

# Curriculum Vitae

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## EDUCATION:

- Ph.D. Industrial and Systems Engineering ([Human Factors Option](#)) 1997. Virginia Tech, Blacksburg, Virginia.
- M.S. [Industrial Engineering](#) 1989. The University of Oklahoma, Norman, OK.
- B.S. [Chemistry/Biology](#) (double degree) 1986. Oklahoma Baptist University, Shawnee, OK.

## PROFESSIONAL EXPERIENCE:

### **Vice President, 1999-Present.**

***Purswell & Purswell, Engineering & Ergonomics, Inc., Colorado Springs, CO 80920***

Consults with manufacturers and attorneys on ergonomics and safety issues. Performs hazard analyses of products for manufacturers. Consults with manufacturers on the development of warnings and instructions for new and redesigned products. Consults with employers on the development and implementation of safe and ergonomically sound work practices.

### **Adjunct Professor, 1999-Present.**

***Engineering Department, Colorado State University-Pueblo, Pueblo, CO 81001***

Teaches the graduate ergonomics course and the senior level safety course for the Engineering department. Supervises student research on product safety and usability issues. As part of his involvement with CSU-Pueblo, Dr. Purswell has also initiated and supervised several graduate student ergonomics projects for Pueblo area manufacturing, warehousing and retail establishments.

### **Ergonomics and Safety Consultant, 1994-1999.**

***Purswell & Associates, Colorado Springs, CO 80920***

Designed and conducted research concerning user perceptions and comprehension of potential product hazards. Developed experimental protocols and questionnaires, performed data collection, data reduction and analysis, and wrote reports for clients.

Performed hazard analyses of consumer and industrial products, applied system safety principles of hazard abatement, including suggested redesign, guarding, and preparation of camera-ready copies of instructions and on-product warnings for clients.

Researched and interpreted OSHA, CPSC and ANSI standards for clients, including the legislative record for OSHA standards. Acquired familiarity with

OSHA standards applicable to chemical safety, workplace/machine interface issues and construction/maintenance operations. These include, for example, the Hazard Communication Standard, Lockout/Tag out Standard, Hearing Conservation Standard, Fall Protection Standards, etc. Performed forensic consulting for attorneys involved in workplace and product safety litigation, including preparation of reports and research applicable to a given issue involved in the litigation.

**Graduate Teaching/Research Assistant, 1989-1992.**  
**Virginia Tech, Blacksburg, Virginia, 24061**

Assisted with *Introduction to Industrial Engineering* and *Probability and Queuing Systems* classes. Lectured in the absence of the professor. Prepared and graded homework and exams.

Documented and analyzed railroad work methods. Prepared task descriptions and ergonomics/safety analysis of work methods. Recommended methods improvements and changes in tool design. Authored the project report.

Researched finger strength capabilities. Designed the data collection equipment. Wrote the software routines to collect and reduce the data. Performed statistical analysis of the data. Authored the project report.

**Industrial Engineer Intern, Summer 1989.**  
**General Motors Assembly Division, Oklahoma City, OK 73135**

Performed analyses of assembly line ergonomics and safety issues. Prepared a safety and ergonomics training program for plant use.

**Graduate Teaching/Research Assistant, 1987-1989.**  
**University of Oklahoma, Norman, OK 73072**

Interfaced a computerized data collection system with analog electrical equipment. Taught ergonomics labs.

**CERTIFICATIONS & LICENCES:**

Registered Professional Engineer by examination  
[Board Certified Professional Ergonomist](#) by examination

**PROFESSIONAL AFFILIATIONS AND SERVICE:**

Member, Industrial Advisory Board, Industrial Engineering Department, CSU-Pueblo  
Program Chair (2004) 1<sup>st</sup> Annual Spring Symposium of the Rocky Mountain Chapter of the Human Factors and Ergonomics Society.

Member, [Human Factors and Ergonomics Society](#). Served as a newsletter editor and paper reviewer for several technical groups. Instructor for [CPE](#) prep course sponsored by the [Rocky Mountain Chapter of HFES](#)

Secretary (2003-5) [International Society for Occupational Ergonomics and Safety](#).

Senior Member and Director of Professional Registration (2003-current) for the [Institute of Industrial Engineers](#). Responsible for preparing the Industrial Engineering P.E. licensure exam administered by [NCEES](#). Served on the 2002-2003 PAK committee to review and reformulate the Industrial Engineering P.E. content areas.

Member, [National Society of Professional Engineers](#)

Member, [American Industrial Hygiene Association](#)

Associate Member, [American Council of Government Industrial Hygienists](#)

### **HONORS AND AWARDS**

Inducted into Alpha Pi Mu, the Industrial Engineering Honor Society (1990).

Recipient of the Gordon Fellowship from the University of Oklahoma (1986).

### **SHORT COURSES/SEMINARS**

Psychometric Training presented by the Chauncey Group, February 2004.

Forklift Truck Operator Instructor Development presented by the Colorado Safety Association, August 2004.

Oxyfuel Welding, Pikes Peak Community College, Fall, 2005.

“Welding Health and Ventilation for Hot Work in Confined Spaces” PCIH 2005.  
10/23/05

SMAW (stick welding), Pikes Peak Community College, Spring, 2006.

### **PAPERS AND PRESENTATIONS**

Purswell, J.P. and Purswell, Jerry L., (2005) “OSHA's Recent Citation Practices of Ergonomic Hazards under the ‘General Duty’ Clause.” Proceedings of the 18<sup>th</sup> Annual International Occupational Ergonomics and Safety Conference (edited by Thurmon Lockhart)

Peleg, L., Stern, C. and Purswell, J.P. (2004), “A NIOSH Equation Multi-task Calculator”, *in* Proceedings of the 17<sup>th</sup> Annual International Occupational Ergonomics and Safety Conference (edited by Lawrence J.H. Schulze)

Michael Griffin, Pavitree Vutra-Ukra, and J.P. Purswell (2004), “An Ergonomic Study of an MMH task in an Industrial Kitchen” *in* Proceedings of the 17<sup>th</sup> Annual International Occupational Ergonomics and Safety Conference (edited by Lawrence J.H. Schulze)

Peleg, Liran, Stern, Christopher, and Purswell, J.P. (2004) “Calculators for NIOSH Lifting Equation: The Single and Multi-Task Cases.” Proceedings of the 1<sup>st</sup> Annual Spring Symposium of the Rocky Mountain Chapter of the Human Factors and Ergonomics Society.

Purswell, J.P. (2004) “Development of an Online Database of Warnings Articles.” Proceeding of the Spring Symposium of the Rocky Mountain Chapter of the Human Factors and Ergonomics Society.

- Gonzalez, R., and Purswell, J.P., (2003) "Usability of the CPSC Website - An Update." *8th Annual International Conference on Industrial Engineering Theory, Applications & Practice*. Las Vegas, Nevada.
- Purswell, J.P., (2003) "Development Of A Searchable Database Of Warnings Articles." *8th Annual International Conference on Industrial Engineering Theory, Applications & Practice*. Las Vegas, Nevada.
- Purswell, J.P., (2003) "HF/E Texts: What are ETG Members Teaching From?" *ETG News*. June 2003.
- Purswell, J.P. (2001) "OSHA's Citation Practices of Ergonomic Hazards under the 'General Duty' Clause." *The National Ergonomics Exposition*, Las Vegas, Nevada.
- Purswell, J.P. (2001) "An MS Access Implementation of an OSHA-300 Compliant Injury Data Tracking System. *Proceedings of the 6<sup>th</sup> Annual International Conference on Industrial Engineering – Theory, Applications, and Practice*. San Francisco, CA, USA,
- Lingo, M. Holland, A, Shrestha, S, and Purswell, J.P. (2001) "An Ergonomic Evaluation and Redesign of an Industrial Kitchen Work Station." *Proceedings of the 6<sup>th</sup> Annual International Conference on Industrial Engineering – Theory, Applications, and Practice*. San Francisco, CA, USA.
- Purswell, J.P. and Purswell, Jerry L., (2001) "OSHA's Citation Practices of Ergonomic Hazards under the 'General Duty' Clause." *Proceedings of the Human Factors and Ergonomics Society 45<sup>th</sup> Annual Meeting – 2001*" p. 1110.
- Purswell, J.P. & Apipat Vithakmontri (2001) "A Preliminary Usability Analysis of the CPSC Website. " *Proceedings of the Human Factors and Ergonomics Society 45<sup>th</sup> Annual Meeting – 2001*" p. 828.
- Purswell, J.P., and Purswell, Jerry L. (2001) "The Effectiveness of Audible Backup Alarms as Indicated by OSHA Accident Investigation Records." *Advances in Occupational Ergonomics and Safety*. pp. 444-450. IOS Press: 2001.
- Gimlin, Dennis, & Purswell, J.P. "Ergonomic Challenges in Modern Endodontic Practices." *Advances in Occupational Ergonomics and Safety*. pp. 163-170. IOS Press: 2001.
- Purswell, J.P. *The OSHA Website*. Presentation to the Pueblo Safety and Health Promotion Council, October, 2000.
- Purswell, J.P. *The OSHA Ergonomics Standard*. Presentation to the Pueblo Safety and Health Promotion Council, November, 2000.
- Purswell, J.P. (March, 1998). "A Review of OSHA's Confined Spaces Advisor 1.0." *The Synergist*.
- Purswell, J.P. *Factory and Office Ergonomics*, Invited lecture to Residents of Occupational Medicine Program at the University Oklahoma Health Sciences, February 26, 1998.

- Kasbaum, T., Purswell, J.L., Purswell, J.P., and Krenek, R.F. (1998). "Hot Water Burn Hazards: Warning Label Influence on User Temperature Adjustment." *International Journal of Cognitive Ergonomics* 2 (1-2) 145-157.
- Purswell, J.P. (1997). *The Effects of Perturbation Frequency, Magnitude, and Uncertainty During Static and Dynamic Tracking on the Estimated Level of Muscle Co-Contraction*. Unpublished doctoral dissertation, Virginia Polytechnic Institute & State University, Blacksburg, Virginia.
- Bowen, D.J., Purswell, J.L., Schlegel, R.E., and Purswell, J.P. (1995). "Preferred tension psychophysical lifting limits with and without back belts." *Advances in Industrial Ergonomics and Safety VII*. p. 735.
- Purswell, J.P., and Woldstad, J.C. (1991). *Ergonomic evaluation of trackman activities*, Tech report submitted to the Association of American Railroads (Contract 4-36182). Blacksburg, VA: Virginia Tech, Industrial Ergonomics Laboratory.
- Purswell, J.P. (1990). "Finger force capabilities in keying operations." In K.H.E. Kroemer (ed.) Blacksburg, VA: Virginia Tech, Industrial Ergonomics Laboratory. *Ternary Chorded Keys and Keyboards*. Tech. Report submitted to the Center for Innovative Technology (Grant no. 4-42279), Industrial Ergonomics Laboratory, VPI&SU, Blacksburg.
- Purswell, J.P. (1989). *Evaluating Alternative Composite Measures for SWAT Ratings*. Unpublished master's thesis, University of Oklahoma, Norman, OK.