

## **Andrew S. Merryweather, Ph.D.**

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Ergonomics and Safety Program  
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198 Springhill Dr.  
North Salt Lake City, Utah 84054

### **Education**

B.S. in Mechanical Engineering, 1998-2003, Utah State University, Logan, UT

M.S. in Mechanical Engineering, 2003-2007, University of Utah, Salt Lake City, UT  
Thesis: "Model Development For The Estimation Of Back Compressive Force And Subsequent Low Back Disorder Risk"

Ph.D. in Mechanical Engineering, 2006-2008, University of Utah, Salt Lake City, UT  
Dissertation: "Lower Limb Biomechanics of Walking on Slanted and Level Railroad Ballast"  
Chair: Donald S. Bloswick

### **Professional Experience (most recent first)**

Research Assistant Professor, Department of Mechanical Engineering, University of Utah, 2008-present

President, Upstream Ergonomics Design Consulting, 198 Springhill Dr., North Salt Lake, Utah, 2011-present

- Training, consultation, workflow design, and process/tool design emphasizing the ergonomic and biomechanical analysis of occupational hazards.

Graduate Student, Teaching and Research Assistant, Department of Mechanical Engineering, University of Utah, Occupational Injury Prevention Research and Training Program, 2003-2008

- ME EN 6100 – *Ergonomics* (Lab TA), University of Utah, Fall 2006
- ME EN 6110 – *Industrial Safety* (Course TA), University of Utah, Spring 2007

### **Research Interests**

Occupational Biomechanics, 3D-Musculoskeletal Modeling, Injury Prevention, Rehabilitation Ergonomics, Design, Motion Capture, Rehabilitation Robotics, Human Factors and Design

### **Teaching Activities**

Courses Taught:

- ME EN 5100/6100 – *Ergonomics* (Instructor), University of Utah, Fall 2008 (
- ME EN 5120/6120 – *Human Factors in Engineering Design* (Instructor), Fall 2009, 2011
- ME EN 7100 – *Advanced Ergonomics* (Instructor), Spring 2010, 2012
- ME EN 7105 – *Advanced Ergonomics Lab* (Instructor), Spring 2010, 2012
- FP MD 6715/ME6140 – Occupational Safety and Health Solutions (Co-Instructor), Spring 2010, 2011, 2012
- ME EN 4000 – Engineering Design 1 (Instructor), Fall 2011

## Teaching Evaluations Compared to Department Avg.

Year	Class	Course	Instructor	Dept. Course	Dept. Instructor
2008	ME5100	5.37	5.46	4.84	4.98
	ME6100	5.19	5.31	4.84	4.98
2009	ME5120	5.46	5.43	4.79	4.85
	ME6120	5.30	5.29	4.79	4.85
2010	ME7100	5.63	5.82	4.96	5.12
2011	ME4000	4.99	5.39	4.89	5.05
	ME6120	5.22	5.55	4.89	5.05

### Regular Lectures:

- FPMD 6750 – Fundamentals of Industrial Hygiene (Safety and Ergonomics)
- BIOEN 6900 – Human Motion Analysis (Motion Analysis and Ergonomics Applications)
- MEEN 3900 – Professionalism Seminar (Safety's role as an Engineer)

### Senior design projects supervised or jointly supervised:

- Paracycle - Competitive, Off-Road Hand Cycle for Persons with Paraplegia
- PATW - Powered All-Terrain Wheelchair
- E-Tetra Bike - Hand Cycle for persons with Tetraplegia
- Training Cane - Electronic cane to train children with vision impairments
- Inova-Flex - Variable resistance lifting system for strength training and rehabilitation

## Publications

### Book Chapter

1. **Merryweather**, A.S., and Bloswick, D., "Biomechanics during ladder and stair climbing and walking on ramps and other irregular surfaces", Biomechanics in Ergonomics, 2<sup>nd</sup> Edition, edited by Shrawan Kumar, 673-694, 2008.

### Selected Peer-Reviewed Publications

1. **Merryweather**, A.S., Bloswick, D., Sesek, R., "A Calculation Of Dynamic Back Compressive Force: A Pilot Study To Identify Load Displacement Velocity Constants", *Journal of SH&E Research*, Fall 2008.
2. **Merryweather**, A.S., Lortscher, M.C., Bloswick, D., "A Revised Back Compressive Force Estimation Model for Ergonomic Evaluation of Lifting Tasks", in Work: A Journal of Prevention, Assessment and Rehabilitation, 2009.
3. Greenland, K, **Merryweather**, A, Bloswick, D. (2011) Prediction of Peak Back Compressive Forces as a Function of Lifting Speed and Compressive Forces at Lift Origin and Destination - A Pilot Study. Safety and Health at Work 2011;2:236-42
4. **Merryweather**, A., Bloswick, D., Yoo, B. "Gait Characteristics Associated with Trip-Induced Falls On Irregular Surfaces," accepted to Minerals, Special Issue on S&H in Mining.
5. A. Garg, J. Kapellusch, K. Hegmann, J. Wertsch, A. **Merryweather**, G. Deckow-Schaefer, E.J. Malloy & the WISTAH Hand Study Research Team (2012): The Strain Index (SI) and Threshold Limit Value (TLV) for Hand Activity Level (HAL): risk of carpal tunnel syndrome (CTS) in a prospective cohort, *Ergonomics*, 55:4, 396-414
6. K.O. Greenland, L. Yang, P.S. Dyer, R.J. Carson, J. B. Webster, A.S. **Merryweather**, K.B. Foreman and S.J.M. Bamberg, Prediction of Stance Time and Force Symmetries using Instrumented Shoe Insoles for Use in Rehabilitation and Weight-Bearing Regimens. *Journal of Biomechanics & Biomedical Sciences*. Nov. 2011; ISSN: 2155-9538

### Conference Proceedings/Presentations (refereed/reviewed)

1. **Merryweather**, A.S., Sesek, R., Daniels II, J., Bloswick, D., "Utah Ergo Analyzer Posture Classification Tool vs. Peak Motus Motion Analysis in 2D Wrist Flexion/Extension and ulnar/Radial Deviation", 3rd Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 22, 2005.
2. Lortscher, M.C., **Merryweather**, A.S., Bloswick, D., "A Revised Back Compressive Force Estimation Model for Ergonomic Evaluation of Lifting Tasks", 4th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 21, 2006.
3. **Merryweather**, A.S., Lortscher, M.C., Bloswick, D., 4th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 21, 2006.
4. Quincy, J., **Merryweather**, A.S., Bloswick, D., "Methods and Procedure Validation of Transverse Plane Sloped Surface Walking GAIT: A Kinematic and Kinetic Analysis". 5th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 19, 2007.
5. **Merryweather**, A.S., Bloswick, D.S., "A calculation of Back Compressive Force: Implementing a Load Displacement Velocity Constant", 5th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 19, 2007.
6. **Merryweather**, A.S., MacWilliams, B., Bloswick, D., "Temporal-Spatial Analysis of Medial/Lateral (Side-to-Side) Sloped Aggregate Surfaces", 6th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 17, 2008.
7. **Merryweather**, A.S., Yoo, B., Bloswick, D.S., "Trip-induced Falls on Crushed Rock Aggregate, Specifically Railroad Ballast," International Conference on Fall Prevention and Protection (ICFPP), West Virginia, May 19-20, 2010.
8. Graziano K, Oostema S, Thiese M, Wood E, Larson R, **Merryweather** A. Piece Rate Compensation and Upper Extremity Musculoskeletal Disorders in Sewing Machine Operators. Proceedings of 8th Annual Regional NORA Young/New Investigators Symposium, April 2010
9. McDonald J, Sterzer B, Ewing G, Larson R, **Merryweather** A, Wood E. Assessment of Combustible Airborne Dust Hazards in a Printing Facility. Proceedings of 8th Annual Regional NORA Young/New Investigators Symposium, April 2010
10. Migel A, Freestone J, Godfrey N, Wood E, Larson R, **Merryweather** A. Manual Material Handling at a Window Covering Manufacturer. Proceedings of 8th Annual Regional NORA Young/New Investigator Symposium, April 2010
11. Stansfield E, Shorti R, Alaves V, Wood E, Larson R, **Merryweather** A. Low Cost Engineering Control to Reduce a Noise Hazard at a Hydraulic Seal Facility. Proceedings of 8th Annual Regional NORA Young/New Investigator Symposium, April 2010
12. **Merryweather**, A., Shorti, R., Thiese, M., Caughey W., Hegmann K. Commercial Truck Driver Mounting/Dismounting Behavior Related to Falls. International Conference on Commercial Driver Health and Wellness, Baltimore MA, November 8-10, 2010
13. Hegmann KT, Garg A, Thiese M, Kapellusch J, Wood E, Deckow-Schaefer G, Bloswick D, **Merryweather** A, Moore JS. Risk Factors for Lateral Epicondylalgia from a 7-year Prospective Cohort Study. Presented at the Prevention of Musculoskeletal Disorders (PREMUS) conference, Angiers, France, August 31, 2010.
14. Garg A, Hegmann KT, Wertsch J, Kapellusch J, **Merryweather** A, Schaeffer G, Thiese M, Bloswick D. Individual, Psychosocial and Job Physical Risk Factors for CTS: Results from a 7-year Prospective Cohort Study. Presented at the Prevention of Musculoskeletal Disorders (PREMUS) conference, Angiers, France, August 31, 2010.
15. **Merryweather**, A., Pate, M., Vemparala, S. (2011). Tractor Mounting/Dismounting Biomechanics Related to Falls. ASABE Annual International Meeting, Louisville, KY, August 7-10, 2011.
16. **Merryweather**, A., Pate, M., Vemparala, S. Self-Reported Tractor Operator Falls, Ergonomics and Musculoskeletal Pain. ASABE Annual International Meeting, Louisville, KY, August 7-10, 2011.
17. James Nolin, Ryan Probst, Laura Brodhag, Eric Wood, Darrah Sleeth, Andrew **Merryweather** Comprehensive Noise Study At Metal Refinery, 9th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 2011.

18. William Newkirk, Travis Green, Alex Morgan, Jason Kraft, Darrah Sleeth, Eric Wood, Andrew **Merryweather**, Airborne Silver Exposure At A Precious Metals Refinery, 9th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 2011.
19. Josh Corbridge, Justin Kargis, Donald Mehr, Ulrike Ott, Eric Wood, Andrew **Merryweather**, Darrah Sleeth, Comprehensive Dust Sampling Study At An Architectural Woodworking Plant, 9th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 2011.
20. Dustin Campbell, Kasey Greenland, Mitch Transtrum, Andrew **Merryweather**, Eric Wood, Darrah Sleeth, An Ergonomic Assessment Of Team Lifted Objects In A Production Process, 9th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 2011.
21. Rahila Andrews, Patricia Pankey, Matthew Raphael, Andrew **Merryweather**, Darrah Sleeth, Eric Wood, Assessment Of Upper Extremity Musculoskeletal Disorders In A Partially Automated Laboratory Sorting System, 9th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 2011.
22. Matthew Raphael, Andrew **Merryweather**, Louise Butler, Donald Bloswick, "Testing and Comparison of Four Manual Wheelchair Designs," 9th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, Salt Lake City, April 2011.

### Other Conference Presentations

1. Greenland, K, **Merryweather**, A. Motion Capture in Ergonomics. 2nd Annual ERC Interdisciplinary Forum on measurement Systems for Occupational Health and Safety Research, April 8-9, 2010
2. Shorti, R, **Merryweather**, A. Force/Pressure Instrumentation. 2nd Annual ERC Interdisciplinary Forum on measurement Systems for Occupational Health and Safety Research, April 8-9, 2010
3. Brammer, C, **Merryweather**, A. Motion Capture in Ergonomics. 2nd Annual ERC Interdisciplinary Forum on measurement Systems for Occupational Health and Safety Research, April 8-9, 2010
4. **Merryweather**, A, Greenland, K. Motion Analysis in Biomechanics: Art or Technique? 2nd Annual ERC Interdisciplinary Forum on measurement Systems for Occupational Health and Safety Research, April 8-9, 2010
5. **Merryweather**, A. Ergonomics and MSDs in Transportation. Rocky Mountain Academy: Planes, Trains, and Trucks: The Role of Occupational and Environmental Medicine in the Transportation Industry, April 8-9, 2010
6. **Merryweather**, A.S., "Relationships between whole body fatigue and balance during vehicle entry," 2010 Lucien Brouha Work Physiology Symposium, Milwaukee, WI, September 22-24, 2010.
7. Xu, H., **Merryweather**, A. "Influence of Foot Marker Placement on Predicted Muscle Force During Gait." Presented at the Rocky Mountain American Society of Biomechanics Conference, Estes Park, CO. April 8-9, 2011
8. **Merryweather**, A. Bloswick, D, Balaji, AK. "Ergonomics and Safety: Role in Sustainable Manufacturing." Presented at the Two-Day Workshop Innovation for Sustainable Manufacturing & Workforce Effectiveness, Lexington, KY, June 21-22, 2011.

### Poster Presentations

1. **Merryweather**, A.S., MacWilliams, B, Bloswick, D., "Lower Limb Biomechanics on Aggregate Surfaces", 4<sup>th</sup> Annual Mountain West Biomedical Engineering Conference, Park City, UT, Sept. 5-6, 2008.
2. Jampala, S, Kallakanti, M, **Merryweather**, A. Evaluating the Effectiveness of Kneepads during Kneeling Work. 2010 Intermountain Graduate Research Symposium, March 2010
3. Jampala, S, Kallakanti, M, **Merryweather**, A. Analysis of Internal Knees Stresses during Kneeling Work. 2010 Intermountain Graduate Research Symposium, March 2010
4. Butler, L, Raphael, M, **Merryweather**, A. Understanding the Biomechanics of Alternative Wheelchair Designs. ACCESS Program for Women in Science and Mathematics, April 2010

5. Knuteson, C, **Merryweather**, A, Bloswick, D. Powered All-Terrain Wheelchair (PATW). Poster Presentation at the 2011 Disability Studies Forum, Salt Lake City, UT, March 2010
6. Hogenson, B, Glassett, L, Mackay, D, Greer, J, Brady, S, **Merryweather**, A. PARACYCLE. Poster Presentation at the 2011 Disability Studies Forum, Salt Lake City, UT, March 2010
7. Harsha, S.J, **Merryweather**, A.S., Kallakanti, M.K. "Influence of Different Kneepads and Location of Work on Knee Stresses" Presented at the National Occupational Research Symposium, Morgantown, West Virginia. October 17-19, 2011.
8. Yoo, B, Kim, S, **Merryweather**, A, "A Technique for dynamic marker identification to locate occluded anatomical landmarks." Presented at the Annual Conference of the American Society of Biomechanics, Long Beach, CA, Aug. 11-14, 2011.
9. Raphael, M, **Merryweather**, A, Bloswick, D. "Metabolic comparison of alternative propulsion wheelchairs." Poster Presentation at the 2011 Disability Studies Forum, Salt Lake City, UT, March 18, 2011.
10. Yoo, B, **Merryweather**, A, Kim, S "Effects of Different Surface Conditions on Postural Sway." Presented at the UKC2011, Park City, UT, USA, Aug 10-14, 2011
11. Kim, S, **Merryweather**, A, Yoo, B. "Factor Analysis of Military Driver Behavior and Accident Liability." Presented at the UKC2011, Park City, UT, USA, Aug 10-14, 2011

### Abstracts

1. Garg A, Thiese MS, Hegmann KT, Moore JS, **Merryweather** A, Kapellusch J, Vos G, Wood E, Holmes EB, Deckow-Schaefer G, Drury D, Foster J, Bloswick D, Shuller M, Milholland S, Groth G, Sesek R. "Individual Factors Associated with Prevalence of Low Back Pain." Presented at the 6<sup>th</sup> International Scientific Conference on prevention of Work-Related Musculoskeletal Disorders (PREMUS), Boston, MA, August 28, 2007.

### Honors and Awards

- National Institute of Occupational Safety and Health (NIOSH) Fellowship, 2004-2008
- Workers Compensation Fund of Utah Safe Workplace Scholarship, 2004, 2005
- ASSE Student Scholarship, 2006
- 2nd Place Award-National Ergonomics Student Design Competition, 2008.
- Advisor to 1<sup>st</sup> Place Team - National Ergonomics Student Design Competition, 2009
- Advisor to 2<sup>nd</sup> Place Team - National Ergonomics Student Design Competition, 2010
- Advisor to Top 5 Finisher - National Ergonomics Student Design Competition, 2011

### Students Supervised

Name	Degree ( <i>Mech. Eng. unless noted</i> )	Grad. Date	Thesis or Research Project
<i>Graduate</i>			
James Snead	PhD	2014 (exp)	Hospital Bed Entry and Exit Biomechanics
Bill Mecham (Co-advisor with Don Bloswick)	PhD	Dec-12	Distal Upper Extremity Injury Models
Kasey Greenland (Co-advisor with Don Bloswick)	Ph.D.	May-12	Optimization of Vacuum Based Prosthetic Attachment
Hang Xu (Co-advisor with Don Bloswick)	Ph.D.	Dec-12	A Model of Lower Extremity Muscle Force and Knee Contact Force
Rami Shorti (Co-advisor with Don Bloswick)	Ph.D.	2013 (exp)	Biomechanical Stresses During Vehicle Ingress/egress
Nate Godfrey (Co-advisor with Don Bloswick)	Ph.D.	2013 (exp)	Lower Limb Stresses During Dismount From Moving Vehicles

<b>Name</b>	<b>Degree (<i>Mech. Eng. unless noted</i>)</b>	<b>Grad. Date</b>	<b>Thesis or Research Project</b>
Sungdo Kim (Co-advisor with Don Bloswick)	Ph.D.	2012 (exp)	Back and Shoulder Stresses During Backpack Use on Uneven Surfaces
Byungju Yoo (Co-advisor with Don Bloswick)	Ph.D.	2012 (exp)	Lower Extremity Stresses During Backpack Use on Uneven Surfaces
Dhaval Dineshbhai Patel	MS	May-12	Design and Simulation of a Control System for a Hybrid Lift Assist Device
Mohan Krishna Kallakanti	MS	May-12	Kinetic and Kinematic Evaluation of Kneeling Work
James Nolin	MS	May-12	A Control System for an Active Wearable Lift Assist Device
Steigerwaldt, Brett (Co-advisor with Mark Minor)	M.S.	May-11	Active shoe sole for walking on low-angled terrain
Matt Raphael (Co-advisor with Don Bloswick)	M.S.	May-11	Efficiency Evaluation of Alternative Propelled Wheelchairs
Christopher Brammer	MS	Dec-11	Using Biomechanical Analysis and User Feedback to Evaluate Optimal Design Specifications in Lift Assist Devices
Sarvari Vemparala	MS	Dec-11	Optimal Design Specifications in Lift Assist Devices
Sree Harsha Jampala	MS	Aug-11	Evaluation of Kneeling Stresses During Kneeling Work
Josh Quincy	MS	Dec-10	Knee Biomechanics Walking on Railroad Ballast and the Associated Risk Factors for Knee Osteoarthritis
Byungju Yoo	MS	May-10	Potential Trip/fall Hazards of Walking on Railroad Ballast
Derrick Franklin	ME	2009	The effects of lifting velocity on back compressive force and Shoulder moment during lifting tasks
<i>Undergraduate</i>			
Josh Quincy	BS Biomed. Eng	Dec-07	Gait Analysis on Transversely Sloped Surfaces
Manndi Lortscher	BS Biomed. Eng	May-07	Revision of a Hand Calculated Back Compressive Force Model

### **Student committee memberships include the following**

<b>Name</b>	<b>Degree (<i>Mech. Eng. unless noted</i>)</b>	<b>Graduation Date</b>	<b>Thesis or Research Project</b>
<i>Graduate</i>			
Travis Steele	PhD	May-13	Shoulder Injuries from Pushing and Pulling
Andrew Vogt	PhD	Dec-12	Slip Gait and Balance Control

Name	Degree ( <i>Mech. Eng. unless noted</i> )	Graduation Date	Thesis or Research Project
Parth Dudhiya	MS	May-12	Non-Thesis M.S.
Nikhil Nanivadekar	MS	May-12	Non-Thesis M.S.
Clayton Bodell	MS	May-13	Non-Thesis M.S.
Rahul Singh	MS	May-12	Non-Thesis M.S.
Scott Ryan	MS-OCHE	May-12	Hand/Arm vibration exposure and tool design
Subhasis Behera	MS	May-12	A Method For The Study of Mechanical Properties of Branched Blood Vessels
Adam Pyper	M.S.	May-10	Non-Thesis M.S.
Mike Larsen	M.S.	May-10	Non-Thesis M.S.
Kathleen Allman	M.S.	May-10	Non-Thesis M.S.
Andrew Krieger	M.S.	May-10	Non-Thesis M.S.
Sanjay Srivastava	ME	2009	Adaptation of Wire Electro Discharge Machine for Making Piston Ring Gap Seals
Rameshwer Kalingala	ME	2009	Taxonomy of Office Jobs
Ryan Choi	MS	2009	Contribution of work-related physical factors to epicondylitis

### Service

- Member of Editorial Board for **WORK: A Journal of Preventative, Assessment & Rehabilitation**
- Volunteer Lab Tour Guide and Presenter-College of Engineering Outreach
- Graduate Student Advisory Committee (GSAC) – 2006-2008
- Student Section Advisor: ASSE University of Utah Student Section – 2008-Present
- Robot Inspector: FIRST Robotics Competition (SLC) 2010-2011
- Task Force Member - 2011 ASSE Student Leadership Conference
- Advisor: Senior Design Teams – 2009-Present
- Reviewer: ASME Summer Bioengineering Conference – 2012
- Task Force Chair - 2012 Region II ASSE Student Leadership Conference
- Member of the University of Utah Center on Aging – 2012-Present

### GRANTS/CONTRACTS/GIFTS/PROPOSALS

#### Funded:

Source: RMCOEH 7/1/2009 – 6/30/2010  
 Title: Evaluating Knee Joint Stresses During Kneeling Work  
 People Involved: (PI)-**Merryweather, A.**  
 Amount: \$9,620

Source: RMCOEH 7/1/2009 – 6/30/2010  
 Title: Modified guidelines for safe material handling using dynamic forces  
 People Involved: (PI)-**Merryweather, A.**  
 Amount: \$8,293

Source: RMCOEH 7/1/2009 – 6/30/2010  
Title: A Device to Reduce BCF and Improve Return to Work Scenarios for Workers with LBP  
People Involved: (PI)-**Merryweather**, A.  
Amount: \$2,179

Source: High Plains Intermountain Center for Agricultural Health and Safety  
Title: Slip, Trip, and Fall Injuries Among Tractor Operators  
People Involved: (PI)-**Merryweather**, A.  
Amount: \$10,478

Source: RMCOEH 7/1/2009 – 6/30/2010  
Title: Slips, Trips, and Falls Among Commercial Truck Drivers  
People Involved: (PI)-**Merryweather**, A., (Co-I)-Thiese, M.  
Amount: \$12,078

Source: University Teaching Award 2011-2012  
Title: Low Cost Teaching Tool for Motion Tracking and 3D Modeling  
People Involved: (PI)-**Merryweather**, A.  
Amount: \$2,995

Source: NIOSH PPRT\_T42 OH008414 7/1/11 – 6/30/12  
Title: Assembly Force Requirements and Human Capabilities for Upstream Design Planning  
People Involved: (PI)-**Merryweather**, A.  
Amount: \$7,421

Source: AHRQ 9/1/11 – 6/30/14  
Title: Linkages between the safety of the hospital bed, patient falls and immobility  
People Involved: (PI)-Morse, J., (Co-I)-**Merryweather**, A, (Co-I)-Doig, A., (Co-I)-Blowski, D.  
Amount: \$231,512 (Merryweather portion as Project Executive) Total: \$949,659

Source: NSF 5/1/2012-4/30/2016  
Title: Haptic VR Terrain Display  
People Involved: (PI)-Minor, Mark, M., (Co-I)-Johnson, D., (Co-I)-**Merryweather**, A., (Co-I)-Hollerbach, J., (Co-I)-Foreman, K.  
Amount: \$1,052,550.

**Submitted/Pending:**

Source: NSF 7/1/2012 - 6/30/2016  
Title: SITE Design Projects.  
People Involved: (PI)-**Merryweather**, A., (Co-I)-Meek, S., (Co-I)-Blowski, D.,  
Amount: \$123,753. Status: Pending

Source: Utah State University (Subcontract) 6/1/2012-6/30/2014  
Title: Sustainable Weed Management  
People Involved: (PI)-**Merryweather**, A., (PI)-Pate, M.  
Amount: \$10,632

Source: CDC/NIOSH 7/1/12 – 6/30/15  
Title: Shoulder Disorders: Identifying Risk Factors  
People Involved: (PI)-Hegmann, K., (PI)-Garg, A., (Co-I)-Kapellusch, J., (Co-I)-Thiese, M., (Co-I)-**Merryweather**, A  
Amount: \$1,697,573



## **Unfunded:**

Source: College of Engineering Base Engineering Equipment Fund (BEEF) 2010  
Title: Virtual Model and Human/Machine System Design Project: OptiTrack Motion Capture System  
People Involved: (PI)-**Merryweather**, A., (Co-I)-Bloswick, D.  
Amount: \$8,824

Source: CDC 2009-2011  
Title: Understanding Prevention Strategies and Development of Assistive Devices to Reduce Fall Injuries among Older Adults  
People Involved: (PI)-**Merryweather**, A., (Co-I)-Thiese, M. (Co-I)-Bloswick, M., (Co-I)-Sesek. R.  
Amount: \$110,200

Source: Clinical and Translational Science Center (CCTS) 2010-2011  
Title: Describe and characterize fatal and non-fatal injuries related to agriculture through probabilistic linkage of multiple databases in Utah  
People Involved: (PI)-**Merryweather**, A, (Co-I)-Edelman, L., (Co-I)-Pate, M., (Co-PI)-Thiese, M, (Co-I)-Cook, L.  
Amount: \$30,000

Source: NSF 7/2011 – 6/2014  
Title: NSF Preventing Slip and Fall Through Traction Characterization, Control, and Proprioceptive Cues  
People Involved: (PI)-Minor, M., (Co-I)-**Merryweather**, A.  
Amount: \$20,400 (Merryweather portion) Total: \$498,560.00

Source: NSF 7/1/2011-6/30-2011  
Title: Senior Design Projects  
People Involved: (PI)-Sanford, M., (Co-I)-**Merryweather**, A., (Co-I)-Bloswick, D.  
Amount: \$125,730

Source: Office Ergonomics Research Committee 12/01/2010-11/30/2011  
Title: Distal Upper Extremity Biomechanics Input Devices  
People Involved: (PI)-**Merryweather**, A.  
Amount: \$19,768

Source: Office Ergonomics Research Committee 12/01/2010-11/30/2011  
Title: Mobile Computing Device Usage  
People Involved: (PI)-**Merryweather**, A.  
Amount: \$16,706

## **Professional Affiliations**

- American Society of Safety Engineers (ASSE), 2004 - present.
- American Society of Biomechanics (ASB), 2009 - present.
- American Society of Agricultural and Biological Engineers (ASABE), 2010 - present.

**Ergonomic Consultation (C) and/or Training (T) including:**

- LDS Church Records and Granite Mountain Vault (C,T)
- Black Diamond Equipment (C)
- Kennecott Utah Copper (C)
- Dupont Holographics (T)
- SKF Polyseal (C)
- Fezter Fine Architectural Wood Work (C)
- LDS Church Printing Division (C)
- Hunter Douglas Blinds (C)
- Smead Manufacturing (C)
- Edwards Life Sciences (C,T)

**Other Qualifications**

- Fluent in Spanish