Matthew Michael Marshall, Ph.D., CPE

Academic Rank: Assistant Professor

Degrees:

Ph.D., Industrial and Operations Engineering, University of Michigan (2002)
MS, Industrial and Operations Engineering, University of Michigan (2000)
BS, Industrial Engineering, Rochester Institute of Technology (1997)

Service:

Years of Service: 3 years
Assistant Professor: 11/01 - present

Related Experience:

Co-Director of Training Development. *Center for Integrated Manufacturing Studies, RIT, Rochester, NY.* Develop and deliver training in the area of workplace ergonomics for small to medium-sized companies in New York State. Develop training materials in conjunction with grocery store ergonomics guidelines published by Occupational Safety and Health Administration (11/01-present).

Graduate Research Assistant. *Rehabilitation Engineering Research Center, University of Michigan, Ann Arbor, MI.* Provided support with ongoing design and development of a web-based system to compare and match the physical demands of work tasks with the capability of workers, (6/98 – 10/01).

Graduate Research Assistant. *Upper Extremity Cumulative Trauma Disorders Lab, University of Michigan, Ann Arbor, MI.* Conducted field-based research to evaluate the ergonomic risk factors of jobs in the automotive industry. Conducted research to evaluate the use of electromyography and verbal magnitude estimation to evaluate the forceful demands of work (6/98 – 10/01).

Consulting, Patents:

Private Consultant. *Ann Arbor, MI.* Provided consultation to automotive companies in southeast Michigan. Services focused on ergonomic analysis of assembly line jobs. Provided support to automotive manufacturers with the design and analysis of door components to reduce the physical demands of installation (6/98 – 10/01).

Professional Registration: None

Publications (last 5 years):

Marshall, M.M., Armstrong, T.J., and Ebersole, M.E. (2004). Verbal estimation of peak exertion intensity. *Human Factors* (accepted).

Marshall, K.K. and Marshall, M.M. (2003). Ergonomics: What it Can Do For Your Company. Imaging Spectrum. I-ITC (International Imaging Technology Council). October, 89-95.

Carrano, A.L., Kuhl, M.E., and Marshall, M.M. (2003). "Design, implementation, and integration of an experiential assembly system engineering laboratory module," Proceedings of the 2003 American Society for Engineering Annual Conference & Exposition.

Marshall, M.M. and Armstrong, T.J. (2003). "Perceived force requirements for activities of daily living," XVth Triennial Congress of the International Ergonomics Association.

Armstrong, T.J., Marshall, M.M., Martin, B.J., Foulke, J.A., Grieshaber, D.C. and Malone, G. (2002). Exposure to forceful exertions and vibration in a foundry. *International Journal of Industrial Ergonomics*.

Armstrong, T.J., Keyserling, W.M., Ulin, S.S., and Marshall, M.M. (2000). A hierarchical job analysis system for assessing physical work barriers. *Proceedings of the IEA 2000/HFES 2000 Congress*, San Diego, CA.

Marshall, M.M., Armstrong, T.J., and Ebersole, M.E. (2000). Development of an observational method of force assessment. *Proceedings of the RESNA 2000 Annual Conference*, Orlando, FL.

Marshall, M.M., Armstrong, T.J., Martin, B.J., Foulke, J.A., Grieshaber, C.G., and Malone, G. (2000). Exposure to forceful exertions and vibration in a foundry. *Proceedings of the IEA 2000/HFES 2000 Congress*, San Diego, CA.

Marshall, M.M., Mozrall, J.R., Shealy, J.E. (1999). The effects of complex wrist and forearm posture on wrist range of motion. *Human Factors*, 41(2), 205-213.

Marshall, M. M., Mozrall, J.R., and Shealy, J.E. (1997). The effects of complex wrist and forearm posture on wrist range of motion. *41st Annual Meeting of the Human Factors and Ergonomics Society*, Albuquerque, NM.

Marshall, M.M., Mozrall, J.R., and Shealy, J.E. (1997). Range of motion for complex wrist movements. *6th Annual Industrial Engineering Research Conference*, Miami, FL.

Professional Societies:
American Society of Engineering Education
Human Factors and Ergonomics Society
Institute of Industrial Engineers – Faculty Advisor for RIT student chapter

Honors and Awards:
Graduate Assistance in Areas of National Need (GAANN) Fellow (2000)

Institute and Professional Service (last 5 years):
Faculty advisor for RIT IIE student chapter (11/02-present)
Advisor for multidisciplinary senior design projects (3 total projects)

Professional Development Activities (last 5 years):
Proposals:
NY State Department of Labor, "Hazard Abatement Grant" – (Co-PI), submitted 2/04, ~$150,000, pending.
National Technical Institute for the Deaf Dodge Grant, "Effects of Interpreting Task Characteristics on Sign Language Biomechanics" – (Co-PI), submitted 2/04, $5,000, pending.
U.S. Department of Labor, "Susan Harwood Training Grant" – (Co-PI), submitted 7/03, $169,101, funded.
NY State Department of Labor, "Hazard Abatement Grant" – (Co-PI), submitted 2/03, $126,745, funded.
NY State Department of Labor, "Hazard Abatement Grant" – (Co-PI), submitted 2/02, $119,556, funded.
RIT Faculty Evaluation and Development Grant, "Development of a Course in Applied Biomechanics" – (PI), submitted 5/03, $5,000, funded.
RIT Gleason Fund, "Biomechanical Assessment of Sign Language Interpreting," – (PI), submitted 4/03, ~$50,000, declined.
NIOSH Young Investigator Grant, "Factors Affecting Verbal Estimation of Peak Forceful Exertion," – (PI), submitted 4/03, ~$100,000, declined.
NSF CCLI, "Design, Implementation, and Integration of an Experimental Assembly System Engineering Laboratory Module" – (Co-PI), submitted 7/03, $75,000.
RIT Provost's Learning and Innovation Proof of Concept Grant, "Development of 'Virtual' Laboratory Modules for an Ergonomics Distance Learning Class" – (PI), submitted 4/03, $5,000, declined.