# **Stephen D. Fleming**

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#### **Professional Interests**

- Industrial ergonomics
- Whole-body vibration assessment
- Job, process, and equipment design
- Job, process, and task risk assessment
- Industrial engineering
- Work measurement
- Occupational biomechanics

# **Education Attained**

M.B.A.	Business Administration, Spring Arbor University, November 2009. Thesis topic: Whole-body vibration in common-life activities.
B.S.E.	Industrial and Operations Engineering, University of Michigan May 2003.

# **Professional Experience**

Ergonomics and Industrial Engineering Consulting Page Engineering, Inc. June 2003 to present

- Analyze work environments and work tasks using industrial engineering work measurement methods and risk assessment models for different body regions.
- Assisting industrial clients in applying ergonomics to workplace processes, tools, and equipment, including all major North American railroads, FedEx, Ford Motor Company, Lear Seating, USPS, and the Blue Water Bridge Authority.
- Developed & implemented a methodology for measuring and analyzing exposure to whole-body vibration (WBV) and hand-arm vibration (HAV).

# Graduate Dissertation

Spring Arbor University, Gainey School of Business 2009

- The final thesis focused on developing & implementing a methodology for measuring and analyzing exposure to whole-body vibration (WBV).
- Page Engineering, Inc. and its clients, continue to utilize this methodology for measuring and analyzing exposure to WBV to date.

#### Undergraduate Senior Thesis

University of Michigan, Department of Industrial and Operations Engineering 2003

- The senior design project involved working as a Program and Operations Analyst for the University of Michigan Health System in Ann Arbor, MI.
- Pediatric resident workload was measured and assessed through time and motion study.

# Co-Op Engineer

Eaton Aerospace June 2000 to September 2002

- Systems Integration Engineer (Ann Arbor, MI)
- Product Engineer (Jackson, MI)
- Test Lab Technician (Jackson, MI)

# **Professional Societies And Memberships**

- Human Factors & Ergonomics Society
- International Society for Occupational Ergonomics and Safety
- Institute of Industrial Engineers
- Association of Canadian Ergonomists

# **Professional Certification**

- Certificant #1919, Board of Certification in Professional Ergonomics, since 2014.
- Certificant #1403507, Excel Tribometers, LLC, Certified XL Tribometrist Certification, since 2014.

# **Research Publications**

Page G, Weames G, Fleming S, Vanderpool J (2015). Slow and Steady: Safe Lifting at the Ready! Proceedings of the 27<sup>th</sup> Annual International Occupational Ergonomics and Safety Conference Nashville, TN.

- Weames, G., Page, G., Vanderpool, J., Fleming, S., and Frohlich, J. (2013). Frequency and duration of occupational physical factors for the job of the North American railroad carman in car repair service: in support of risk evaluation. Proceedings of the 44<sup>th</sup> Annual Conference, Association of Canadian Ergonomists. Whistler, British Columbia.
- Weames, G., Page, G., Vanderpool, J., Frohlich, J., Fleming, S. (2013). Modeling of occupational physical factors for the job of the North American railroad carman in car repair service: in support of risk evaluation. Proceedings of the 44<sup>th</sup> Annual Conference, Association of Canadian Ergonomists. Whistler, British Columbia.
- Fleming, S., Page, G., Weames, G., Vanderpool, J., and J. Frohlich (2013). Analysis of Whole-Body Vibration Exposures Associated with Commonly Used Land and Aquatic Vehicles. Proceedings of the 25<sup>th</sup> Annual International Occupational Ergonomics and Safety Conference, Atlanta, GA.
- Weames, G., Brown, R., Page, G., Vanderpool, J., Fleming, S., Frohlich, J. (2012). Analysis of exposure to upper and lower extremity occupational physical factors in North American Railroad Carmen-Inspectors. Proceedings of the 24<sup>rd</sup> Annual International Occupational Ergonomics and Safety Conference, Fort Lauderdale, FL.
- Weames, G., Brown, R., Page, G., Vanderpool, J., Fleming, S., Frohlich, J. (2012). Analysis of exposure to cervical and lumbar spine occupational physical factors in North American Railroad Carmen-Inspectors. Proceedings of the 24<sup>rd</sup> Annual International Occupational Ergonomics and Safety Conference, Fort Lauderdale, FL.
- Weames, G., Brown, R., Frohlich, J. Page, G., Vanderpool, J., Fleming, S. (2011). Analysis of exposure to lower extremity occupational physical factors in North American train crews: walking and ballasted surfaces. Proceedings of the 23<sup>rd</sup> Annual International Occupational Ergonomics and Safety Conference, Baltimore, MD.
- Page, G., Fleming, S., Weames, G., Vanderpool, J., and Frohlich, J. (2010). Data compilation and risk analysis for exposure to occupational physical factors for the North American railroad train crew: part II. Proceedings of the 41<sup>st</sup> Annual Conference of the Association of Canadian Ergonomist, Kelona, British Columbia.
- Weames, G., Page, G., Vanderpool, J., Fleming, S., Frohlich, J. (2010). Data compilation and risk analysis for exposure to occupational physical factors for the North American railroad train crew: part I. Proceedings of the 41<sup>st</sup> Annual Conference of the Association of Canadian Ergonomist, Kelona, British Columbia.
- Page, G., Fleming, S., Weames, G., Vanderpool, J., and Frohlich, J. (2010). Whole-body Vibration Exposure at the Seat Pan: an investigation of jointed rail upon the locomotive cab. Proceedings of the 22<sup>nd</sup> Annual International Occupational Ergonomics and Safety Conference, Tempe, AZ.

- Page, G., Fleming, S., Weames, G., Vanderpool, J., and Frohlich, J. (2010). Rock and Roll: Perception and reality of whole-body vibration exposure under different service conditions. Proceedings of the 22<sup>nd</sup> Annual International Occupational Ergonomics and Safety Conference, Tempe, AZ.
- Page, G., Weames, G., Vanderpool, J., Fleming, S., Frohlich, J. (2010). Whole-body Activity and Postural Fixity and Neutrality: A case study of North American railroad conductor/brakemen. Proceedings of the 22<sup>nd</sup> Annual International Occupational Ergonomics and Safety Conference, Tempe, AZ.
- Page, G., Weames, G., Vanderpool, J., Fleming, S. Frohlich, J., and Hunt, W. (2009). Postural Fixity and Neutrality: a case study of the modern North American locomotive cab environment Proceedings of the 21<sup>st</sup> International Society of Occupational Ergonomics and Safety (ISOES) Annual Conference, Dallas.
- Page, G., Weames, G., Vanderpool, J., and Fleming, S. (2009). Whole-Body Postural Adaptation During Manual Materials Handling-Type Exertions: Implications for job task assessment. Proceedings of the 21<sup>st</sup> International Society of Occupational Ergonomics and Safety (ISOES) Annual Conference, Dallas.
- Page, G., Vanderpool, J., Fleming, S., and Jones, T. (2008). Whole-Body Postural Adaptation During Pull-Type Exertions: What is the Driving Force? What are the Practical Implications? Proceedings of the 20<sup>th</sup> International Society of Occupational Ergonomics and Safety (ISOES) Annual Conference, Chicago.