

G. TALLEY HOLMAN

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EDUCATION

Auburn University, Auburn, AL,

Ph.D. in Industrial & Systems Engineering, 2007

Specialization: Occupational Injury Biomechanics, Human Factors, Ergonomics & Safety

Advisor: Dr. Robert E. Thomas

Dissertation: 'Patient Handling: Conditions & Restrictions'

M.S. in Industrial & Systems Engineering, *Advisor:* Dr. Brian J. Carnahan, 2004

M.B.A., *Advisor:* Dr. Michael LaTour, 2004

Georgia Southern University, Statesboro, GA,

B.S., Physics, 1995

B.S. in Manufacturing, Industrial Management (Lean Manufacturing), 1995

RESEARCH INTERESTS

1. Analysis and quantification of healthcare environments and procedures for error reduction, layout redesign, and development of environmental design standards.
Current Research: A risk assessment of ambulatory medication use of patients transitioning from hospital discharge back to primary care clinics to reduce the potential for patient harm. Grant: K08 HS17014-01 (NIH/AHRQ) Pi: Wetterneck
Dissertation Research: Biomechanical, human factors and ergonomics assessment of working in restricted or confined spaces (other application: vehicle design, evacuation modeling, general industry, etc).
2. Expanding human factors and biomechanical constraints of building and public transportation evacuation models.
3. Development of a human biomechanical coefficient for use in industry optimization models and simulations.

PUBLICATIONS

Journal Articles:

1. Holman, G.T., Thomas, R.E., and Brown, K, 2009, A Health Comparison of Alabama Nurses versus U.S. and Canadian Normative Populations, *Journal of Orthopaedic Nursing*, (In Press).
2. Holman, G.T., Ellison, K.J., Maghsoodloo, S., and Thomas, R.E., 2009, Nurses' Perceptions of How Job Environment and Culture Influence Patient Handling, *Journal of Orthopaedic Nursing*, (In Press).
3. Holman, G.T., Davis G.A., and Maghsoodloo, S., 2008, Effect of Dynamic Reach on Seated Reach Arcs, *Ergonomics*, 51(5), 691-701.
4. Holman, G.T., Carnahan, B.J., and Thomas, R.E., 2006, Using Surveys to Identify Stressors in Generalized Jobs, *International Journal of Industrial Ergonomics*, 36, 671-7.

Manuscripts Submitted:

1. Holman, G.T., Blackburn, J.T., and Maghsoodloo, S., 2009, The Effects of Restricted Space on Patient Handling.

Manuscripts in Draft:

1. Holman, G.T. and Piper, A.K., Using Data Clustering of Short Survey Results to Identify Ergonomic Stressors Associated with Nursing Tasks.
2. Holman, G.T., LaTour, M.S., and Maghsoodloo, S., Changing Buyer Intent: Can Ergonomics Sell?

**REFEREED
CONFERENCE
PROCEEDINGS:**

Articles & Presentations:

1. Holman, G.T., 2006, Decision Factors in Patient Handling, *Proceedings of the 4th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium*, Salt Lake City, UT, ISBN: 0-9744324-3-1.
2. Holman, G.T. and Carnahan, B.J., 2003, Using Linear Programming to Optimize Control Panel Design From an Ergonomic Perspective, *Proceedings of the Human Factors and Ergonomics Society 47th Annual Meeting*, Denver, Colorado, 1317-1321.
3. Flynn, E.A., Dorris, N.T., Holman, G.T., Carnahan, B.J., and Barker, K.N., 2002, Medical Dispensing Errors in Community Pharmacies: A Nationwide Study, *Proceedings of the Human Factors and Ergonomics Society 46th Annual Meeting*, Baltimore, Maryland, 1448-1451.

Presentations & Posters:

1. Wetterneck, T., Holman, G.T. and Smith, P., 2008, Methods used to Assess Risk in Ambulatory Medication use after Hospital Discharge, *WREN Wisconsin Primary Care Research & Quality Improvement Forum*, Wisconsin Dells, Wisconsin, poster.
2. Boelhouwer, E. and Holman, G.T., 2007, Front-End Discharge Versus Rear-End Discharge Ready Cement Trucks, *Proceedings of the 2007 American Society of Safety Engineers Professional Conference*, Orlando, FL, poster.
3. Holman, G.T., 2006, Patient Handling: Conditions and Restrictions, *2006 American Society of Safety Engineers Conference*, Seattle, WA.
4. Holman, G.T., 2005, Patient Handling: Conditions & Restrictions, *National Institute for Occupational Safety and Health (NIOSH) Deep South Center Research Symposium*, Birmingham, AL.

GRANTS

Written as principal investigator (Funded):

Holman, G.T., 2005, "The Influence of Restricted Spaces on Patient Handling within a Hospital Environment", American Society of Safety Engineers Foundation, \$16,560, (February 2005).

Co-written proposal:

Davis, G.A. (PI), 2004, "Nursing Home Ergonomics Training Program", OSHA: Susan Harwood Grant, \$110,500 (not funded).

**ACADEMIC
EXPERIENCE**

Assistant Professor, University of Louisville, Louisville, KY, 2009
Department of Industrial Engineering

Research: Occupational Injury Biomechanics, Human Factors, Ergonomics & Safety

Research Associate (*postdoctoral*), University of Wisconsin-Madison, Wisconsin, 2008-2009
Center for Quality and Productivity Improvement (CQPI), Director: Pascale Carayon
Contribute to the execution of existing studies: (1) Assessing Risk in Ambulatory Medication Use after Hospital Transitions; (2) Proactive Risk Assessment of Primary Care of the Elderly

Research Exchange Program, University of Algarve, Portugal, 2007

Network and Systems Administrator, Auburn University, Auburn, AL, 2003-2007
Performed installation and maintenance of all equipment and computers in the Industrial & Systems Engineering Occupational Safety and Ergonomics laboratories and offices.

Laboratory Technician, Auburn University, Auburn, AL, 2005-2007
Designed, built, and maintained Industrial & Systems Engineering's biomechanics and human factors laboratory. Laboratory capabilities include simultaneous capture of ground force reaction, motion capture, balance, etc.

Software:	Peak Motus 8.5
	LabView
	Cinema 4D
Equipment:	Vicon/Peak Motion Capture System (5 Camera)
	AMTI Forceplate (OR6-7 1000)
	EMG/EEG/EKG (8 Channel)
	NeuroCom Balance Master
	Lumbar Motion Monitor (LMM)
	Pressure Mapping System

OIPRT Interdisciplinary Training Program, University of Alabama Birmingham, 2005-2006
Completed the School of Public Health graduate core curriculum.

Graduate Research Assistant, Auburn University, Auburn, AL
Projects (selected)

- Patient Handling: Conditions & Restrictions, 2005-2007.
- Incorporation of Human Constraints and Interactions in Fire Evacuation Models, 2007.
- Formula SAE Racecar Team Safety, Human Factors & Ergonomic Specialist, 2005-2006.
- Using Linear Programming to Optimize Layout from an Ergonomic Perspective, 2003-2004.
- Human Optimization Constraint: Biomechanical Coefficient of Seated Reach, 2004.
- Marketing Technology, Product Testing, and Safety: Can Ergonomics Sell?, 2003.
- Effect of Dynamic Reach on Seated Reach Arcs, 2002-2003.
- ScriptPro Nationwide Pharmacy Error Study, 2001-2002.

Graduate Teaching Assistant, Auburn University, Auburn, AL
Auburn University, Department of Industrial & Systems Engineering

Teaching assistant for the following courses:

INSY	3021	Methods Engineering (undergraduate), 2005, 2007
INSY	8970	Research Methods (graduate), 2006
INSY	3020	Occupational Safety and Ergonomics (undergraduate), 2005

Guest Lecturer for the following courses, 2003-2007:

INSY	6010	Safety Engineering I (graduate)
INSY	7060	Ergonomics I (graduate)
INSY	7070	Ergonomics II: Biomechanics (graduate)

Auburn University, Department of Marketing

Teaching assistant for the following courses:

- MKTG 4390 Personal Selling (undergraduate), 2004
- MKTG 3410 Consumer Marketing (undergraduate), 2004
- MKTG 3310 Principles of Marketing (undergraduate), 2003

**INDUSTRY
EXPERIENCE**

Ergonomic Intern, Delta Airlines, Atlanta, GA, Summer 2003

- Conducted group and one-on-one ergonomics training.
- Performed ergonomic evaluations for departments and individuals.
- Designed and built initial Ergonomics Website.
- Developed multi-level recommendations based on impact versus cost

Ergonomic Consultant, Auburn University, Auburn, AL, 2002

Performed an ergonomic evaluation of Auburn University Fisheries.

- Evaluated procedures and environment working directly with management and employees.
- Developed new techniques for on-site ergonomic assessment of general description jobs (*Publication: Using Surveys to Identify Stressors in Generalized Jobs, IJIE 2006, 36, 671-7*).
- Developed multi-level recommendations based on impact versus cost (presentation and written report).

Supervisor / Manager, Shaw Industries, Inc., Andalusia, AL, 1995 – 2001

- Managed 30 to 55 employees in both main production and support departments.
- Set new production records each of the areas worked while lowering waste percentages.
- Responsible for written department procedures, both operational (SOPs) and safety (JSAs).
- Performed perspective management and hourly interviews.
- Chaired and participated on special committees including:
 - Headed both shift safety and ergonomic committees (1997-2001)
 - Streamlined a series of department mergers (1999)
 - Behavioral Safety Program (1999)
 - Turnover Reduction Team (1998)

Emergency Responder, Shaw Industries, Inc., Andalusia, AL, 1998 – 2001

Responsible for the safety of 800+ individuals located on-site in an emergency. Primary or secondary emergency organization incident commander 1998-1999. Specialized training:

- Hazardous waste spill and response (Hazmat) Technician Level, INCA Environmental
- Confined Space and Rescue training, INCA Environmental
- Incipient Fire Team training, INCA Environmental
- Red Cross First Responder training with CPR
- Incident Commander and Emergency Response training

PROFESSIONAL

Certifications

1. CEP (AEP application pending)

Memberships

1. Alpha Pi Mu Honor Society
2. Delta Epsilon Iota Honor Society
3. Institute of Industrial Engineers
4. Human Factors and Ergonomics Society
5. American Society of Safety Engineers