

**JAMES LOUIS SMITH, Ph.D., P.E., CPE**  
 E.L., Jr and Sue Derr Professor of Industrial Engineering  
 Texas Tech University, Lubbock, TX 79409-3061  
 Tel. (806) 742-3543; FAX (806) 742-3411  
 email: james.smith@ttu.edu  
 Registered Professional Engineer - Texas #50514  
 Certified Professional Ergonomist #577

**EDUCATION**

Ph.D.	Auburn University	1980
M.S.I.E.	University of Texas at Arlington	1973
B.S.I.E.	Northwestern University	1971

Major Areas of Interest: Ergonomics, Work Physiology, Biomechanics

**EXPERIENCE**

Teaching

Texas Tech University	E.L., Jr and Sue Derr Professor	Jan 2009- Present
	Professor of Industrial Engineering	Sept 2004- Present
	Interim Dean of Engineering	July 2002- May 2004
	Senior Associate Dean of Engineering	Jan 2001- June 2002
	Director, Center for Space Sciences	May 1999- Aug 2009
	Director, NIOSH Training Grant	Aug 1999- Present
	Professor and Chair of Industrial Engineering	Mar 1992- Dec 2000
	Professor of Industrial Engineering	Sept 1989- Mar 1992
	Associate Dean of Engineering	Sept 1988- Aug 1991
	Interim Chairperson of Industrial Engineering	Sept 1986- June 1987
	Associate Professor of Industrial Engineering	Sept. 1984- Aug 1989
Auburn University	Assistant Professor of Industrial Engineering	Aug 1979- Aug 1984
	Instructor-Department of Textile Engineering	Aug 1976- Aug 1979

Industrial

Monsanto Company, Guntersville, AL	Industrial Engineer	Apr 1974-Aug 1976
Continental Can Company, Elk Grove, IL	Industrial Engineer	Jun 1971-Aug 1972
Morgan Service Inc., Chicago, IL	Industrial Engineering Co-op	Mar 1969-Dec 1970
Monsanto Company, St. Louis, MO	Engineering Co-op	Jan 1968-Sept 1968

**RESEARCH ACTIVITIES**

- “Engineering Support for Extended Human and Robotic Space Flight Missions”, NASA Grant NNX09AR98G, \$500,000, Principal Investigator, 10/09-5/12.
- “Control Software, Water Reclamation, Nanotechnology, Autonomous Inspection, and Salad Crop Culture,” NASA Grant NNJ06HE94A, \$919,692, Principal Investigator, 10/06-9/09.
- “Control Systems, Water Recovery, Human Factors, and Plant Growth,” NASA Grant NNG06J14G 48G, \$992,000, Principal Investigator, 7/06-9/08.
- “Control Systems, Water Recovery, Human Factors, and Plant Growth,” NASA Grant NNG05GP 48G, \$1,869,000, Principal Investigator, 9/05-3/07.
- “Plant Research in the EDU, Water Reuse/Recycling, Human Centered Computing, and Microgravity Locomotion,” NASA Grant USP-JSC-6-03-9843, \$2,235,000, Principal Investigator, 2004-2005.

### Publications (Books)

*Occupational Ergonomics: Principles and Applications*, 1997, Chapman & Hall, London. (Fariborz Tayyari and James L. Smith). (ISBN 0 412 58650 9)

*The Ergonomics of Manual Work*, Taylor and Francis, 1993 (edited by William S. Marras, Waldemar Karwowski, James L. Smith, and Leszak Padholski).

### Book Chapters

“Ergonomics of Manual Materials Handling”, Chapter 2 in *Environmentally Conscious Materials Handling*, 2009, John Wiley & Sons, Inc., pp. 31-62. (James L. Smith, Jeffrey C. Woldstad, and Patrick Patterson)

“Models in Manual Materials Handling”. Chapter 19 in *Biomechanics in Ergonomics*, 2009, CRC Press. (Jeffrey C. Woldstad, M. M. Ayoub, and James L. Smith).

### Other recent publications (since 2005)

“Static Arm Strength Evaluation”, *Proceedings of the XXIV Annual International Occupational Ergonomics and Safety Conference*, Ft. Lauderdale, FL, June 2012, pp. 188-192. (Yulin Wang, Manish Ranjit, Maria Natalia Russi-Vigoya, Jesse Stanley, Harshvardhan Gazula, and James Smith).

“Another Look at Static Arm Strength”, *Proceedings of the XXIII Annual International Occupational Ergonomics and Safety Conference*, Baltimore, MD, June 2011, pp. 100-105. (James L. Smith, Young-Ji Chun, and Johan Hendrikse).

“Photographic ergonomics: Holding a small digital camera”, *Ergonomics for All: Celebrating PPCOE’s 20 years of excellence*, 2010, CRC Press, 335-340. (Egbert J. Hendrikse and James L. Smith).

“Chain Pulling Capabilities of Males and Females”, *Proceedings of the XXII Annual International Occupational Ergonomics and Safety Conference*, Phoenix, AZ, June 2010, pp. 21-26. (Johan Hendrikse and James L. Smith).

“Photographic Ergonomics”, *Proceedings of the XXI Annual International Occupational Ergonomics and Safety Conference*, Dallas, TX, June 2009, pp. 1-4. (James L. Smith and Johan Hendrikse).

“Camera Stability at Varying Postures”, *Proceedings of the XXI Annual International Occupational Ergonomics and Safety Conference*, Dallas, TX, June 2009, pp. 5-10. (E. J. Hendrikse and James L. Smith).

“Uability Testing of Digital Cameras: Should We Test Differently for the Aging Population?”, *Proceedings of the XXI Annual International Occupational Ergonomics and Safety Conference*, Dallas, TX, June 2009, pp. 23-28. (Aditya Jayadas and James L. Smith).

“An Optimal-Control Model of Vision–Gait Interaction in a Virtual Walkway”, *IEEE Transactions on Systems, Man, and Cybernetics—Part B: Cybernetics*, Vol 39, No. 1, February 2009, pp 156-166. (Haining Dong, Simon M. Hsiang, and James L. Smith).

“Collecting Anthropometric Data from Digital Photographs: A Case Study for a Special Population (Dwarfs)”, *Proceedings of the XX Annual International Occupational Ergonomics and Safety Conference*, Chicago, IL, pp.26-29, June 2008 (Bethany Ferguson and James L. Smith).

“Effects of aging on the biomechanics of slips and falls”, *Human Factors*, 47:4, 708-729, 2005, (Thurmon E. Lockhart, James L. Smith, and Jeffrey C. Woldstad).

## **TECHNICAL ORGANIZATIONS**

Human Factors and Ergonomics Society – **Fellow**

Institute for Ergonomics and Human Factors - **Fellow**

Institute of Industrial Engineers – **Fellow**

Society for Design & Process Science- **Fellow**

American Society for Engineering Education

International Society for Occupational Ergonomics and Safety, President 1996, Past President 1997

Texas Space Grant Consortium- Institutional Representative for Texas Tech, Chair of the Education Committee, Board of Directors, 1996-1999, 2001-Present

Board of Certification in Professional Ergonomics, Director, 2000-2003, Treasurer, 2003, Director Emeritus.

Alpha Pi Mu (national Industrial Engineering Honor Society) President 2008-2010, Executive Council 2000-Present