

July, 2008

## Curriculum Vitae

# RICHARD JOHN KOUBEK, Ph.D.

### EDUCATION

Jan. 1986- Dec. 1987	Ph.D.	Industrial Engineering	School of Industrial Engineering Purdue University West Lafayette, IN 47907
Aug. 1984- Dec. 1985	M.S.	Industrial Engineering	School of Industrial Engineering. Purdue University West Lafayette, IN 47907
May 1982- Dec. 1982	B.A.	Psychology	Northeastern Illinois University 5500 North St. Louis Avenue Chicago, IL 60625
Aug. 1977- May 1981	B.A.	Major: Bib. Literature Minor: Chemistry	Oral Roberts University Tulsa, OK 74171

### PROFESSIONAL EXPERIENCE

Peter and Angela Dal Pezzo Department Head Chair The Pennsylvania State University	November, 2007
Professor and Head Marcus Dept. of Industrial & Manufacturing Engineering The Pennsylvania State University	July, 2001-present

Associate Dean for Research & Graduate Studies College of Engineering and Computer Science Wright State University	July 1999-June 2001
Professor and Chair Biomedical, Industrial and Human Factors Engineering Wright State University	August 1997 – June 2001
Associate Professor School of Industrial Engineering Purdue University	August 1993-July 1997
Assistant Professor School of Industrial Engineering Purdue University	June 1991 - July 1993
Assistant Professor Human Factors Engineering Wright State University	September 1988 - May 1991
Visiting Scientist NCR Corporation Dayton, Ohio	June 1988 - August 1988
Visiting Assistant Professor School of Industrial Engineering Purdue University	January 1988 - May 1988
NEC Research Fellow School of Industrial Engineering Purdue University	January 1986 - December 1987
NSF Research Assistant School of Industrial Engineering Purdue University	June 1984 - December 1985
Research Assistant Human-Computer Interaction Laboratory Northeastern Illinois University	March 1983 - May 1984

## PUBLICATIONS

### Papers in Refereed Archival Journals

Strawderman, L. and Koubek, R. (2008). Human factors and usability in service quality measurement, *Human Factors and Ergonomics in Manufacturing*, 18(4), 454-463.

Brannon, N.G., Koubek, R.J., and Voss, D. (2008). Mechanisms of knowledge degradation in a resource management task, *Theoretical Issues in Ergonomics Science*. 9(1), 25-44.

Lin, Y., Zho and, W.J., Koubek, R.J., and Mourant, R.R. (2006). On integration of interface design methods: Can debates be resolved? *Interacting with Computers*, 18, 709-722.

Strawderman, L. and Koubek, R. (2006). Quality and Usability in a Student Health Clinic. *International Journal of Health Care Quality Assurance*, 19(3), 225-236.

Hammond, J., Harvey, C.M., Koubek, R.J., Compton, W.D., and Darisipudi, A. (2005). Distributed Collaborative Design Teams: Media effects on design processes, *International Journal of Human Computer Interaction*, 18(2), 145-166.

Lin, Y., Zhang, W.J. and Koubek, R.J. (2004). Effective attention allocation behavior and its measurement: a preliminary study. *Interacting with Computers*, 16, 1195-1210.

Koubek, R.J., Benysh, D., Buck, M., Harvey, C.M., Reynolds, M. (2003). The development of a theoretical framework and design tool for process usability assessment. *Ergonomics*, 46(1-3), 220-241.

Rothrock, L., Koubek, R., Fuchs, F., Haas, M., Salvendy, G. (2002). Review and reappraisal of adaptive interfaces: Toward biologically-inspired paradigms, *Theoretical Issues in Ergonomics Science*, 3(1), 47-84.

Brannon, N.G., and Koubek, R.J. (2001). Towards a conceptual model of procedural knowledge degradation. *Theoretical Issues in Ergonomics Science*, 2(4), 317-335.

Lin, H., Koubek, R.J., Haas, M., Phillips, C. and Brannon, N. (2001). Using cognitive models for adaptive control and display, *Automedica*, 19, 211-239.

Hammond, J.H., Koubek, R J. and Harvey, C. M. (2001). Distributed collaboration for engineering design: A review and reappraisal, *International Journal of Human Factors in Manufacturing*, 11(1), 35-52.

- Koubek, R.J., Harvey, C.M. and Leichter, S.B. (2001). Work-Flow: The focus of "Sutton's Law" in the diabetes care workplace, *Clinical Diabetes*, 19(1), 17-20.
- Harvey, C. M. and Koubek, R. J. (2000). Cognitive, social, and environmental attributes of distributed engineering collaboration: A review and proposed model of collaboration, *International Journal of Human Factors in Manufacturing*, 10(4), 369-394.
- Tang, K.H., Koubek, R.J., Lightner, N.J. and Salvendy, G. (1999). Development and validation of a theoretical model for cognitive skills acquisition, *International Journal of Industrial Ergonomics*. 24(1), 25-38.
- Koubek, R.J., Salvendy, G., Tang, E. and Brannon, N.G. (1999). Development of a conceptual model for predicting skills needed in the operation of new technologies. *International Journal of Cognitive Ergonomics*, 3(4), 333-350.
- Harvey, C. M., Koubek, R. J. and Chin, C. L. (1999). Toward a model of workforce agility, *International Journal of Agile Manufacturing*, 2(2), 203-218.
- Harvey, C.M. and Koubek, R.J. (1998). Toward a model of distributed collaboration, *Computers & Industrial Engineering*, 35(1-2), 173-177.
- Liang, S.F. and Koubek, R.J. (1997). The interaction of instruction representation and aptitude for performing statistical quality control tasks, *International Journal of Human Factors in Manufacturing*, 7(2), 97-112.
- Jacko, J.A., Salvendy, G. and Koubek, R.J. (1995). Modeling of menu design in computerized work, *Interacting with Computers*, 7(3), 304-330.
- Danek, A.M. and Koubek, R.J. (1995). Mapping perceptual and cognitive processing for the effective use of graphical displays in shop floor scheduling tasks, *International Journal of Human Factors in Manufacturing*, 5(4), 401-415.
- Koubek, R.J., Salvendy, G. and Noland, S. (1994). Use of hybrid task analysis for personnel selection: Combining consensus-based job analysis with protocol analysis for a computer-based task, *Ergonomics*, 37(4), 1787-1800.
- Korthauer, R. and Koubek, R.J. (1994). An empirical evaluation of knowledge, cognitive style and structure upon the performance of a hypertext task, *International Journal of Human-Computer Interaction*, 6(4), 373-390.
- Koubek, R.J., Clarkston, T.P. and Calvez, V. (1994). The training of knowledge structures for manufacturing tasks: An empirical study, *Ergonomics*, 37(4), 765-780.
- Karwowski, W., Salvendy, G., Koubek, R., et al., (1994). Integrating people, organization, and technology in advanced manufacturing: A position paper based on the

joint view of industrial managers, engineers, consultants, and researchers, *International Journal of Human Factors in Manufacturing*, 4(1), 1-19.

Koubek, R.J., Horn, J.A., Cacioppo, A.J. and Phillips, C. (1993). An approach for determining suitability of knowledge-based systems in the workplace, *International Journal of Human Factors in Manufacturing*, 3(3), 253-274.

Benysh, D., Koubek, R.J. and Calvez, V.C. (1993). A comparative review of knowledge structure measurement techniques for interface design, *International Journal of Human-Computer Interaction*, 5(3), 211-237.

Phillips, C.A., Koubek, R.J. and Crouch, E. (1992). Velocity of mammalian skeletal muscle contraction as a function of fiber type, activation, initial length and temperature, *Computers in Biology and Medicine*, 22(4), 247-262.

Heard, D.C.Y., Phillips, C.A., Koubek, R.J. and Hendershot, D.M. (1992). A sensory feedback system for EMS-RGO walking: Part I-A constant velocity control system, *Automedica*, 14, 205-226.

Heard, D.C.Y., Phillips, C.A., Koubek, R.J. and Hendershot, D.M. (1992). A sensory feedback system for EMS-RGO walking: Part II-Evaluation of constant velocity control, *Automedica*, 14, 227-245.

Phillips, C.A., Hendershot, D.M., and Koubek, R.J., (1992). Technology transfer of a system for medically prescribed F.E.S. walking exercise, *Journal of Clinical Engineering*, 17(1), 69-76.

Koubek, R.J. and Mountjoy, D.N. (1991). The impact of knowledge representation on cognitive-oriented task performance, *International Journal of Human-Computer Interaction*, 3(1), 31-47.

Koubek, R.J. and Salvendy, G. (1991). Cognitive performance of super-experts on computer program modification tasks, *Ergonomics*, 34(8), 1095-1112.

Phillips, C.A., Koubek, R.J. and Hendershot, D.M. (1991). Walking while using a sensory (tactile) feedback system: Potential for use with a functional electrical stimulation (F.E.S.) orthosis, *Journal of Biomedical Engineering*, 13, 91-96.

McClain, J.E., Cacioppo, A.J., Reising, J.M. and Koubek, R.J. (1990). The interaction of chromostereopsis and stereopsis in stereoscopic CRT displays, *Applied Ergonomics*, 21(2), 101-126.

Koubek, R.J. and Salvendy, G. (1989). "The implementation and evaluation of a theory for high level cognitive skill acquisition through expert systems modelling techniques," *Ergonomics*, 32(11), 1419-1429.

Koubek, R.J., Salvendy, G., Dunsmore, H. and LeBold, W.K. (1989). Cognitive issues in the process of software development, *International Journal of Man-Machine Studies*, 30(2), 171-191.

Koubek, R.J., Salvendy, G., Eberts, R.E. and Dunsmore, H. (1987). Eliciting knowledge for software development, *Behaviour and Information Technology*, 6(4), 427-440.

Koubek, R.J., LeBold, W.K. and Salvendy, G. (1985). Predicting performance in computer programming courses, *Behaviour and Information Technology*, 4(2), 113-129.

### **Articles in Refereed Conference Proceedings**

Kim, J. W., Koubek, R. J., & Ritter, F. E. (in press). Investigation of procedural skills decay from different modalities. In *Proceedings of the 8th International Conference on Cognitive Modeling*, Ann Arbor, Michigan.

Koubek, R.J., Chandra, J. and Litzinger, T. (2006). Preparing Students to Become World-Class Industrial Engineers. In *Proceedings of 5<sup>th</sup> ASEE Global Colloquium on Engineering Education*, Rio de Janeiro, Brazil.

Kim, J. W., Ritter, F. E. and Koubek, R. J. (2006). ESEGMAN: A Substrate for ACT-R Architecture and an Emacs Lisp Application. In *Proceedings of the Seventh International Conference on Cognitive Modeling, Trieste, Italy*, 375-376.

Chandra, M.J. and Koubek, R.J. (2006). New Curriculum in Industrial Engineering at the Pennsylvania State University, in *2006 ASEE Annual Conference and Exposition*, Chicago, June 18-21, 2006, CD-ROM.

Kim, J.W. and Koubek, R. (2005). Toward a Framework for Decay Resistant Knowledge, In *Proceedings of HCI International 2005*, CD-ROM.

Strawderman, L. and Koubek, R. (2004). The Role of User Processing and Task Change on Task Performance, In *Proceedings of the Human Factors and Ergonomics Society 48<sup>th</sup> Annual Meeting*, 995-998.

Wheatly, M., Narayanan, S., Koubek, R., Harvey, C., Rothrock, L., Smith, P., Haas, M., and Nanry, W. (2003). Biologically inspired analysis of complex systems: Back to nature, In *Proceedings of HCI International 2003*. CD-ROM.

Harvey, C. M., Reynolds, M., Pacley, A. L., Koubek, R. J., Rehmann, A. J. (2002). Effects of the controller-to-pilot data link (datalink) on crew communication, In *Proceedings of Human Factors and Ergonomics Society 46th Annual Meeting*, 61-65.

Brannon, N.G. and Koubek, R.J. (2001). "Performance degradation associated with strategic changes in a supervisory control task." In *CAES 2001 International Conference on Computer-Aided Ergonomics and Safety*, Maui, Hawaii, July 29-August 1, 2001. Session 19.

Hammond, J., Harvey, C.M. and Koubek, R.J. (2000). "Effect of communication medium on virtual design teams' workload." In *Human Factors and Ergonomics Society Conference*, San Diego, July 29-August 4, 2000, CD-ROM.

Duffy, V.G., Sparrow, T. and Koubek, R.J. (1995). "Modeling the successful mechanism of military base transition with human measures and the implications for manufacturing." In *The 13th International Conference on Production Research*, Jerusalem Israel, 6-10 August 1995, pp. 321-323.

Danek, A. and Koubek, R.J. (1994). "Effective use of graphical displays in scheduling tasks through the mapping of perceptual and cognitive processing." In *Proceedings of the International Ergonomics Association 12th Triennial Congress*, Toronto, Canada, 15-19 August 1994, pp. 65-67.

Jacko, J., Salvendy, G. and Koubek, R.J. (1994). "Menu design for computerized work." In *Proceedings of the International Ergonomics Association 12th Triennial Congress*, Toronto, Canada, 15-19 August 1994, pp. 351-353.

Koubek, R.J., Salvendy, G. and Tang, K.H (1994). "Development and validation of a theoretical framework for predicting skill requirements in agile manufacturing. In *Proceedings of the Fourth International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation*, Manchester, U.K., 5-7 July 1994.

Tang, K.H., Koubek, R.J. and Salvendy, G. (1994). "Development and validation of an operational model for predicting skill requirements in agile manufacturing." In *Proceedings of the Fourth International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation*, Manchester, U.K., 5-7 July 1994.

Phillips, C.A., Frazier, T.A., Cacioppo, A.J. and Koubek, R.J., (1991). "Time domain and frequency domain analyses of a computerized tracking task." In *Proceedings of the 13th Annual Conference of the IEEE Engineering in Medicine and Biology Society*, Orlando, Florida, October 31-November 3, 1991, pp. 3-6.

Phillips, C.A., Heard, D.C.Y., Koubek, R.J. and Hendershot, D.M. (1990). "A sensory feedback system for constant velocity control during EMS-RGO ambulation." In *Proceedings of the 12th Annual Conference of the I.E.E.E. Engineering in Medicine and Biology Society*, Philadelphia, Pennsylvania, 1-4 November 1990, pp. 2260-2261.

Koubek, R.J., Phillips, C.A., Allread, W.G., Barnaba, J.E. and McClain, J.E. (1989). "The effects of training on a vibrotactile cognitive feedback system." In Y. Kim and F.A. Spelman (Eds.), *Proceedings of the 11th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Seattle, Washington, 9-12 November 1989, pp. 1518-1519.

Koubek, R.J. and Salvendy, G. (1988). "On the theory of expert and super-expert performance on computer program modification tasks: An experimental study." In *Proceedings of the Human Factors Society 32nd Annual Meeting*, Anaheim, California, 24-28 October 1988, pp. 386-390.

Koubek, R.J., Salvendy, G. and Dunsmore, H. (1986). "CAP: A knowledge extraction methodology for computer programming." *Proceedings of the Human Factors Society 30th Annual Meeting*, Dayton, Ohio, September 29-October 3, 1986, pp. 492-496.

Salvendy, G., LeBold, W.K. and Koubek, R. (1985). "Cognitive engineering issues in the design and operation of software factories." In *Proceedings of the IEEE Computer Society's Ninth International Computer Software and Applications Conference (COMPASC)*, Chicago, Illinois, 9-11 October 1985, p. 198.

LeBold, W.K., Jagacinski, D., Koubek, R.J. and Salvendy, G. (1985). "Assessing computer programming productivity at the university level." In *Proceedings of the 12th Conference on Production Research and Technology*, National Science Foundation, Madison, Wisconsin, 14-17 May 1985, pp. 459-468.

Koubek, R.J., LeBold, W.K. and Salvendy, G. (1985). "Cognitive and affective factors related to computer programming performance." In *Proceedings of the Ninth Congress of the International Ergonomics Association*, Bournemouth, England, 2-6 September, 1985, pp. 844-846.

Koubek, R.J. and Garg Janardan, C. (1985). "A basis for explaining the conflicting results in performance on CRT and paper displays." In *Proceedings of the Human Factors Society 29th Annual Meeting*, Baltimore, Maryland, September 29-October 3, 1985, pp. 1102-1105.

Ambardar, A.K. and Koubek, R.J. (1983). "Analysis of readability of CRT vs. paper presented text." In *IEEE Proceedings of the International Conference on Systems, Man and Cybernetics*, Delhi, India, December 29, 1983-January 7, 1984, p. 806.

### **Book Chapters**

Harvey, C. M., Koubek, R. J., Rothrock, L. Darispudi, A., Kim, J., and Munch, J. (2005). Cognitive Ergonomics, In *Handbook of Human Factors in Web Design*, (pp. 70-89). New Jersey: Erlbaum.

Brannon, N., Koubek, R. J., and Harvey, C. M. (1999). "Usability Analysis." In A. Mital and J. Chen (Eds.), *Industrial Engineering Applications and Practice: Users' Encyclopedia*, CD-ROM.

Koubek, R.J., Benysh, S. and Tang, E. (1997). "Learning." In G. Salvendy (Ed.), *Handbook of Human Factors and Ergonomics, 2nd Edition*, (pp. 130-149). New York: Wiley.

Wilson, J.R., Koubek, R.J., Sharit, J., Karwowski, W. and Salvendy, G. (1994). "Human Factors in Advanced Manufacturing: A Review and Reappraisal." In G. Salvendy and W. Karwowski (Eds.), *Organization and Management of Advanced Manufacturing*, (pp. 379-416). New York: Wiley.

Koubek, R.J., and Salvendy, G., (1993). "A Conceptual Model of Human Skill Requirements for Advanced Manufacturing Settings." In G. Salvendy and M. Smith (Eds.), *Human-Computer Interaction: Software and Hardware Interfaces*, (pp. 356-361). New York: Elsevier.

Benysh, D. and Koubek, R.J. (1993). "The Implementation of Knowledge Structures in Cognitive Simulation Environments." In G. Salvendy and M. Smith (Eds.), *Human-Computer Interaction: Software and Hardware Interfaces*, (pp. 309-314). New York: Elsevier.

Day, C.N., Cacioppo, A., and Koubek, R.J. (1992). "Human Issues in Manufacturing Technology," In P. Brodner and W. Karwowski (Eds.), *Ergonomics of Hybrid Automated Systems III*, (pp. 43-48). New York: Elsevier.

Koubek, R.J. and Phillips, C.A. (1991). "Ambulatory Exercise Procedures and Effects: Training Effects With the Sensory Feedback System," In C.A. Phillips (Ed.), *Functional Electrical Rehabilitation*, (pp. 163-170). New York: Springer-Verlag.

Koubek, R.J. and Mountjoy, D.N. (1990). "The Role of Training, Individual Differences and Knowledge Representation in Operator Skill Acquisition for Advanced Manufacturing Environments." In W. Karwowski and M. Rahimi (Eds.), *Ergonomics of Advanced Manufacturing and Hybrid Automated Systems II*, (pp. 675-682). New York: Elsevier.

Horn, J.A., Koubek, R.J. and Cacioppo, A. (1989). "A Theory-Based Methodology for Analyzing Domain Suitability for Expert Systems Technology Applications." In G. Salvendy and M. Smith (Eds.), *Designing and Using Human-Computer Interfaces and Knowledge Based Systems*, (pp. 799-805). New York: Elsevier.

Barfield, W., Koubek, R.J. and Hwang, S. (1985). "Eliciting Expert Behavior for Software: A Cognitive Psychology Perspective." In R.E. Eberts and C.G. Eberts (Eds.), *Trends in Ergonomics/Human Factors II*, (pp. 303-310). New York: Elsevier.

## **Books**

*Usability Evaluation and Interface Design: Cognitive Engineering, Intelligent Agents and Virtual Reality*, (2001). M.J. Smith, G. Salvendy, D. Harris and R. Koubek, (Eds.), Mahwah, New Jersey: Erlbaum.

*Design of Computing Systems: Cognitive Considerations*, (1997). G. Salvendy, M.J. Smith and R.J. Koubek, (Eds.), New York: Elsevier.

*Design of Computing Systems: Social and Ergonomic Considerations*, (1997). M.J. Smith, G. Salvendy and R.J. Koubek (Eds.), New York: Elsevier.

*Manufacturing Agility and Hybrid Automation - I*, (1996). R. Koubek and W. Karwowski (Eds.), Louisville, KY: IEA Press.

## **Abstracts**

Danek, A.M., and Koubek, R.J. (1993). "Mapping perceptual and cognitive processing for the effective use of graphical displays in shop floor scheduling tasks," In *Proceedings of the Fifth International Conference on Human Computer Interaction*, Orlando, Florida 8-13 August 1993, p. 268.

Phillips, C.A., Frazier, T.A., Cacioppo, A.J. and Koubek, R.J. (1991). "Human operator dynamics in a tracking task," In *Aviation and Space Environmental Medicine*, 62:457.

## **INVITED PRESENTATIONS**

"Development and Validation of a Theoretical Framework for Predicting Skill Requirements in Agile Manufacturing." The Fourth International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation, Manchester, U.K., 7 July 1994.

"The Consideration of Human Knowledge Structures in the Design and Implementation of Advanced Manufacturing Technologies", NEC Corporation, Tokyo, 16 November, 1993.

"Designing the Human in the Production Environment", Tsinghua University, Beijing, China, 8 September 1993.

“A Multidimensional Approach to Knowledge Structures”, Tsinghua University, Beijing, China, 9 September, 1993.

“Understanding Procedural Knowledge Structures and their Application to the Production Environment”, Tsinghua University, Beijing, China, 10 September, 1993.

“The Derivation of Skill Requirements in AMT Environments”, HCI International '93, Orlando, Florida, 11 August 1993.

“A Conceptual Framework for Integrating Humans in Advanced Manufacturing Environments”, NEC Corporation, Tokyo, 19 October, 1992.

“Ergonomics in Action,” Association for Electronics Manufacturing of the Society of Manufacturing Engineers, Martinsville, Indiana, 15 September 1992.

“Toward a Model of Knowledge Structures and Comparative Review of Measurement Techniques,” Office of Naval Research Contractor's Meeting, Seattle, Washington, 5 May 1991.

“The Role of Training, Individual Differences and Knowledge Representation on Operator Performance,” Second International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation, 14 August 1990.

“Toward a Basis for the Design and Analysis of Cognitive Oriented Tasks”, The 12th Biennial Psychology in the Department of Defense Symposium, Colorado Springs, 19 April 1990.

“Toward an Understanding of High Level Cognitive Performance,” Dept. of Industrial and Operations Engineering, University of Michigan, Ann Arbor, September 1989.

“The Impact of Knowledge Structures in Cognitive Task Performance,” Dept. of Industrial Engineering and Operations Research, University of California, Berkeley, June 1989.

## **SUPPORT**

“Establishing A Novel Training Paradigm by Investigating Learning and Forgetting of Procedural Skills,” Co-Investigator (with Frank Ritter), Office of Naval Research; Duration: July 1, 2007-June 30, 2009, Amount: \$168,000.

“Engineering the Service Sector,” Principal Investigator, U.S. Security Associates; Duration: September 1, 2005-June 30, 2006, Amount: \$30,000.

“Adaptive Aiding Using Operator State Assessment,” Co-Investigator (With L. Rothrock, P.I.), DAGSI/AFRL; Duration: August 1, 2001-July 31, 2003, Amount: \$399,354.

“Human Factors Engineering in Air Traffic Control, Part II” Principal Investigator, Federal Aviation Administration; Duration: April 12, 2001 – August 14, 2001, Amount: \$29,667.

“Biologically Inspired Self-Evolving Adaptive Interfaces,” Principal Investigator, DAGSI/AFRL; Duration: July 1, 2000 - June 30, 2002, Amount: \$400,000.

“Human Factors Engineering in Air Traffic Control,” Principal Investigator, Federal Aviation Administration; Duration: April 4, 2000 – April 3, 2001, Amount: \$179,629.

“REU Supplement-Bioengineering Design Projects for the Disabled,” Co-Investigator (With C. Phillips, P.I.), National Science Foundation; Duration: January 1, 2000-June 20, 2004, Amount: \$10,000.

“Models, Web-based Simulations, and Integrated Analysis Techniques for Improved Logistical Performance,” Co-Investigator (With S. Narayanan, P.I.), DAGSI/AFRL; Duration: July 1, 1999 - June 30, 2001, Amount: \$221,180.

“Biomedical and Human Factors Engineering Design Projects for Persons with Disabilities,” Co-Principal Investigator (With C. Phillips and D. Reynolds), National Science Foundation; Duration: July 1, 1999-June 30, 2004, Amount: \$83, 703.

“Interactive Introductory Course in Human Factors Engineering,” Principal Investigator, WSU Alumni Foundation; Duration: September 1, 1999-August 31, 2000, Amount: \$12,000.

“Pilot State Modeling Support for the SIRE Laboratory,” Principal Investigator (With C. Phillips), Logicon Technical Services; Duration: July 1, 1998-March 30, 1999, Amount: \$60,281.

“Toward a Model of Collaborative Engineering Design,” Co-Investigator, (With J. Solberg, P.I.), Center for Collaborative Manufacturing supported by the National Science Foundation and industries; Duration: August, 1995-July, 1997, Amount to Dr. Koubek: \$55,000.

“Educational Development in Applied Ergonomics,” Principal Investigator, General Motors; Duration: August, 1996-December, 1996, Amount: \$25,000.

“Development of an Automated Technique for the Design and Evaluation of Human-Machine Dialogue,” Principal Investigator, Purdue Research Foundation; Duration: January, 1996 to December, 1997, Amount: \$20,000.

“Development of a Usability Prediction Tool,” Principal Investigator, United States Postal Service; Duration: May, 1995 to February, 1997, Amount: \$44,400.

“Usability in Medical Device Design”, Principal Investigator, Boehringer Mannheim Corporation; Duration: October, 1996-June, 1997, Amount: \$4,000.

“Concurrent Prediction of Technology and Human Skills Requirements for AMT,” Principal Investigator, National Science Foundation; Duration: September 1992-August 1996, Amount: \$291,290.

“Research Experience for Undergraduates”, Principal Investigator, National Science Foundation; Duration: September, 1993-August, 1996, Amount: \$10,000.

“Manufacturing Systems Design, Control and Analysis,” Co-Investigator, (With R. Kashyap, C. Moodie and E. Chong), Purdue University Engineering Research Center on Intelligent Manufacturing Systems supported by the National Science Foundation and industries; Duration: September 1992-December, 1994, Amount: \$247,833, Amount to Dr. Koubek: \$49,974.

“Research in Human-Computer Interaction,” Co-Principal Investigator, (With G. Salvendy), Hewlett-Packard Corporation; Initiated February, 1994, Amount: \$20,000.

“Development of an Integrated Operator Productivity Model and Associated Assessment Technique,” Principal Investigator, Purdue Research Foundation; Duration: August 1992-August 1994, Amount: \$19,800.

“Toward a Model of Expert Knowledge Structures and Their Application in the Development of Intelligent Decision Support Systems: Part II,” Principal Investigator, Office of Naval Research; Duration: August 1991-June 1993, Amount: \$94,000.

“Human Operator Considerations in Advanced Manufacturing Environments,” Principal Investigator, NEC Corporation Faculty Fellowship; Initiated: July 1992, Amount: \$25,000.

“Toward a Model of Expert Knowledge Structures and Their Application in the Development of Intelligent Decision Support Systems: Part I,” Principal Investigator, Office of Naval Research; Duration: November 1989-May 1991, Amount: \$56,000.

“Toward a Model of Highly Skilled Cognitive Performance and its Application to the Development of Hybrid Expert Systems,” Principal Investigator, WSU Research Incentive Award; Duration: January 1989-December 1990, Amount: \$4,000.

“Expert Systems Development (II),” Principal Investigator, U.S. Air Force; Duration: February 1990-March 1990; Amount: \$5,658.

“Human Considerations in Adaptive Computer Interfaces,” Principal Investigator, NCR Corporation Equipment Grant; Duration: September 1988-December 1988, Amount: \$12,000.

## **AWARDS**

- 2007 Peter and Angela Dal Pezzo Department Head Chair, Pennsylvania State University.
- 2001 Department Chair of the Year, College of Engineering, Wright State University.
- 2001 “Click-It” Award for Innovative Use of Instructional Technology, Wright State University.
- 1995 Pritsker Outstanding Teaching Award, School of Industrial Engineering, Purdue University.
- 1992 NEC Corporation Faculty Fellow, Schools of Engineering, Purdue University.
- 1991 Wright State University College of Engineering Teacher of the Year Award.
- 1989 Thesis advisor for Wright State University Distinguished Thesis Award to Jay Horn. This award was based on a university-wide competition. It also won second place at the Midwest Association of Graduate Schools Competition.
- 1987 ACM's CHI+GI '87 Selection to Doctoral Dissertation Consortium, Toronto, Canada. Thirteen graduate students were selected for this award based on international competition.
- 1986 NEC Graduate Research Fellow, School of Industrial Engineering, Purdue University, West Lafayette, IN.
- 1986 AAI Knowledge Acquisition for Knowledge-Based Systems Workshop, Banff, Canada. Three student scholarships were awarded for this workshop.

## **PROFESSIONAL AFFILIATIONS AND TRAINING**

Board of Directors, Industrial Modernization Center  
Board of Directors, Consortium for Advanced Manufacturing Productivity  
Who's Who in Engineering Education  
Who's Who in Science and Engineering  
American Society of Engineering Education  
Human Factors Society (Medical Devices and Computer Systems Technical Groups)  
Tau Beta Phi

Institute of Industrial Engineers, IIE Student Chapter Advisor (2005-present)  
Institute of Industrial Engineers, IIE Local Chapter Treasurer (one year)

*Engineering Education Leadership Institute*, The National Academy of Engineering, 2005

*The Art of Asking*, The Institute for Charitable Giving, 2005

*Leadership Academy*, Pennsylvania State University, 2004

*Executive Leadership and Management Program*, Pennsylvania State University, 2002

## **PROFESSIONAL ACTIVITIES**

### **Editorial Duties**

1995-2000 Co-Editor, *International Journal of Cognitive Ergonomics*

Since 1996 Editorial Board, *European Journal of Industrial Engineering*

Since 1993 Editorial Board, *International Journal of Human-Computer Interaction*

Since 1993 Editorial Board, *International Journal of Human Factors in Manufacturing*

Since 1998 Editorial Board, *Theoretical Aspects of Ergonomics*

1990-1992 Book Review Editor, *International Journal of Human-Computer Interaction*, Erlbaum

### **Referee for Scientific Journals**

Since 2000 *IEEE Transactions on Systems, Man, and Cybernetics*

Since 1995 *International Journal of Computer-Integrated Manufacturing*

Since 1994 *Behavior Research Methods, Instruments and Computers*

Since 1991 *International Journal of Human-Computer Interaction*

Since 1991 *Behaviour and Information Technology*

Since 1991 *Ergonomics*

Since 1991 *Knowledge Acquisition*

Since 1990 *International Journal of Human Factors in Manufacturing*

Since 1990 *International Journal of Human-Computer Studies*

### **Reviewer**

Since 1995 Proposal Reviewer, Office of Naval Research

Since 1994 Proposal Reviewer, NASA

Since 1992 Proposal Reviewer, National Science Foundation

1991 Chapter Reviewer, *Handbook of Industrial Engineering*, Wiley

### **Professional Conferences**

2008 Member of the Board for *Ergonomics in Manufacturing* at the *International Conference on Applied Ergonomics*, Las Vegas,, USA.

- 2007 Member of Scientific Advisory Board, *HCI International 2007*, Beijing, China.
- 2005 Member of Scientific Advisory Board, *Eleventh International Conference on Human-Computer Interaction (HCII2005)*, Las Vegas, NV.
- 2001 Conference Co-Chair (with Don Harris) *4th International Conference on Engineering Psychology and Cognitive Ergonomics*, (held in conjunction with HCI International 2001) New Orleans, USA.
- 2000 Member of Scientific Advisory Board, *7<sup>th</sup> International Conference on Human Aspects of Advanced Manufacturing: Agility & Hybrid Automation*, Krakow, Poland.
- 1998 Member of Scientific Advisory Board, *Manufacturing Agility and Hybrid Automation-II*, Hong Kong.
- 1997 Member of Scientific and Program Advisory Board, *First International Conference on Allocation of Functions*, Galway, Ireland.
- 1997 Member of Scientific Advisory Board, *International Ergonomics Association 13<sup>th</sup> Triennial Congress*, Tampere, Finland.
- 1997 Registration Chairman, *Seventh International Conference on Human-Computer Interaction*, Orlando, Florida.
- 1996 Conference Chairman, *Fifth International Conference on Human Aspects of Advanced Manufacturing: Agility & Hybrid Automation*, Maui, Hawaii.
- 1996 Member of the Program Board, *First International Conference on Applied Ergonomics*, Istanbul, Turkey.
- 1995 Member of Program Committee, *Sixth International Conference on Human-Computer Interaction*, Tokyo, Japan.
- 1994 International Scientific Advisory Board, *Fourth International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation*, Manchester, UK.
- 1993 Member of the Program Board, *Fifth International Conference on Human-Computer Interaction*, Orlando, Florida.
- 1993 Registration Chairman, *Fifth International Conference on Human-Computer Interaction*, Orlando, Florida.
- 1990 Member of the Conference Board, *Second International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation*, Honolulu, Hawaii.
- 1987 Member of the Conference Board, *Third International Conference on Human-Computer Interaction*, Boston, Massachusetts.