



Human Systems Engineering Laboratory

Department of Industrial and Systems Engineering

Mississippi State University



Kari Babski-Reeves

She received her PhD, MS, and BS degrees in Industrial Engineering from Mississippi State University in 2000, 1998, and 1995 respectively. She joined the Industrial and Systems Engineering Faculty in June 2006. Prior to joining MSU, Dr. Babski-Reeves was an assistant professor in the Grado Department of Industrial and Systems Engineering at Virginia Tech.



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Dr. Babski-Reeves' research efforts are focused in the areas of human factors, ergonomics, and safety. Specifically, her research interests include industrial ergonomics, work related musculoskeletal disorder prevention and control, occupational biomechanics, psychosocial risk factors, work physiology, occupational safety and health, total body fatigue, localized muscle fatigue, and thermography applications in ergonomics. Her research has been funded by entities such as NIOSH, NIJ, DHS, TARDEC, TACOM, ORNL, Honda, Hyundai, UPS, ClimaTech Safety Inc., Revealed Knowledge Inc., John's Hopkins Public School of Health, and the Virginia Institute for Critical Technologies

Co-Directors

Lesley Strawderman

She received her Ph.D. in Industrial Engineering from Pennsylvania State University in 2005. She has also received M.S.I.E. from Pennsylvania State University and a B.S.I.E. from Kansas State University. She joined the Industrial and Systems Engineering faculty in August 2006.

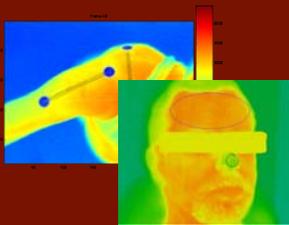


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Dr. Strawderman's research interests center around human factors and ergonomics. She is particularly interested in the use of usability metrics in service quality improvement. Her research has also included topics such as health care process improvement, consumer product design, cognitive processing, safety systems, and customer satisfaction. Dr. Strawderman has taught courses in the areas of human factors, safety systems, work measurement, and facilities layout.

Select Current and Recent Projects

Thermographic Applications in Ergonomics Research



Usability Research



Assistive Technology Research



Project Title: Ergonomic evaluation of a bed assistive device

Funding Source: Revealed Technologies, Inc.

Occupational Ergonomics in Construction Research



Project Titles: Using expert knowledge to prevent upper extremity injuries ; Modeling total fatigue during finished carpentry tasks

Funding Sources: National Institute for Occupational Safety and Health (NIOSH); Center for Innovation in Construction Research (VT)/NIOSH

Automotive Research



Project Titles: Recommended limits for manual torquing tasks; User-centered vehicle design

Funding Sources: Honda of America and Hyundai

Body Armor Research



Project Title: Investigation of the Effects of Increased Coverage Area for Soft Body Armor,

Funding Source: National Institute of Justice (NIJ)



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Select Current and Recent Projects

Situational Awareness and Cognitive Task Analysis Research



Project Title: Semantics-driven knowledge discovery systems for wide area monitoring of electric power grid,

Funding Source: Department of Homeland Security (DHS)/Oak Ridge National Laboratory (ORNL)/Southeast Region Research Initiative (SERRI)

Project Titles: Validation of digital human models, Using virtual soldier research (VSR) to determine the work required to integrate cognitive architecture modeling into the TARDEC ground vehicle simulation lab (GVSL), Virtual soldier research: human factors development and evaluation

Funding Sources: Tactical Army Command (TACOM) / U.S. Army Tank Automotive Research, Development and Engineering Command (TARDEC)

Virtual Soldier Research



Healthcare Service Delivery



Project Title: Quantifying the quality of service for healthcare delivery in Mississippi

Funding Source: MSU Office of Research – Research Initiation Program (RIP),

Training Program Research



Project Titles: DSP safety training system, The national highway watch analysis and improvement program, Ergonomics essentials workshop development

Funding Sources: UPS , Department of Homeland Security (DHS) and American Trucking Associations(ATA), Center for Advanced Vehicular Systems Extension (CAVS-E)

Pedestrian Behavior Modeling



Project Title: Multi-agent pedestrian simulation modeling

Funding Source: United States Department of Transportation (DOT)



Project Title: The role of intermodal transportation in humanitarian supply chains

Funding Source: National Center for Intermodal Transportation (NCIT)



FEMA