Richard Stone Vita

Date: January 29, 2016
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

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 Sherriff, Story County Sherriff's Office, Story County, Iowa, 2015- Present

Rescue and Recovery Diver, Story County Sherriff's Office, Story County, Iowa, 2015-Present.

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

Visiting Professor, Information and Computer Science, Rochester Institute of Technology, 2001-2004

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

D. Honors, Recognitions, and Outstanding Achievements

- **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, "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 Steal 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

Communications Officer for Human Factors and Ergonomics Society (HFES) Technical Group (TG) Virtual Environments (2012 - 2014).

H. Grants and Contracts Received Since Last Promotion at ISU

H17: Investigators: Caroline Kreji, Richard T. Stone, Michael Dorneich
Title of Grant: Workflow Optimization for Iowa Regional Food Hubs
Granting Agency: Leopold Center
Dates of beginning and end of grant: 2/15/16-2/15/18
Total dollar amount of grant: $50,000
Dollar amount allocated to this candidate: $20,000
Role or responsibilities of the candidate: Co-PI

H16: Investigators: Richard T. Stone
Title of Grant: Partnering in Animal Welfare Service 2 (PAWS2) (a 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 Terpenny, 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 Terpenny
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)

F16: *Krejci, C., Stone, R., **Dorneich, M.C.**, & Gilbert, S. (in press). "Analysis of Food Hub Commerce and Participation using Agent-Based Modeling: Integrating Financial and Social Drivers," *Human Factors (Special Issue: Human Factors Prize on Sustainability)*. http://dx.doi.org/10.1177/0018720815621173

F15: * Byrd, A., Stone, R., & Anderson, R., "The Use of Virtual Welding Simulators to Evaluate Experienced Welders", accepted by Welding, 2015.

F14: †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", accepted by International Journal of Electronic Governance, 2015. http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijeg.

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, † Elease 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.

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

H27: *__McGrath, K.__, Rivero, V., & Stone, R.T. (2015). "Measuring the Effectiveness of Team-Based Leaning 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.

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 Leaning Outcomes in a Human Factors Course," *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Los Angeles, CA, 26-30 October.

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. Acceptance rate ~ 70%.

H22:* Morgan Hample, 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. Acceptance rate ~ 70%.

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: *† Elease 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 wiimote 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, 2006. 2007. Acceptance rate ~ 65%.

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

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

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, Mahyiar 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.

K. 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: * Heidi Laabs, and Richard T. Stone, Preliminary Patent Filed "Dual Purpose Batting Glove" Filed via ISURF 04339 as of 2015.

Journal Articles Submitted and Currently Under Review

F19: *Schnieders, T., & Stone, R. "Current Work in the Human-Machine Interface for Ergonomic Intervention with Exoskeletons". Submitted to Human Factors. 2015.

F18: *Zurlinden, A., & Stone, R. "Assessment of the safety and clinical utility of a cat imaging and oxygen chamber". Submitted to Veterinary Radiology & Ultrasound. 2015.

F17: *†Al-Besher, A., & Stone, R. ”Civic Engagement with T-government and M-Government: Comparing Rural to Urban Citizens in Saudi Arabia”. Submitted to Journal of Information Technology & Politics. 2015.

III. INSTRUCTION AND SUPERVISION

A. Instruction for ISU

Course	Title	Credits
IE 681	Cognitive Engineering	3
IE 671	Research Practicum in Ergonomics	3
IE 577	Human Factors	3
IE 576	Human Factors in Product Design	3
IE 571	Occupational Biomechanics	3
IE 271	Applied Ergonomics and Work Design	3
IE 148	Information Engineering	3
AER X	Spaceflight Operations Training Course	3*

Course Number	Term	Credits Hours	# 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	3	10	0	X	5.0
IE 671	Spring 2012	3	9	0	X	5.0
	Spring 2014	3	11	0	Dorneich	5.0
	Spring 2016	3	13	0	Dorneich	TBD
IE 577	Fall 2008	3	10	0	X	4.75
	Fall 2009	3	19	0	X	4.78
X and XE	Fall 2010	3	38	0	X	4.87
	Fall 2011	3	49	0	X	4.59
	Fall 2012	3	49	10	X	5.0
	Fall 2013	3	45	0	X	4.29
	Fall 2014	3	65	0	X	4.74
	Fall 2015	3	74	20	X	4.68
IE 576	Spring 2014	3	18	0	Dorneich	4.70
	Fall 2015	3	13	0	Dorneich	5.0
IE 571	Fall 2012	3	9	0	X	5.0
	Spring 2015	3	27	0	X	4.71
X and XE						
IE 271	Spring 2011	3	65	20	X	4.58
	Spring 2012	3	109	20	X	4.28
	Spring 2013	3	91	20	X	4.37
	Spring 2014	3	119	20	X	4.55
	Spring 2015	3	144	30	X	4.49
	Spring 2016	3	160	40	X	TBD
IE 148	Spring 2009	3	31	20	X	3.89
	Spring 2010	3	39	20	X	4.36

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

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)

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

Research Practicum in Ergonomics, IE 671X, 3 credits, (oversaw and developed four large scale human performance experiments to teach students research steps and execution)

Applied Ergonomics and Work Design, IE 271, 3 credits, (updated materials and added three 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

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

Courses in development for Spring of 2017

Biomedical Engineering and Manufacturing, IE 651X, 3 credits, (developing a course with Dr. Rivero, this course will address key issues of human facture and manufacturing focused cutting edge and emerging medical device and procedure development, this class will be heavily lab driven).

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

Current Students

AbdulMohsen Al-Besher, PhD Human Computer Interaction, August 2013-present, work in progress, degree expected May 2016.

Ahmad Mumani, PhD Industrial Engineering, August 2015-present, work in progress, degree expected December 2017.

Esra'a Abdel-All, PhD Industrial Engineering, August 2014-present, work in progress, degree expected May 2017.

Olivia Janusz, MS Industrial Engineering, September 2014-present, work in progress, degree expected May 2016.

Colten Fales, MS Industrial Engineering, September 2014-present, work in progress, degree expected May 2016.

Thomas Schnieders, MS Human Computer Interaction, September 2014-present, work in progress, degree expected May 2016.

Dan VanGroningen, MS Industrial Engineering, September 2014-present, work in progress, degree expected May 2016.

Leela Rajana, MS Industrial Engineering, September 2014-present, work in progress, degree expected May 2016.

Akshay Dave, MS Industrial Engineering, January 2015-present, work in progress, degree expected August 2016.

Anupam Singh, MS Industrial Engineering, September 2014-present, work in progress, degree expected December 2016.

Jose Dean, MS Industrial Engineering, September 2014-present, work in progress, degree expected December 2016.

Midhun Vasan, MS Industrial Engineering, September 2014-present, work in progress, degree expected December 2016.

Zoe Eagle, MS Industrial Engineering, September 2015-present, work in progress, degree expected December 2016.

Completed Students

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 andR 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.

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 in progress), Du, Yu (PhD in progress), Jacklin Stonewall (MS in progress), Karthik Sajikumar (MS in progress), Anuj Mittal (MS in progress), Euijung Yang (PhD in progress) .

ME department: Tyrone Moore (MS completed), Alex Renner (PhD 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 in progress), Hilary Bainbridge (MS in progress), Janalese Warden (MS in progress), Amara Poolswasdi (MS in progress).

AgE department: Alex Preston Byrd (PhD completed).

F. Supervision of Post-Doctoral Students and Professional Staff
(For each, list name, highest degree earned, description of project or duties, dates supervised, present position or employment.)

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

G. Supervision of Undergraduate Research and Independent Study

Scott Kleymann, Undergraduate researcher, Spring 2016.

Andy Adams, Undergraduate researcher, Spring 2016.

Tyler Oviatt, Undergraduate researcher, Fall 2015 – Present.

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-May 2013.

Morgan Hample, 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

Elease 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 Human Performance Engineering Club 2011-present.

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

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

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

A. Public Service

Outreach to Native American Groups from 2010 – 2013.
Virtual Reality Education Pathfinders (VREP) 2012-present.

B. Service to Disciplinary and Professional Societies or Associations

Professional Society Leadership

HFES TG Virtual Environments Communication Officer 2011 - 2014.

Professional Conference Activities

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,"Telerobotic Operations," 2009

Panel Member for HFES, "Distance Learning," 2010

Editorial Activates

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
Presence
Teleoperators
Virtual Environments

Conference Article Reviewer/Referee for:

HFES conference
ISERC

C. University/Campus Service

Member, IMSE Chair Search committee, COE, 2015.

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

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

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

Chair, computer committee, IMSE department 2014-2015.

Member, curriculum committee, IMSE department 2014-present.

Member, facilities committee, IMSE department 2008-present.

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

McNair Mentor, Iowa State University 2009 – 2014.

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

Presenter for VRAC Deere Day 2008-2009.

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

Faculty Advisor to Human Performance Engineering Club 2011-present.

Presentation to the Graduate College 2010 and 2012.

D. Other Service

Active Engineering Outreach to Native American Communities and Reservations.