim, CA, 21-24 May 2016.
- H26: * Krejci, C., Stone, R., Dorneich, M.C., & Gilbert, S. (2015). "Evaluating Producer Selection Policies in Intermediated Regional Food Distribution Systems: An Agent-Based Approach," *2015 Computational Social Science Society of the Americas (CSSSA) conference*. Santa Fe, NM, October 29 - November 1.
- H25: * Curtis, M.K., Dawson, K., Jackson, K., Litwin, L., Meusel, C., Dorneich, M.C., Gilbert, S., Kelly, J., Stone, R., & Winer, E. (2015). "Mitigating Visually Induced Motion Sickness: A virtual hand-eye coordination task," *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Los Angeles, CA, 26-30 October 2015.
- H24: * Dorneich, M.C., Bickelhaupt, S., Dorius, C., Artz, G., Bender, H., Bestler, L., Bestler, L., Caissie, B., Gahn, S., Jacobs, K., Lamm, M.H., Orgler, L., Rongerude, J., Smiley-Oyen, A., & Stone, R.T. (2015). "Measuring the Effectiveness of Team-Based Learning Outcomes in a Human Factors Course," *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Los Angeles, CA, 26-30 October 2015.
- H23: * Richard T. Stone, Rob Mayer, Bryce Rosenquist "Initial Biomechanical and Performance Implications of Weapon Design: Comparison of Bullpup and Conventional Configurations" Human Factors and Ergonomics Societies 58th Annual Conference, Chicago, IL. October 27-31, 2014.
- H22: * Morgan Hampel, Richard T. Stone, "Improving the Diagnosis of Potential Concussion Victims in American Football through Hampel Tackling Criterion" Human

- Factors and Ergonomics Societies 58th Annual Conference, Chicago, IL. October 27-31, 2014.
- H21: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *Reducing Beginning Welders' Anxiety by Integrating Virtual Reality Simulations*. Western Region American Association for Agricultural Education Conference, Kona, HI. Distinguished Manuscript 1st place.
- H20: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *Dexterity: An Indicator of Future Performance in Beginning Welders?* Western Region American Association for Agricultural Education Conference, Kona, HI.
- H19: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *The Effect of Virtual Reality Simulation on Anxiety in a Welding Training Program*. Proceedings of the National Agricultural Mechanics Professional Development Blue Ribbon Papers Presentation Conference, Louisville, KY., Distinguished Manuscript 2nd place.
- H18: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *Using Dexterity to Determine Trainability in Selecting Participants for Welding Programs*. Proceedings of the National Agricultural Mechanics Professional Development Blue Ribbon Papers Presentation Conference, Louisville, KY., Distinguished Manuscript 3rd place.
- H17: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). Utilizing Dexterity to Predict Future Performance of Beginning Welders. Poster presented at the American Association for Agricultural Education Conference, Salt Lake City, UT. Distinguished Research Poster.
- H16: * Richard T. Stone, “Actively Guided Practice Enhances Kinesthetic Memory” Human Factors and Ergonomics Societies 57th Annual Conference, San Diego, CA. September 30- October 4, 2013. Acceptance rate ~70%.
- H15: * Richard T. Stone, Michael Dorneich, Stephen Gilbert, † Elease McLaurin “Human Differences in Navigational Approaches During Tele-Robotic Search” Human Factors and Ergonomics Societies 57th Annual Conference, San Diego, CA. September 30- October 4, 2013. Acceptance rate ~70%.
- H14: * † Vikram Vyawahare, Richard T. Stone “Evaluation of bimanual stretched-string single object manipulation for virtual assembly with haptics” ASME 2013 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE, Portland Oregon. August 4-7, 2013. Acceptance rate ~75%.
- H13: * † Rob Mayer, † Brandon Moeller, † Vince Kaliwata, † Ben Zweber, Richard T. Stone, Matt Frank “Educating Engineering Undergraduates: Effects of Scaffolding in a Problem Based Learning Environment” Human Factors and Ergonomics Societies 56th Annual Conference, Boston, MA. October 22-26, 2012. Acceptance rate ~75%.
- H12: * Richard T. Stone, † Kris Watts, † Bryce Rosenquist “Evaluation of 3D Television:

Impact on Depth Perception” Human Factors and Ergonomics Societies 56th Annual Conference, Boston, MA. October 22-26, 2012. Acceptance rate ~75%.

- H11: *† Elesee McLaurin, Richard T. Stone “Comparison of Virtual Reality Training vs. Integrated Training in the Development of Physical Skills” Human Factors and Ergonomics Societies 56th Annual Conference, Boston, MA. October 22-26, 2012. Acceptance rate ~75%.
- H10: * Alex R. zur Linden, Richard T. Stone “Comparison of the accuracy, timing and ergonomics of a Wii mote to a standard computer mouse for image interpretation” American College of Veterinary Radiology (AVCR) 2012 Conference, Las Vegas, Nevada. October 18-21, 2012. Acceptance rate ~80%.
- H9: * †Vikram Vyawahare, Richard T. Stone “Asymmetric interface and interactions for bimanual virtual assembly with haptics” ASME 2012 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE, Chicago IL. August 12-15, 2012. Acceptance rate ~80%.
- H8: * Richard T. Stone “Integrated Virtual Reality Training: The Biomechanical and Cognitive implications of design” 15th Annual Applied Ergonomics Conference, Nashville, TN. March 26-29, 2012. Acceptance rate ~85%.
- H7: * Richard T. Stone, † Chen-Shuang Wei, “Exploring the Linkage between Facial Expression and Mental Workload for Arithmetic Tasks” Human Factors and Ergonomics Societies 55th Annual Conference, Las Vegas, NV. September 19-23, 2011. Acceptance rate ~ 70%
- H6: * Richard T. Stone, Ann Bisantz, James Llinas, Victor Paquet, “Improving Tele-Robotic Navigation through Augmented Reality Devices” Human Factors and Ergonomics Societies 53th Annual Conference. San Antonio, TX. October 19-23th, 2009. Acceptance rate ~75%.
- H5: * DuPon Cao, Theresa Guarrera, Melisa Jenkins, Pria Pennathur, Ann Bisantz, Richard Stone, Mike Farry, John Pfautz, Emily Roth, “Evaluating the Creation and Interpretation of Causal Influence Models” Human Factors and Ergonomics Societies 53th Annual Conference. San Antonio, TX. October 19-23th, 2009. Acceptance rate ~70%.
- H4: *# Richard T. Stone, Ann Bisantz, James Llinas, Victor Paquet, “Improving Tele-robotic Landmine Detection through Augmented Reality Devices.” Human Factors and Ergonomics Societies 52th Annual Conference. New York, NY. September 22-26th, 2008. Acceptance rate ~70%.
- H3: * Richard T. Stone, “The Biomechanical and Physiological Link Between Archery Techniques and Performance,” Human Factors and Ergonomics Societies 51th Annual Conference. Baltimore, MD. October 1-5th, 2007. Acceptance rate ~70%.
- H2: * Richard T. Stone, “Bulls eye: Biomechanical and EMG Analysis Expose Techniques

That Reduce Risk and Improve Performance,” Sixth International Scientific Conference on Prevention of Work-Related Musculoskeletal Disorders (PREMUS). Boston, MA, 2007. Acceptance rate ~70%.

H1: * Ann Bisantz, John Pfautz, Richard T. Stone, Emily Roth, Adam Fouse, “Assessment of Display Attributes for Displaying Meta-Information on Maps,” Human Factors and Ergonomics Societies 50th Annual Conference, San Francisco CA. October 16 – 20th, 2007. Acceptance rate ~65%.

I. Bulletins, Reports, or Conference Proceedings That Have Not Undergone Stringent Editorial Review by Peers (in print or accepted).

I9: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *Reducing Beginning Welders’ Anxiety by Integrating Virtual Reality Simulations*. Presentation presented at the Association for Career and Technical Education Research Conference, Nashville, TN.

I8: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *Dexterity: An Indicator of Future Performance in Beginning Welders?* Presentation presented at the Association for Career and Technical Education Research Conference, Nashville, TN.

I7: *†Alex Byrd, Richard Stone, & Ryan Anderson. (2014). *The Use of Virtual Welding Simulators to Evaluate Experienced Welders*. North Central Region American Association for Agricultural Education Conference, Morgantown, WV.

I6: Richard T. Stone, Frank Peters, Kris Watts, “Visual Inspection Effective Methods for Task Performance Augmentation”, National T&O Conference, Chicago, IL, December 9-11, 2011.

I5: Richard T. Stone, Frank Peters, Kris Watts, “Visual Inspection: Improvements Through Cognitive Ergonomics”, National T&O Conference, Chicago, IL, December 9-11, 2010.

I4: Richard T. Stone, Frank Peters, Kris Watts, “Visual Inspection: Physiological and Cognitive Implications and Applications for the Casting Industry”, National T&O Conference, Chicago, IL, December 9-11, 2010.

I3: * Mike Farry, John Pfautz, Zach Cox, Ann Bisantz, Richard Stone, Emily Roth, “An Experimental Procedure for Evaluating User-Centered Methods for Rapid Bayesian Network Construction”, Bayesian Modeling Applications Workshop of the Uncertainty in Artificial Intelligence Conference. 15 July 2008.

I2: * John Pfautz, Mike Farry, Ann Bisantz, Adam Fouse, Richard T. Stone, Emily Roth, Ted Fichtl, “Acquiring Representations of Meta-Information to Enhance Battle Space Awareness (AMEBA)”, AFRL/HECS. 15 June 2007.

I1: Richard T. Stone, Wayne Walter, “AQUATO: A Submersible Autonomous Robot for

Underwater Data Gathering”, Proceedings of the 15th International Conference on Systems Engineering-ICSEng 2002, Las Vegas, 6-8 August 2002.

J. Abstracts (in print or accepted) and Technical Presentations

- J11: Richard T. Stone, “Best Practices in the development of Effective AR/VR Instructional Technologies”, 2024 Institute of Industrial and Systems Engineers Conference and Expo (IISE) proceedings, Montreal, Canada, May 18-21, 2024.
- J10: Richard T. Stone, “Backpack selection: A human factors and engineering analysis detailing the impact of backpack selection”, 2024 Institute of Industrial and Systems Engineers Conference and Expo (IISE) proceedings, Montreal, Canada, May 18-21, 2024.
- J9: Braden Westby, Richard T. Stone, Fatima Mgaedeh “Cockpit Environment Effects on Pilot Operational Speed”, 2024 Institute of Industrial and Systems Engineers Conference and Expo (IISE) proceedings, Montreal, Canada, May 18-21, 2024.
- J8: Braden Westby, Richard T. Stone, Fatima Mgaedeh “A Comparison of Trust and Slip and Fall Events for Various Roofing Materials”, 2024 Institute of Industrial and Systems Engineers Conference and Expo (IISE) proceedings, Montreal, Canada, May 18-21, 2024.
- J7: Richard T. Stone, †Minglu Wang, “Advantages of Multi-touch vs. Joystick Navigation Interface in Real World Tele-Robotic Search Tasks”, 19th Industrial Engineering Research Conference (IERC) proceedings, Cancun, Mexico, June 5-9, 2010.
- J6: Richard T. Stone, “Human Assisted Energy Generation: Risks and Benefits,” 18th Industrial Engineering Research Conference (IERC) proceedings, Miami, FL, May 30 – June 1, 2009.
- J5: Richard T. Stone, “The Ageing Eye and Universal Design”, 18th Industrial Engineering Research Conference (IERC) proceedings, Miami, FL, May 30 – June 1, 2009.
- J4: Richard T. Stone, Ann Bisantz, James Llinas, Victor Paquet, “Multisensory Augmented Reality”, 17th Industrial Engineering Research Conference (IERC) proceedings, Vancouver, Canada, 17 – 21 May 2008.
- J3: Richard T. Stone, Priya Pennathur, Mahyiar Nasarwanji, “Real world vs. Virtual Reality Training: Analysis of Task Complexity on Cognitive Mechanisms and Performance”, 17th Industrial Engineering Research Conference (IERC) proceedings, Vancouver, Canada, 17 – 21 May 2008.
- J2: Mahyiar Nasarwanji, Richard T. Stone, Priya Pennathur, “Assessment of Upper Extremity Posture of Hairstylists: An Observational Ergonomic Evaluation”, 17th Industrial Engineering Research Conference (IERC) proceedings, Vancouver, Canada, 17 – 21 May 2008.

J1: Priya Pennathur, Mahiyar Nasarwanji, Richard T. Stone, Carolyn Joseph, “Socio-Technical Systems Approach in a Service Setting: A Case Study in Domestic Violence Prevention Facility”, 17th Industrial Engineering Research Conference (IERC) Proceedings, Vancouver, Canada, 17 – 21 May 2008.

L. Patents, Disclosures and Technology Transfer Activities

L1: * Richard T. Stone, Iris Rivero, and Robert Kizer, Preliminary Patent Filed “Advanced nasal slider of intubation” Filed via ISURF 04447 as of 2015.

L2: * Richard T. Stone, and Iris Rivero, and Robert Kizer, Preliminary Patent Filed “Hydrogel guided nasal gastral tube” Filed via ISURF 04448 as of 2015.

L3: * Richard T. Stone, Iris Rivero, Preliminary Patent Filed “Fast expanding hydrogel” Filed via ISURF 04449 as of 2015.

L4: Mathews, C., Myren, J., Matessa, M., Patel, S., Elbert, D., Stone, R.T., Fales, C.W. (2022) Bezel Flight Control Interface for Pilots (U.S. Patent No. 11533813 Application No. 17382032). U.S. Patent and Trademark Office.(Awarded 12/20/2022)

Journal Articles Submitted and Currently Under Review

M1: Ameen, M, Stone, R. T., Operational Security via AI and Machine Vision Modeling *Ergonomics* (Submitted 4/13/24)

M2: Stone, R,T, Westby., The Physical and Cognitive effects of Vibrations in Flight Operations. *Human Factors* (Submitted 2/25/24)

M3: Wang, Z., Stone, R,T., A NOVEL APPROACH FOR INDUSTRIAL HAND AND POWER TOOL SELECTION: COMPREHENSIVE HAND TOOL EVALUATION FOR COMPREHENSIVE KNOWLEDGE & EXPECTED RETURNS (C.H.E.C.K.E.R.) *Human Factors* (Submitted 1/22/24).

III. INSTRUCTION AND SUPERVISION

A. Instruction for ISU

Course	Title	Credits
IE 681	Cognitive Engineering	3
IE 677	Human Augmentation Engineering	3
IE 671	Research Practicum in Ergonomics	3
IE 577	Human Factors	3
IE 578X	Human Centered Manufacturing	3
IE 576	Human Factors in Product Design	3
IE 571	Occupational Biomechanics	3
IE 537/437	Reliability and Safety Engineering	3
IE 441	Industrial Engineering Senior Design	3
IE 271	Applied Ergonomics and Work Design	3
IE 148	Information Engineering	3
IE 305	Engineering Economics	3
HCI 587	Models and Theories in Human Computer Interaction	3
AER X	Spaceflight Operations Training Course	3*
HON 290H	Special Projects Honors	1

Course Number	Term	# Students Enrolled	Hrs./Week of TA/Grader Support	Name(s) of co-instructor(s)	Overall Teaching Effectiveness (on 5-point scale)
IE 681	Fall 2011	10	0	X	5.0
IE 671	Spring 2012	9	0	X	5.0
	Spring 2014	11	0	Dorneich	5.0
	Spring 2016	13	0	Dorneich	4.57
IE 578 X A1 and A2	Spring 2018	18	0	X	5.0
	Spring 2019	16	0	X	4.70
IE 577 X and XE A1 and A2	Fall 2008	10	0	X	4.75
	Fall 2009	19	0	X	4.78
	Fall 2010	38	0	X	4.87
	Fall 2011	49	0	X	4.59
	Fall 2012	49	10	X	5.0
	Fall 2013	45	0	X	4.29
	Fall 2014	65	0	X	4.74
	Fall 2015	74	20	X	4.68
	Fall 2016	82	20	X	4.70
	Fall 2017	91	20	X	4.89
	Fall 2018	90	20	X	4.83
	Fall 2019	81	20	X	4.67
	Fall 2020	67	20	X	4.85
	Fall 2021	85	0 (URA 10)	X	4.00
Fall 2022	69	20	X	4.00	
Fall 2023	72	20	X	4.68	
IE 576	Spring 2014	18	0	Dorneich	4.70

	Fall 2015	13	0	Dorneich	5.0
IE 571 X and XE	Fall 2012	9	0	X	5.0
	Spring 2015	27	0	X	4.71
	Spring 2017	19	0	X	4.70
	Fall 2019	37	0	X	3.9
IE 271	Spring 2011	65	20	X	4.58
	Spring 2012	109	20	X	4.28
	Spring 2013	91	20	X	4.37
	Spring 2014	119	20	X	4.55
	Spring 2015	144	30	X	4.49
	Spring 2016	160	40	X	4.46
	Spring 2017(1)	86	20	X	4.56
	Spring 2017(2)	78	20	X	4.73
	Spring 2018	42	10	X	4.00
Spring 2019	45	10	X	3.78	
IE 148	Spring 2009	31	20	X	3.89
	Spring 2010	39	20	X	4.36
IE 305	Summer 2019	98	20	X	4.00
HCI 587	Summer 2017	29	0	X	4.35
	Summer 2018	18	0	X	4.00
	Summer 2019	31	0	X	4.45
	Summer 2020	29	0	X	4.65
	Summer 2021	32	0	X	4.67
	Summer 2022	29	0	X	4.55
Summer 2023	21	0	X	5.0	
IE 437	Spring 2020	13	0	X	5.0
	Summer 2020	4	0	X	5.0
	Spring 2022	11	0	X	5.0
	Spring 2023	18	0	X	5.0
	Spring 2024	23	0	X	5.0
IE 537	Spring 2020	13	0	X	5.0
	Summer 2020	5	0	X	5.0
	Spring 2022	12	0	X	5.0
	Spring 2023	3	0	X	4.67
	Spring 2024	6	0	X	5.0
IE 441	Spring 2021	41	20	X	4.83
	Spring 2022	44	20	X	4.58
	Spring 2023	43	20	X	4.86
IE 677	Spring 2021	9	0	X	5.0
	Spring 2024	9	0	X	5.0

Note: In addition, I co-taught by directing the cognitive projects in this class for Dr. Mirka (the instructor of record) Research Practicum in Ergonomics, IE 671X, (S09 = 9, S10 = 9) 9 Students, 0 TA

C. Curricular Development Activity

Courses expanded and enhanced

Reliability and Safety Engineering, IE 537 / 437X, 3 credits, - Created all of the materials for and taught for the first time in 9 years IE 537. Dr. Stone created a fully online section with all videos recorded and created 9 interactive Laboratories. Created and taught 13 interactive lectures with 9 labs to the first every IE 437 / 537 sitdown section.

Human Centered Manufacturing, IE 587, 3 credits, - Created this hands on NSF funded course that was both an advanced Manufacturing class and Human Factors Class. Created 7 Labs, 3 major project and 13 Lectures, in addition Dr. Stone organized business and government sponsors to aid in the support of the class.

Occupational Biomechanics, IE 571, 3 credits, - (Expanded the course materials in 2012, greatly redeveloped this course to include more medical applications, and direct system/tool design in 2014, In December of 2016 the course was expanded to include 3 new lectures/labs that are focused on practical lab skills and equipment training)

Human Factors, IE 577, 3 credits, - (Fully developed and revitalized the course in 2008, updated for 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2023)

Research Practicum in Ergonomics, IE 671X, 3 credits - (oversaw and developed four large scale human performance experiments to teach students research steps and execution, in 2016 this course was restructures to increase team effectiveness and streamline the research process, have added in the running of this class in all subsequent years - 2018)

Applied Ergonomics and Work Design, IE 271, 3 credits - (2017/18 completely redesigned this course for CURE paradigm and latest innovations/technologies)

Models and Theories in HCI, HCI 587X, 3 credits - (updated materials and added two weeks of new material to support current standards in industrial practice)

Spaceflight Operations Training Course, AERO X, 3* credits - (this class was founded in the summer of 2014 by Clayton Anderson and Tor Finseth, I was involved as one of the founding faculty and I developed materials and lectured in areas having to do with you capabilities, training and team structures, I have been asked to (and have accepted) participate again this year in the second running of this special and very innovative academic experience).

Courses proposed, created, and taught

Reliability and Safety, IE 537 / 437, 3 credits, -I sought funding for and received a grant to completely create this new class, Dr. Stone added a fully functioning online section and a very hands hands-on curriculum that is being taught in spring 2020/21/22/23.

Human Centered Manufacturing, IE 578, 3 credits, - (Created (with the significant help of NSF team members) a new innovative class in the area of human creativity, rapid prototyping and design for manufacturing)

Cognitive Engineering, IE/HCI 681X, 3 credits, (created and developed) expect full capacity of 12 students, (in addition I add a distance section to accommodate multiple requests), 0 TA

Human Factors in Design, IE 576, 3 credits, (redeveloped and created with M Dorneich), 0 TA

Augmentation Engineering IE 677, this course is an innovative approach to preparing human workers for various environmental (physical and social) and technological (HRI, Exoskeleton, EVO suite, Hazmat technology) challenges that are present in many modern jobs. This is a very lab intensive course that will enable students to optimize work in a way beyond that of classical work redesign and tools assignments interventions.

D. Supervision of Graduate Student Research for Which Candidate is Primary Advisor or Co-Advisor

Current Students

(13-PhD, 1-MS)

Neil Jaskowiak, PhD Industrial Engineering, May 2024-present, work in progress, degree expected May 2028.

Ahmed Almarzooqi, PhD Human Computer Interaction, Coming September 2024-present, work in progress, degree expected May 2028.

Hasan Sagga, PhD Human Computer Interaction, Coming September 2024-present, work in progress, degree expected May 2028.

Bassam Alabbas, PhD Human Computer Interaction, Coming September 2024-present, work in progress, degree expected May 2029.

Abduljaleel Hosawi, PhD Human Computer Interaction (IE), Fall 2023-present, work in progress, degree expected May 2027.

Braden Westby, PhD Industrial Engineering, September 2022-present, work in progress, degree expected May 2026.

Zhonglun Wang, PhD Industrial Engineering, September 2015-present, work in progress, degree expected December 2024.

Mohammed Al-Daraghme, PhD Industrial Engineering, January 2021-present, work in progress, degree expected May 2025.

Mohammed Ameen, PhD Human Computer Interaction (IE), January 2020-present, work in progress, degree expected August 2024.

Majed Hariri, PhD Industrial Engineering, January 2022-present, work in progress, degree expected May 2025.

Samer Alhebaishi, PhD Human Computer Interaction, September 2022-present, work in progress, degree expected May 2026.

Griffin Wilson, PhD Industrial Engineering, January 2023-present, work in progress, degree expected May 2027.

Varun Srikrishnan, PhD Industrial Engineering, January 2023-present, work in progress, degree expected May 2027.

Bassam Alabbas, MS Industrial Engineering, September 2022-present, work in progress, degree expected May 2024.

Completed Students

(10-PhD, 36-MS)

Minglu Wang, MS Industrial Engineering, August 2008-August 2010, “TRUST, Situation Awareness and Automation Use: Exploring the Effect of Visual Information Degradation on Human Perception and Performance in Human-Telerobot Systems”, granted August 2010, Pursuing PhD. in Statistics, NC State University.

Chen-Shuang Wei, MS Industrial Engineering, August 2008-August 2010, “The Impact of Inspectors' Cognitive Style on Performance in Various Visual Inspection Display Tasks”, granted December 2010, Employed Taiwan ES.

Hong Yul Jun, MS Industrial Engineering, September 2009-January 2011, “The Effect of Composite vs. First Person Perspective Views in Real World Tele-Robotic Operations”, granted January 2011, Employed Korean Air.

Peihan Zhong, MS Industrial Engineering, September 2009-2011, “Automated Kinesthetic Training”, granted September 2011, transitioned to Ph.D. Student Fall 2011, ISU.

Kris Watts, MS Industrial Engineering, September 2009-December 2011, (Frank Peters, co-advisor), “Augmenting Visual Inspection in the Casting Industry”, granted December 2011, Employed Caterpillar.

Zach Sobczak, MS Industrial Engineering, September 2010-September 2012, “Development and Examination of Pop-Top Can Openers and How They Improve Accessibility for an Aging Population”, granted April 2012, Employed United Health Systems.

Alex Clemens, MS Industrial Engineering, (Frank Peters, co-advisor), September 2010-September 2012, “Cognitive Style and Visual inspection”, granted September 2012, Employed Boston Scientific.

Brandon Moeller, MS Industrial Engineering, September 2011-May 2013, “Biomechanical Impact of Lower-Body PPE on the American Football Athlete: An Evaluation and Redesign of the Knee Pad”, granted May 2013, Employed John Deere.

Elease McLaurin, MS Industrial Engineering, September 2011-May 2013, “A Comparison of Performance on Tele-Robotic Search Task Under Different Conditions of Navigation”, granted May 2013, Pursuing PhD. in Industrial Engineering, UW at Madison.

Rob Mayer, MS Industrial Engineering, September 2011-May 2013, “How Engineers Learn: A Study of Problem-Based Learning in the Classroom and Implications for Course Design”, degree granted May 2013, Employed Lockheed Martin.

Sicong Chen, MS Industrial Engineering, September 2010-July 2013, “The Effect of table Tennis Racket Design on Wrist Motion”, degree granted July 2013, Employed Google.

Peihan Zhong, PhD Industrial Engineering, September 2009-December 2013, “Perception in Remote Navigation”, granted December 2013, Currently Post-Doc.

Morgan Hampel, MS Industrial Engineering, September 2013-May 2015, “A psychophysical study on the effect protective equipment has on contact sport athletes”, degree granted May 2015.

Heidi Laabs, MS Industrial Engineering, September 2013-May 2015, “Evaluation of dual purpose softball gloves”, degree granted May 2015.

Xin Wang, MS Industrial Engineering, September 2013-July 2015, “Study of Team Building Based on 3D Games”, degree granted July 2015.

Midhun Vasan, MS Industrial Engineering, September 2014-December 2016, “Evaluation of computer workstation standards”, degree granted December 2016.

Zoe Eagle, MS Industrial Engineering, December 2014-December 2016, “Comparison of features, usability, and load carrying design of recreational and travel backpacks when considering travel applications”, degree granted December 2016.

Dan Van Groningen, MS Industrial Engineering, September 2014-August 2016, “Effects of outsole show patterns on athletic performance”, degree granted July 2016.

Leela Rajana, MS Industrial Engineering, September 2014-December 2016, “Investigation of the simple mattress suturing technique”, degree granted December 2016.

Colten Fales, MS Industrial Engineering, September 2014-July 2016, “Are We Done Yet?: A study of the effects of defined goals and progressive feedback on task performance and perceptions”, degree granted July 2016.

Thomas Schnieders, MS Human Computer Interaction and Industrial Engineering, September 2014-June 2016, “ARCTiC LawE: Armed Robotic Control for Training in Civilian Law Enforcement”, degree granted May 2016.

Olivia Janusz, MS Industrial Engineering, September 2014-May 2016, “Evaluation of modern day kitchen knives: An ergonomic and biomechanical approach to design”, degree granted May 2016.

AbdulMohsen Al-Besher, PhD Human Computer Interaction, August 2013-May 2016, “Civic Engagement with Traditional government and Mobile government: Comparing Rural to Urban Citizens in Saudi Arabia”, degree granted May 2016.

Dean Jose, MS Industrial Engineering, September 2015-May 2017, “The Impact of Scientific Management Principles on Food Hubs”, degree granted May 2017.

Anupam Singh, MS Industrial Engineering, September 2014-May 2017, “Analysis of Force, Time, Energy, Psychological demand and Safety of common kicks in Martial Arts”, degree granted May 2017.

Zhonglun Wang, MS Industrial Engineering, September 2015-August 2017, “How packaging characteristics change the perception of product net weight”, degree granted August 2017.

Ahmad Mumani, PhD Industrial Engineering, August 2015-May 2018, “User-packaging interaction (UPI): A comprehensive research platform and techniques for improvement evaluation, and design”, degree granted May 2018.

Esra’a Abdel-All, PhD Industrial Engineering, August 2014-May 2018, “The Implication of Rapid Technologies on the Design Process”, degree granted May 2018.

Hunter Sabers, MS Industrial Engineering, January 2018–May 2019, “Performance Archery Shooting”, degree granted May 2019.

Thomas Schnieders, PhD Industrial Engineering, September 2014-May 2019, “A top-down human-centered approach to exoskeleton design”, degree awarded May 2019.

Varun Ananthasivan, MS Industrial Engineering, September 2017–December 2019, “A USER-CENTERED ENGINEERING APPROACH TO STORAGE AND ACCESS IN HIGH PRIORITY SCENARIOS”, degree awarded September 2019.

Cortney Middlekoop, MS Industrial Engineering, September 2018–December 2019, “Analyzing Gymnastics Equipment”, degree awarded December 2019.

Steffen Baumann, MS Human Computer Interaction, September 2018-July 2020, “Evaluation of Data Usability Generated by Wearables & LoT-Enabled Home Use Medical Devices via Telehealth to Identify if Blockchain can Solve Potential Challenges”, degree awarded July 2020.

Wonseok Kim, MS Industrial Engineering, September 2018-May 2020, “the risk analysis for the introduction of collaborative robots in the Republic of Korea” degree awarded May 2020.

Yijia Sun, MS Human Computer Interaction, September 2016–May 2020 “User satisfaction and effect of survey design in a tool usability testing ” degree completed May 2020.

Cong Xu, MS Industrial Engineering, September 2018–July 2020, “Assessment of Human and Multiple UAV’s Interaction in Police Clearing Operations “ degree awarded July 2020.

Shamika Prashant Pujari, MS Industrial Engineering, September 2018–December 2020, “Characterizing an automation level based safety assessment tool to improve fluency in safe human cobot interaction” degree awarded December 2020.

Drew Schweiger, MS Industrial Engineering, September 2018-May 2020, “Non-dominant Hand Training on the Computer Mouse and Bilateral Transfer”, degree awarded May 2020.

Colten Fales, PhD Industrial Engineering, July 2016 - December 2021, “Accelerations of Trunk and Limb Assessment System (ATLAS): A study of Agricultural Work and Ergonomic Risk Evaluation”, degree awarded May 2021.

Griffin Wilson, MS Industrial Engineering, January 2020-August 2022, “Using Mixed Integer Program to Assign Finishers to Brooders at a Large Turkey Harvesting Operation”, degree awarded August 2022.

Joseph Kim, MS Industrial Engineering, January 2021-December 2022, “Multifaceted Approach to Evaluating Surgical Exoskeletons”, degree awarded December 2022.

Steffen Baumann, PhD Human Computer Interaction, July 2020 – December 2022, “The Pi-CON Methodology – Applying ubiquitous visual & radar-sensing technologies to enable handsfree tracking of vital signs in remote patient monitoring”, degree awarded December 2022.

Kristina Schaffhausen, MS Industrial Engineering, January 2021-May 2023, “The Effects of Muscle-Strengthening and Endurance-Building Exercises on Suturing Performance Among Novices: An Engineering Evaluation of the Hands, Wrists, Fingers, and Forearms”, degree awarded May 2023.

Yanhua Huang, PhD Industrial Engineering January 2019-December 2024, “Hydroponic systems customization and internet of things integration for operation optimization and physiology study”, degree awarded December 2024 (Co-advised with Dr. Lizhi Wang)

Fatima Mgaedeh, PhD Industrial Engineering January 2019-May 2024, “An Engineering Approach to Personal Protective Equipment: An analysis of the PPE, non-compliance issues and the methodology to predict non-complicance”, degree awarded May2024

Hassan Wasfi , PhD Human Computer Interaction, January 2021 – May 2024, “Usability and Security of Recognition-Based Textual Password”, degree awarded May 2024.

E. Service on Thesis Committees Other than Own Advisees

IMSE department: Xiaopeng Ning (PhD completed), Sangeun Jin (PhD completed), Omid Haddard (PhD completed), Justin Schonburg (MS completed), Sarah Gidlewski (MS completed), Jamiahus Walton (MS completed), Euijung Yang (MS completed), Melissa Slagle (MS completed), Kellie McGrath (MS completed), Teri Craven (MS in IE completed), Jacklin Stonewall (MS completed), Karthik Sajikumar (MS completed), Anuj Mittal (MS completed), Euijung Yang (PhD completed), Jacklin Stonewall (MS completed), Du, Yu (PhD completed), Emmanuel Tetteh (PhD completed).

ME department: Tyrone Moore (MS completed), Alex Renner (PhD in progress) Timothy Beavers (MS in progress).

HCI department: Krista M. Thompson (MS completed), Kim Flaherty (MS completed), Chase Meusel (MS completed), Rachel Dudley (MS completed), Sagrie Govender (MS completed), Chase Meusel (PhD completed), Hilary Bainbridge (MS in progress), Janalese Warden (MS in progress), Amara Poolswasdi (MS completed), Alex Renner (Ph.D completed), Joseph Zimmel (MS completed).

AgE department: Alex Preston Byrd (PhD completed).

Education department: Heidi Doellinger (PhD completed)

F. Supervision of Post-Doctoral Students and Professional Staff

Colton Fales PhD, Post Doctorate Industrial Engineering, June 2021-August 2021.

Peihan Zhong PhD, Post Doctorate Industrial Engineering, January 2014-August 2014.

G. Supervision of Undergraduate Research and Independent Study

Catherine Brunia, Undergraduate researcher, Fall 2023–Spring 2024.

Niamh Corscadden, Undergraduate researcher, Fall 2023–Spring 2024.

Enzo Deo, APEX/Undergraduate researcher, Summer 2023–present.

Paiton Pumroy, Undergraduate researcher, Fall 2021–Spring 2024.

Alexandria Pulley, Undergraduate researcher, Fall 2022-Spring 2024.

Hannah Albrecht, Honors Program Mentee, Spring 2023.

Eleanor Stoffel, Honors Program Mentee, Spring 2023.

Allison Hubbel, Undergraduate researcher, Fall 2022.

Truman Kester, Honors Program Mentee, Spring 2022.

Anna Ryan, Undergraduate researcher, Spring 2022.

Kara Albrecht, Undergraduate researcher, Fall 2021– Spring 2022.

Anna Ryan, First-Year Honors Mentee, Fall 2021-Spring 2022.

Truman Kester, First-Year Honors Mentee, Fall 2021-Spring 2022.

Ayuush Mehta, Undergraduate researcher, Fall 2020–Fall 2021.

Braden Westby, URA and Honors Program Mentee, Undergraduate researcher, Fall 2019–Summer 2022.

Joseph Kim, URA and Honors Program Mentee, Fall 2018–Spring 2022.

Marcus Szamlewski, Undergraduate researcher, Fall 2020–Spring 2021.

Ellie Helton, Undergraduate researcher, Fall 2019-Spring 2021.

Makayda Johnson, McNair Scholar, Fall 2020-Spring 2021.

Jackson Leman, Undergraduate researcher, Spring 2021.

Kristina Schaffhausen, Undergraduate researcher, Spring 2020–Summer 2020.

Jeremy Cermin, Undergraduate researcher, Spring 2018–Fall 2020.

Soneil Harchakar, Undergraduate researcher, Spring 2020.

Evan Timmons, Honors Program Mentee, Spring 2020.

Karandeep Sandhu, Honors Program Mentee, Spring 2020.

Kathryn Soch, Undergraduate researcher, Fall 2018-Spring 2020.

Sebastian Madej, Undergraduate researcher, Spring 2019–Spring 2020.

Christopher Hernandez, LSAMP INSPRIE Mentee, McNair Mentee and URA, Fall 2015-Summer 2019.

Evan Hundley, Undergraduate researcher, Fall 2018-Spring 2019.

Karla Mercado-Barahona, Undergraduate researcher, Fall 2018-Spring 2019.

Dylan Muller, Undergraduate researcher, Spring 2018-May 2018.

Drew Schweiger, Undergraduate researcher, Spring 2017-Spring 2019.

Kevin Push, Undergraduate researcher ME, Fall 2017-Spring 2019.

Erik Danford-Klein, Undergraduate researcher, Fall 2016-Spring 2019.

Cortney Middelkoop, Undergraduate researcher, Fall 2016-Summer 2018.

Tracy Purdy, Undergraduate researcher, Fall 2016-Summer 2018.

Jakob Croghan, Honors Program Mentee, Spring 2017-Fall 2017.

Derek Janusz, Undergraduate researcher, Spring 2017-Spring 2018.

Christen Hernandez, LSAMP INSPRIE Mentee and URA, Fall 2015-Fall 2017.

Anthony Dote, Undergraduate researcher, Spring 2016-Winter 2018.

Jaelyn Stiller, Honors Program Mentee, Fall 2016–Spring 2017.

Scott Kleymann, Undergraduate researcher, Spring 2016.

Tyler Oviatt, Undergraduate researcher, Fall 2015–December 2016.

Jillian Brinkman, Undergraduate researcher, Fall 2015.

Jill Koster, Undergraduate researcher, Fall 2014-Spring 2015.

Charley Forey, Undergraduate researcher, Fall 2014- Spring 2015.

Austin Trotter, Undergraduate researcher, Spring 2014.

Kathryn Woltjer, Undergraduate researcher, Fall 2013-Spring 2013.

Olivia Janusz, Honors Program Mentee, Fall 2013–Fall 2014. (Student Marshal)

Morgan Hampel, Undergraduate researcher, Spring 2013.

Steven Johnson, McNair scholar program, Fall 2011-May 2013

Nick Kraus, Biomechanics in Design project, Fall 2011-May 2013

Bryce Rosenquite, Biomechanics in Design project, Fall 2011-May 2013

Jared Juel, Biomechanics in Design project, Fall 2011-May 2013

Eleese McLaurin, McNair scholar program, Fall 2010-May 2012

Ivan Ojeda (HCI/ University of Puerto Rico), NSF REU program, Summer Semester 2009

Princes Campbell (HCI/ St. John's University), NSF REU program, Summer Semester 2009

Amy Green (HCI/ Northwestern College), NSF REU program, Summer Semester 2009

Charlecia Brownlee (HCI/ Jackson State University), NSF REU program, Summer Semester 2012

Sarah Belter (HCI/ Washington State University), NSF REU program, Summer Semester 2012

Andrew Lilja (HCI/ Gustavus Adolphus College), NSF REU program, Summer Semester 2012

Kayla Dawson (HCI/ University of Miami), NSF REU program, Summer Semester 2013

Kelli Jackson (HCI/ Bethune Cookman University), NSF REU program, Summer Semester 2013

Liat Litwin (HCI/ Tufts University), NSF REU program, Summer Semester 2013

H. Other Contributions to Instructional Programs

(e.g., undergraduate advising, student chapter advising)

Faculty Advisor to Tau Beta Pi Alpha Chapter at ISU 2008-present.

Faculty Advisor to Alpha Pi Mu Chapter at ISU Spring 2014-present.

Faculty Advisor to Fencing Club at ISU Summer 2021-present.

Faculty Advisor to Waterpolo Club at ISU Spring 2024-present.

Faculty Advisor to Human Performance Engineering Club 2011-Spring 2014.

Faculty Advisor to National Organization for Business and Engineering 2011-Spring 2014.

Faculty Member of ISU Martial Arts Club, 2009-2012.

IV. SERVICE (PUBLIC, PROFESSIONAL/DISCIPLINARY, AND UNIVERSITY)

A. Public Service

President of the Forensics Technical Group of HFES, November 2023-present (two year term)
Subject Matter Expert, Footwear Intelligence Development Group (FIDG), NIJ 2022-present
CyncHealth Board Member (Iowa Board) 2021-present
SAES 2018- 2021.
Inter-Agency Board from 2015-2019.
Outreach to Native American Groups from 2010–2013.
Virtual Reality Education Pathfinders (VREP) 2012-2015.

B. Service to Disciplinary and Professional Societies or Associations

Professional Society Leadership

President of Forensics TG for HFES, November 2023-present (two year term)
Board Member, CyncHealth - Iowa Board, Omaha, Nebraska, 2021-present
President, SAES 2018-2021.
Subject Matter Expert for Inter-Agency Board (federal organization), 2015–2019.
HFES TG Virtual Environments Communication Officer 2011-2014.

Professional Conference Activities

President of Forensics TG November 2023-Present.
Session Chair for IISE, “Organizational Ergonomics and Engineering Education”, 2024.
Session Chair for IISE, “Physical Ergonomics”, 2024.
Session Chair for HFES, “Forensics,” 2020, 2022, 2023.
Session Chair for HFES, “Virtual Environments,” 2011, 2012, 2013.
Session Chair for IERC, “Virtual/Augmented Reality & Training,” 2008.
Session Chair for IERC, “Human Performance systems,” 2010.
Session Chair for HFES, “Designing Robots and Unmanned Vehicles,” 2010.
Session Chair for HFES, “Teleroptic Operations,” 2009.

Panel Member for HFES, “Distance Learning,” 2010.

Editorial Activities

Journal Reviewer/Referee for:

Journal of Human Factors
Journal of Applied Ergonomics
IEEE Systems Cybernetics and Man
Journal of Cognitive Engineering and Decision Making
Virtual Reality
International Journal of Industrial Ergonomics
Presence
Teleoperators
Virtual Environments
ASME Journal of Mechanical Design
Cognitive Engineering and Decision Making

Conference Article Reviewer/Referee for:

HFES conference
IISE conference

C. University/Campus Service

Diversity and Inclusion Officer for IMSE 2020-present.

Chair, Diversity and Inclusivity committee, IMSE 2022-present.

Member, Rescuritment committee, IMSE 2023-present.

Chair, Recruitment committee, IMSE 2022-2023.

Leader, Be Calm Initiative, IMSE/COE, 2022-present

Member, engineering collage curriculum committee, COE 2021-present.

Member, engineering collage diversity and inclusion committee, COE 2020-present.

Member, curriculum committee, IMSE department 2014-present.

Faculty Advisor to Tau Beta Pi Alpha Chapter at ISU 2008-present.

Facutly Advisor to Alpha Phi Mu Chapter at ISU 2014-present.

Faculty Advisor to Fencing Club at ISU 2021-present.

McNair Mentor, Iowa State University 2009–2014 & 2017-2019, & 2020-2021.

Faculty Mentor, Louis Stokes Alliance for Minority Participation (LSAMP), University, 2015-2019.

Faculty Advisor to Human Performance Engineering Club 2011-2018.

Member, IMSE Chair Search committee, COE, 2015.

Member, Tenure committee (For Dr. Hu), IMSE, 2015.

Member, University Teaching Awards committee, ISU 2014-2016.

Member, 3rd year review T&P committee (for Gilbert), IMSE department 2014.

Chair, computer committee, IMSE department 2014-2015.

Member, facilities committee, IMSE department 2008-2017.

Member, graduate committee, IMSE department 2010-2012.

Member, special search committee (for Gilbert), IMSE department 2011.

Member, faculty search committee, IMSE department 2011-2015.

Member, public relations committee, IMSE department 2009 – 2013.

Member, ad hoc committee for revenue generation, IMSE department.

Recruiter for College of Engineering and ISU Graduate College at Spelman Diversity Fair 2010.

Presenter for VRAC Deere Day 2008-2009.

Presentation to the Graduate College 2010 and 2012.

D. Outreach

14 Recruitment Events in 2023/24

21 Diversity and Inclusion Evets in 2023/24

17 Student Organization Events in 2023/24

E. Other Service

Current –Active in woring with Bee Preservation Organizations

Current-Active in working with area Animal Shelters

Current –Active in law enforcement and Rescue Operations

Current –Active in organizations directed at encouraging STEM education to underrepresented

Past-Engineering Outreach to Native American Communities and Reservations.

