

## **CURRICULUM VITA**

### **ROBERT EDWARD SCHLEGEL**

#### **PERSONAL:**

Citizenship: U.S.A.  
Registration: Professional Engineer, Oklahoma 14001  
Office Address: School of Industrial Engineering, University of Oklahoma  
Norman, OK 73019  
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#### **EDUCATION:**

Ph.D., University of Oklahoma, Norman, OK, 73019 (August 1980)  
Major: Industrial Engineering (Human Factors)  
Doctoral Dissertation: Evaluation of Static Work Capabilities in a Hot Environment  
B.S.I.E., University of Oklahoma, May 1973 (GPA 3.92/4.00)

#### **RESEARCH AND TEACHING INTERESTS:**

Human Factors Engineering/Ergonomics, Human Information Processing, Cognitive Performance Assessment, Mental Workload Assessment, Statistics and Experimental Design, Human-Computer Interfaces, Wireless Electromagnetic Compatibility.

#### **PROFESSIONAL EXPERIENCE:**

##### **Academic**

President's Associates Presidential Professor of Industrial Engineering, University of Oklahoma, Norman, OK 73019. (August 1996 - present)

Associate Director for Research, Center for the Study of Wireless Electromagnetic Compatibility, University of Oklahoma, Norman, OK 73019. (August 1996 – December 1999)

Associate Professor of Industrial Engineering, University of Oklahoma, Norman, OK 73019. (August 1988 - August 1996)

Acting Director, School of Industrial Engineering, University of Oklahoma, Norman, OK 73019. (June 1989 - August 1989)

Assistant Professor of Industrial Engineering (tenured July 1987), University of Oklahoma, Norman, OK 73019. (September 1980 - August 1988)

Academic Counselor, College of Engineering, University of Oklahoma. (May 1985 - August 1985)

Graduate Teaching Assistant, Graduate Research Assistant, and Graduate Teaching Associate, School of Industrial Engineering, University of Oklahoma. (September 1976 - May 1980)

Group Project Director and Instructor for FATE - First Americans, Tomorrow's Engineers, summer programs sponsored by the College of Engineering, University of Oklahoma, to introduce engineering to American Indian high school students. (Summer 1975 through Summer 1983)

### **Research Labs**

DLR (Hamburg, Germany) Institute of Aviation and Space Medicine Department of Aviation and Space Psychology - NATO Research & Technology Organization Mission to exchange information about experience with the application of standardized performance task batteries for human performance monitoring during aerospace operations (June 1998)

NASA Johnson Space Center - Provided support from the JSC Science Monitoring Area for the PAWS experiment on Life and Microgravity Spacelab (LMS) aboard Space Shuttle Columbia (STS-78). Research involved determining the effects of microgravity and fatigue on the cognitive skills of space shuttle astronauts. (Summer 1996)

NASA Ames Research Center - Conducted bedrest study at Human Research Facility to examine effects of 17 days of continuous bedrest on cognitive processing skills. (Summer 1995)

NASA Johnson Space Center - Provided support from the JSC Science Monitoring Area for the PAWS experiment on International Microgravity Laboratory 2 (IML-2) aboard Space Shuttle Columbia (STS-65). Research involved determining the effects of microgravity and fatigue on the cognitive skills of space shuttle astronauts. (Summer 1994)

Summer Faculty Research Fellow, United States Air Force - Research and Development Laboratories (USAF - RDL). Research involving microgravity effects on human cognitive processing at the Sustained Operations Branch, Crew Technology Division, Armstrong Laboratory, Brooks AFB, Texas. (Summer 1992)

Summer Faculty Research Fellow, United States Air Force - Southeastern Center for Electrical Engineering Education (USAF - SCEEE). Research involving mental workload assessment at the Workload and Ergonomics Branch, Human Engineering Division, Armstrong Aerospace Medical Research Laboratory, Wright-Patterson AFB, Ohio. (Summer 1984)

Summer Faculty Research Fellow, United States Air Force - Southeastern Center for Electrical Engineering Education (USAF - SCEEE). Research involving spatial orientation information processing at the Crew Performance Branch, Crew Technology Division, USAF School of Aerospace Medicine, Brooks AFB, Texas. (Summer 1982)

### **Consulting**

NTI, Incorporated, Dayton, OH. Expert consultant and technical support for G-TOP advisory panel. (September 2001, February 2003).

General Motors Corporation, Detroit, MI. Instructor for Human Information Processing section of intensive ergonomics course. (September 1994).

- Innovative Computing Corporation, Oklahoma City, OK. Ergonomics evaluation of human-computer interface for trucking industry economic information system software. (March 1994 - May 1994).
- Society of Automotive Engineers (SAE), Warrendale, PA. Literature Review to develop new SAE J1138 Standard on automobile secondary controls. (January 1991 - December 1992).
- Oklahoma Center for Continuing Education, University of Oklahoma, Norman, OK. Human Factors consultant on FAA contract to develop new screening procedure for Air Traffic Controllers. (December 1988 - December 1989).
- AT&T Corporate Education Center (CEC), Hopewell, NJ. Instructor for course *Improving Quality and Productivity by Industrial Experimentation*. (August 1987 - July 1989).
- GARD Division, Chamberlain Manufacturing Corp., Niles, IL. Consultant on proposal to U.S. Postal Service - Human Factors Experiments for Remote Video Encoding. (August 1987).
- Arthur Young & Company, Oklahoma City, OK. Evaluation of Quality Assurance approach to scheduling the Flight Inspection of Navigational Aids for the FAA. (September 1985 - December 1985).
- Ecosystems, Inc., Norman, OK. Instructor for FAA Quality Assurance Technology Course 07017, Oklahoma City, OK. (Summer 1985, 1986, 1988, 1989, 1990 and 1991).
- Systems Research Laboratories, Inc., Dayton, OH. Human factors and software evaluation of the Criterion Task Set information processing test battery. (September 1984 February 1985).
- Energy Analysts, Inc., Norman, OK. Ergonomics evaluation of shift schedules for process control operators. (August 1983).
- General Motors Assembly Division (Industrial Engineering Department), Warren, MI. Reviewed and edited *Ergonomics: An Approach to Productivity and Effectiveness*, an ergonomics guide for assembly line workers and supervisors. (January 1983 - February 1983).
- Occupational Safety and Health Administration, Little Rock, AR. Developed and presented short course *Selected Topics in Ergonomics*. (September 1981 - October 1981).
- Department of Personnel, University of Oklahoma. Developed software to evaluate alternative retirement plans on an individual basis. (Summer 1978).
- Department of Health, Physical Education and Recreation, University of Oklahoma. Designed and installed human performance measurement equipment and software. (1978 - 1980).
- Oklahoma Management and Engineering Consultants, Inc., Norman, OK. Evaluated the safety and stability of various models of shopping carts and assisted in the development of

design standards recommendations. (June 1976 - May 1977).

Air Refiner, Inc., Oklahoma City, OK. Developed decision models for minimizing scrap metal in the manufacture of industrial air filters and evaluated visual inspection process. (June 1973 - September 1973).

**PROFESSIONAL AND HONORARY SOCIETIES:**

Human Factors and Ergonomics Society  
Institute of Industrial Engineers (President, Oklahoma City Chapter, 1984)  
Alpha Pi Mu  
Tau Beta Pi  
Sigma Tau  
Phi Eta Sigma

**AWARDS AND HONORS:**

Recipient, Tau Beta Pi - Honeywell Fellowship (1973 - 1974)  
Recipient, National Science Foundation Fellowship (1974 - 1977)  
Faculty Advisor, first place national winners of Institute of Industrial Engineers Student Technical Paper Contest (Gary L. Gollhofer - 1980; Ronnie R. Spencer - 1982; Brad Schmidt, Sharon Cheatwood - 1986)  
Brandon H. Griffith Award, annual award within the College of Engineering for faculty contributions to student activities and welfare (1982, 1984 *First Two-time Winner*)  
Listed in Outstanding Young Men of America (1982 - 1986)  
Fellow, USAF-SCEEE Summer Faculty Research Program (1982, 1984, 1992)  
Outstanding Faculty Member in the College of Engineering, presented by the University of Oklahoma Student Association (1983)  
Faculty Excellence Award, College of Engineering Dean's Council (1983)  
Ralph R. Teetor Educational Award for Outstanding Young Engineering Educators, Society of Automotive Engineers (1984, 1991)  
Outstanding Professor of Industrial Engineering (1984, 1986)  
Associates Distinguished Lectureship, College of Engineering (1984, 1985, 1987, 1988)  
AMOCO Foundation Good Teaching Award, University of Oklahoma (1984)  
Listed in Who's Who in Technology Today (1985)  
Young Engineer of the Year, Oklahoma Society of Professional Engineers (1985)  
Regents Award for Superior Teaching, University of Oklahoma (1988)  
OTT Foundation Honorable Mention Award for paper "Spectral Analysis in Quality Control: A Control Chart Based on the Periodogram", *Technometrics*, 30(1), 63-70, 1988. (1989)  
College of Engineering Faculty Associates Award, University of Oklahoma (1989 - 1994)

College of Engineering Faculty Award, University of Oklahoma (1998)

Outstanding Engineer, OSPE Canadian Valley Chapter (1998)

OSPE's 1999 Outstanding Engineer, Oklahoma Society of Professional Engineers (1999)

1999 AAMI Annual Meeting Management and Technology Outstanding Manuscript Award for paper "Impact of CDMA Wireless Phone Power Output and Puncture Rate on Hearing Aid Interference Levels", Association for the Advancement of Medical Instrumentation – co-authored with T. Fry and H. Grant (1999)

Regents Award for Superior Research and Creative Activity, University of Oklahoma (2000)

President's Associates Presidential Professorship, University of Oklahoma (2004-2007)

### **FUNDED RESEARCH:**

**Workload Demand and CNS Depressant Stressor Effects on Spatial Orientation Information Processing**, Principal Investigator, funded by the Air Force Office of Scientific Research, Grant No. AFOSR-83-0181, **\$12,000**, April 15, 1983 to March 15, 1984.

**Development of an Optimal Testing Protocol for the USAF Criterion Task Set**, Principal Investigator, funded by the Air Force Office of Scientific Research, subcontracted through the Southeastern Center for Electrical Engineering Education, Contract No. SCEEE-84 RIP 47, **\$12,000**, January 1, 1985 to December 31, 1985.

**Evaluation of the Criterion Task Set for Drug and Stress Research**, Co-Principal Investigator, funded by the United States Air Force, Aerospace Medical Research Laboratory, Wright-Patterson AFB, Ohio, subcontracted through the Southeastern Center for Electrical Engineering Education, Contract No. SCEEE-ARB/85-62, **\$87,432**, February 1, 1985 to April 30, 1986.

**The Existence of a Subjective Measure of Excessive Mental Workload in a Single Cognitive Task**, Co-Principal Investigator, funded by Boeing Military Airplane Company, Contract No. 246442, **\$14,973**, March 1, 1986 to September 30, 1986.

**Evaluation of the Criterion Task Set**, Co-Principal Investigator, funded by the United States Air Force, Aerospace Medical Research Laboratory, Wright-Patterson AFB, Ohio, subcontracted through the Southeastern Center for Electrical Engineering Education, Contract No. SCEEE-HER/86-9, **\$85,823**, May 15, 1986 to November 15, 1987.

**Fall Hazards Associated with Erection of Painted Steel Structural Members**, Associate Investigator, funded by Centers for Disease Control, NIOSH, Atlanta, GA, CDC Contract No. 200-86-2929, **\$63,238**, September 1, 1986 to December 30, 1987.

**Digital Data Acquisition and Processing System (DDAPS) for Engineering Teaching Laboratories**, Co-Investigator, funded by EXXON Education Foundation, **\$571,500**, January 1, 1987 to December 31, 1991.

**A Human Factors Tool for the Prediction of Driver Performance with Hand Controls**,

Principal Investigator, funded by General Motors Corporation, Chevrolet-Pontiac-Canada Group, Contract No. PB276743, **\$56,478**, August 1, 1988 to July 24, 1989.

**Instrumentation for Industrial Engineering Physical Ergonomics Laboratory**, Principal Investigator, funded by National Science Foundation, ILI Program, **\$28,564**, November 15, 1988 to April 30, 1991.

**Pilot Study of Vibro-Tactile Stimulation of the Human Head for Information Display**, Principal Investigator, funded by Boeing Military Airplane Company, Contract No. AB0211, **\$10,000**, July 24, 1989 to February 28, 1990.

**Facilities for Video Analysis of Human Movement**, Principal Investigator, funded from University of Oklahoma Associates Research Funds, **\$15,000**, December 15, 1989 to July 31, 1990.

**Development of the UTC-PAB Normative DataBase**, Principal Investigator, funded by the United States Air Force, Armstrong Aerospace Medical Research Laboratory, Wright-Patterson AFB, Ohio, subcontracted through the Southeastern Center for Electrical Engineering Education, Contract No. SCEEE-HER/90-0011, **\$145,348**, June 5, 1990 to May 7, 1992.

**Commonality Study of Automobile Secondary Control Characteristics**, Principal Investigator, funded by General Motors Corporation, Chevrolet-Pontiac-Canada Group, Contract No. CCS32757, **\$3,500**, April 16, 1991 to February 28, 1992.

**Evaluation of Extended Practice Effects on the Air Traffic Scenarios Test**, Co-Principal Investigator, funded by Federal Aviation Administration, Contract No. DTFA-02-92P13359, **\$25,000**, March 27, 1992 to September 30, 1992.

**Readiness-to-Perform Testing - Literature Evaluation**, Co-Principal Investigator, funded by Federal Aviation Administration, Contract No. DTFA-02-92P23499, **\$20,000**, August 15, 1992 to December 18, 1992.

**Microgravity Effects on Cognitive Performance Measures - Practice Schedules to Acquire and Maintain Performance Stability**, Principal Investigator, funded by NASA through the United States Air Force, Armstrong Laboratory, Brooks AFB, Texas, subcontracted through Systems Research Laboratories, Inc., Contract No. G1764, **\$65,012**, September 22, 1992 to September 6, 1993.

**Development of a Laboratory Model of Readiness-to-Perform Testing**, Co-Principal Investigator, funded by Federal Aviation Administration, Contract No. DTFA-02-93D-93088, **\$163,567**, September 29, 1993 to May 31, 1995.

**Microgravity Effects on Cognitive Performance Measures**, Principal Investigator, funded by NASA through the United States Air Force, Armstrong Laboratory, Brooks AFB, Texas, subcontracted through Systems Research Laboratories, Inc., Contract No. G1764 Mod. 2, **\$80,874**, April 28, 1994 to April 30, 1995.

**RTP Antihistamine Study - Addendum to Development of a Laboratory Model of**

**Readiness-to-Perform Testing**, Co-Principal Investigator, funded by Federal Aviation Administration, Contract No. DTFA-02-93D-93088, **\$30,333**, March 15, 1994 to June 1, 1994.

**Interaction Between Pacemakers and Cellular Phones**, Team Member (PI - F.H. Grant), funded by CTIA and various pacemaker manufacturers through the OU Center for the Study of Wireless Electromagnetic Compatibility, **\$100,000**, December 1, 1994 to June 30, 1996.

**Development of a Laboratory Model of Readiness-to-Perform Testing: Antihistamine Follow-On**, Co-Principal Investigator, funded by Federal Aviation Administration, Contract No. DTFA-02-93D-93088, **\$103,930**, January 1, 1995 to August 31, 1996.

**Life and Microgravity Spacelab Bed Rest Study** (data collection and reduction), Principal Investigator, funded by NASA through the United States Air Force, Armstrong Laboratory, Brooks AFB, Texas, subcontracted through Systems Research Laboratories, Inc., Contract No. G1764 Mod. 3, **\$56,086**, January 15, 1995 to September 15, 1995.

**Interaction Between Hearing Aids and Cellular Phones**, Team Member (PI's - F.H. Grant and A. Ravindran), funded by CTIA through the OU Center for the Study of Wireless Electromagnetic Compatibility, **\$100,000**, April 1, 1995 to June 30, 1996.

**Human External Load Human Factors Study**, Co-Principal Investigator (PI - R.L. Shehab), funded by Federal Aviation Administration, Contract No. DTFA-02-93D-93088, **\$26,307**, September 29, 1995 to May 30, 1997.

**Life and Microgravity Spacelab Bed Rest Study** (data analysis), Principal Investigator, funded by NASA through the United States Air Force, Armstrong Laboratory, Brooks AFB, Texas, subcontracted through Systems Research Laboratories, Inc., Contract No. Y0894, **\$15,669**, September 26, 1995 to February 15, 1996.

**Microgravity Effects on Cognitive Performance Measures Aboard Life and Microgravity Spacelab (LMS)**, Principal Investigator, funded by NASA through the United States Air Force, Armstrong Laboratory, Brooks AFB, Texas, subcontracted through Systems Research Laboratories, Inc., Contract No. F41624-95-D-6026, Task 0001, Mod. 1, **\$36,884**, February 16, 1996 to August 15, 1996 and **\$63,073**, June 16, 1996 to September 30, 1997 (**Total = \$99,957**).

**Study of Digital Wireless Phone Interactions with Automotive Electronic Systems**, Co-Principal Investigator, funded by the American Automotive Manufacturers Association, **\$17,963**, April 1, 1997 to October 1, 1997.

**Study of the Interaction Between Wireless Phones and Implantable Cardioverter Defibrillators**, Co-Principal Investigator, funded by various ICD manufacturers, **\$45,000**, April 1, 1997 to October 1, 1997.

**Testing of Pacemakers with Wireless Phones**, Co-Principal Investigator, funded by Hughes Network Systems, **\$20,000**, May 1, 1997 to October 1, 1997.

**Industry/University Cooperative Research Center for Wireless Electromagnetic Compatibility**, Co-Principal Investigator, funded by the National Science Foundation, **\$330,000**,

May 1, 1997 to May 1, 2002.

**Center for the Study of Wireless Electromagnetic Compatibility - Industry Consortium**, Associate Director for Research, funded by various industrial members, **\$625,000**, July 1, 1997 to June 30, 1998.

**Center for the Study of Wireless Electromagnetic Compatibility - Industry Consortium**, Associate Director for Research, funded by various industrial members, **\$440,000**, January 1, 1998 to December 31, 1998.

**Development of Short Course: Management of EMI from Wireless Communications Devices in Hospitals**, Contributor, funded by the Cellular Telecommunications Industry Association (CTIA), **\$20,000**, May 1, 1998 to October 1, 1998.

**Investigation of the Interaction Between CDMA Wireless Phones and Hearing Aids**, Investigator, funded by the CDMA Development Group, **\$24,000**, May 1, 1998 to October 1, 1998.

**Human Factors Support for the National Weather Service Operational Support Facility**, Principal Investigator, funded by the Department of Commerce, National Oceanic and Atmospheric Administration, Contract No. NA67RJ0150, **\$69,413**, May 9, 1998 to December 31, 1998.

**Validation of the ANSI C63.19 Standard for Predicting Usability of Wireless Phones with Hearing Aids**, Principal Investigator, funded by Ericsson, Motorola, Nokia, QUALCOMM, and Siemens, **\$50,000**, September 1, 1998 to August 31, 1999.

**Center for the Study of Wireless Electromagnetic Compatibility - Industry Consortium**, Associate Director for Research, funded by various industrial members, **\$385,000**, January 1, 1999 to December 31, 1999.

**Human Factors Support for the National Weather Service Operational Support Facility**, Principal Investigator, funded by the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), **\$6,010**, January 1, 1999 to June 30, 1999. (with R.L. Shehab and C.M. Harvey).

**Cognitive and Psychomotor Task Performance During Long-Duration Space Flight**, NASA EPSCoR Travel Grant, **\$1,216**, November 1999. (with R.L. Shehab).

**A Self-Assessment System for Monitoring Astronaut Cognitive and Sensorimotor State**, Co-Principal Investigator, NASA EPSCoR Research Initiation Grant, **\$18,855**, July 1, 2000 to December 31, 2000. (with R.L. Shehab and K. Gilliland).

**Integrated Crew Performance Assessment and Training**, Principal Investigator, funded by NASA HQ Bioastronautics Office AHST Program, **\$473,084**, January 1, 2001 to December 31, 2004. (with R.L. Shehab and K. Gilliland).

**Quality Assurance Studies on the Automated Neuropsychological Assessment Metrics**

**(ANAM) Modules**, Co-Principal Investigator. funded by U.S. Department of Defense Army, Medical Research and Materiel Command (MRMC), Military Operational Medicine Research Program (MOMRP), Fort Detrick, Maryland, subcontracted through Anteon, **\$38,174**, December 20, 2001 to March 31, 2002. (with K. Gilliland).

**Analysis of the Automated Neuropsychological Assessment Metrics (ANAM) and the Cambridge Neuropsychological Test Automated Battery (CANTAB)**, Co-Principal Investigator, funded by U.S. Department of Defense Army, Medical Research and Materiel Command (MRMC), Military Operational Medicine Research Program (MOMRP), Fort Detrick, Maryland, **\$249,581**, March 1, 2003 to February 28, 2005. (with K. Gilliland).

**The Development and Evaluation of Remote Manipulator System (RMS) Operator Proficiency and Training Effectiveness Metrics**, Principal Investigator, funded by NASA HQ Office of Biological and Physical Research SHFE Program, **\$665,889**, April 1, 2003 to March 31, 2006. (with K. Gilliland and R.L. Shehab).

**Congressional Allocation for the Center for the Study of Human Operator Performance (C-SHOP)**, Center Co-Director, funded by the United States Congress through the U.S. Department of Defense Army, Medical Research and Materiel Command (MRMC), Military Operational Medicine Research Program (MOMRP), Fort Detrick, Maryland, **\$1,000,000**, FY2004. (with K. Gilliland).

## **PUBLICATIONS AND PRESENTATIONS:**

### **Edited Volumes**

*Operator Functional State Assessment*, NATO RTO Publication RTO-TR-HFM-104 (ISBN-92-837-1111-4). Neuilly sur Seine, France: NATO Research and Technology Organization, February 2004. (G.F. Wilson and R.E. Schlegel, Eds.).

### **Refereed Articles**

Strength Tests for Evaluating Low Back Injuries, in *Trends in Ergonomics/Human Factors III* (W. Karwowski, ed.), Amsterdam: Elsevier Science Publishers, 1986. (R.E. Schlegel, A.M. Waikar, and K.S. Lee).

Prototype Expert System for Physical Work Stress Analysis, in *Trends in Ergonomics/Human Factors IV* (S.S. Asfour, ed.), Amsterdam: Elsevier Science Publishers, 541-546, 1987. (J.-G. Chen, R.E. Schlegel, and J.B. Peacock).

Spectral Analysis in Quality Control: A Control Chart Based on the Periodogram, *Technometrics*, 30(1), 63-70, 1988. (M. Beneke, L. Leemis, R.E. Schlegel, and B.L. Foote).

Keyboard Interface of a Speech Synthesizer for the Physically Handicapped, *Applied Ergonomics*, 19(1), 67-70, 1988. (R.E. Schlegel, R.R. Spencer, and C.W. Whitbeck).

Thermal Characteristics of Surgical Gown Materials, *Trends in Ergonomics/Human Factors V* (F. Aghazadeh, ed.), Amsterdam: Elsevier Science Publishers, 479-483, 1988. (R.E. Schlegel, S.D. Cheatwood, and B. Schmidt).

A Database Management System for Ergonomics Information Analysis, *Trends in*

*Ergonomics/Human Factors V* (F. Aghazadeh, ed.), Amsterdam: Elsevier Science Publishers, 3-14, 1988. (J.-G. Chen, J.B. Peacock, and R.E. Schlegel).

An Observational Technique for Physical Work Stress Analysis, *International Journal of Industrial Ergonomics*, 3, 167-176, 1989. (J.-G. Chen, J.B. Peacock, and R.E. Schlegel).

An Ergonomic Evaluation of Powered Hand Tool Use in Automobile Assembly, *Advances in Industrial Ergonomics and Safety I* (A. Mital, ed.), London: Taylor & Francis, 267-274, 1989. (R.E. Schlegel and R. Willcoxon).

Evaluating and Improving Safety Behavior at the Workplace, *Advances in Industrial Ergonomics and Safety I* (A. Mital, ed.), London: Taylor & Francis, 375-381, 1989. (P.S. Ray, J.L. Purswell, and R.E. Schlegel).

A Behavioral Approach to Improve Safety at the Workplace, *Advances in Industrial Ergonomics and Safety II* (B. Das, ed.), London: Taylor & Francis, 983-988, 1990. (P.S. Ray, J.L. Purswell, and R.E. Schlegel).

A New Method for Screening Low Back Injuries and Malingerers, *Forensic Reports*, 4(3), 245-257, 1991. (A. Waikar, F. Aghazadeh, and R.E. Schlegel).

A Computer-Assisted System for Physical Ergonomics Analysis, *Computers and Industrial Engineering*, 20(2), 261-269, 1991. (J.-G. Chen, R.E. Schlegel, and J.B. Peacock).

A Safety Data Collection and Analysis System, *Advances in Industrial Ergonomics and Safety III* (W. Karwowski and J.W. Yates, eds.), London: Taylor & Francis, 709-716, 1991. (V. Rao, J.L. Purswell, and R.E. Schlegel).

Coefficient of Friction and Subjective Assessment of Slippery Work Surfaces, *Human Factors*, 34(1), 67-77, 1992. (E.E. Swensen, J.L. Purswell, R.E. Schlegel, and R.L. Stanevich).

Effects of Individual Characteristics, Context and Posted Warnings on Hazard Awareness and Safety Compliance, *Advances in Industrial Ergonomics and Safety IV* (S. Kumar, ed.), London: Taylor & Francis, 000-000, 1992. (A. Bouhatab, J.L. Purswell, and R.E. Schlegel).

Driver Mental Workload, *Automotive Ergonomics* (J.B. Peacock and W. Karwowski, eds.), London: Taylor & Francis, Chapter 17, 359-382, 1993. (R.E. Schlegel)

Project Management in Computer-Integrated Manufacturing Implementation, *Organization and Management of Advanced Manufacturing* (W. Karwowski and G. Salvendy, eds.), New York: John Wiley & Sons, Chapter 11, 255-279, 1994. (A.B. Badiru and R.E. Schlegel).

A Program to Predict Indoor WBGT from Environmental Factors, *Advances in Industrial Ergonomics and Safety VI* (F. Aghazadeh, ed.), London: Taylor & Francis, 263-270, 1994. (I. Vasmatzidis and R.E. Schlegel).

Psychophysically Determined Work-Cycle Parameters for Repetitive Hand Gripping, *Advances in Industrial Ergonomics and Safety VI* (F. Aghazadeh, ed.), London: Taylor & Francis, 573-578,

1994. (M.A. Abu-Ali, J.L. Purswell, and R.E. Schlegel).

Human-Machine System Reliability Using Fault Tree Analysis, *Ergonomics of Hybrid Automated Systems IV* (F. Aghazadeh, ed.), London: Taylor & Francis, 000-000, 1994. (M.A. Abu-Ali, J.L. Purswell, and R.E. Schlegel).

Tactile Stimulation of the Human Head for Information Display, *Human Factors*, 36(4), 700-717, 1994. (K. Gilliland and R.E. Schlegel).

Readiness-To-Perform Testing and the Worker, *Ergonomics in Design*, 14-19, January 1995. (K. Gilliland and R.E. Schlegel).

Effects of a Hot Environment on Time-Sharing Performance, *Advances in Industrial Ergonomics and Safety VII* (A.C. Bittner and P.C. Champney, eds.), London: Taylor & Francis, 265-271, 1995. (I. Vasmatzidis, R.E. Schlegel, and J.L. Purswell).

Preferred Tension and Psychophysical Lifting Limits With and Without Back Belts, *Advances in Industrial Ergonomics and Safety VII* (A.C. Bittner and P.C. Champney, eds.), London: Taylor & Francis, 735-740, 1995. (D. Bowen, J.L. Purswell, R.E. Schlegel, and J.P. Purswell).

EMI to Hearing Aids from Wireless Phones, *ITEM Update 1996*, 44-45, 1996. (A. Ravindran, R.E. Schlegel, H. Grant, P. Matthews, and P. Scates).

Study Measures Interference to Hearing Aids from Digital Phones, *The Hearing Journal*, 50(2), 32-34, February 1997. (A. Ravindran, R.E. Schlegel, H. Grant, P. Matthews, and P. Scates).

Physiological Effects of Abdominal Belt Use During a Lifting Task, *Advances in Industrial Ergonomics and Safety IX* (W. Karwowski and B. Das, eds.), London: Taylor & Francis, 287-290, 1997. (D. Madala, R.E. Schlegel, and J.L. Purswell).

Effect of Session Length and Time Between Sessions on the Reliability of Psychophysical Evaluations of Repetitive Hand Grasping, *Advances in Industrial Ergonomics and Safety IX* (W. Karwowski and B. Das, eds.), London: Taylor & Francis, 403-406, 1997. (E.E. Swensen, R.E. Schlegel, and J.L. Purswell).

Determining Hearing Aid - Wireless Phone Electromagnetic Compatibility, *ITEM Update 1997*, 87-92, 1997. (R.E. Schlegel, S. Raman, and H. Grant).

Electromagnetic Compatibility and Medical Devices, *Biomedical Instrumentation & Technology*, 31, 570-573, November/December, 1997. (H. Grant, R.E. Schlegel, S. Raman, and D. Heirman).

The NASA Performance Assessment Workstation: Cognitive Performance During Head-Down Bed Rest, *Acta Astronautica*, 43, 223-233, September 1998. (R.L. Shehab, R.E. Schlegel, S.G. Schiflett, and D.R. Eddy).

Cognitive Performance Aboard the Life and Microgravity Spacelab, *Acta Astronautica*, 43, 193-210, September 1998. (D.R. Eddy, S.G. Schiflett, R.E. Schlegel, and R.L. Shehab).

Planar Separation Effects: Pacemakers and Wireless Phones, *Medical Device & Diagnostic Industry*, 20 (9), 64-70, September 1998. (F.H. Grant and R.E. Schlegel).

Electromagnetic Compatibility Study of the In Vitro Interaction of Wireless Phones with Cardiac Pacemakers, *Biomedical Instrumentation & Technology*, 32, 645-655, November/December, 1998. (R.E. Schlegel, F.H. Grant, S. Raman, and D. Reynolds).

Climate Measurement, *Industrial and Occupational Ergonomics: Users' Encyclopedia* (A. Mital, ed.), International Journal of Industrial Engineering CD-ROM, 1999.

Validation of the C63.19 Standard: Acoustic Measurements and Subjective Evaluations, *The Journal of the Acoustical Society of America*, 106 (4, pt.2), 2138 (abstract). Invited paper at the 138th Meeting of the Acoustical Society of America, Columbus, OH, November 1 – 5, 1999. (R.E. Schlegel, H. Grant, and T.L. Fry).

Clinical Studies of Digital Wireless Phone Interference in Hearing Aids (1999). *The Journal of the Acoustical Society of America*, 106 (4, pt.2), 2138 (abstract). Paper presented at the 138th Meeting of the Acoustical Society of America, Columbus, OH, November 1 – 5, 1999. (R.E. Schlegel, R.L. Shehab, T.L. Fry, and H. Grant).

Impact of CDMA Wireless Phone Power Output and Puncture Rate on Hearing Aid Interference Levels, *Biomedical Instrumentation & Technology*, 34, 29-38, January/February, 2000. (T.L. Fry, R.E. Schlegel, and H. Grant).

Effects of an Increased Air Gap on the In Vitro Interaction of Wireless Phones with Cardiac Pacemakers, *Bioelectromagnetics*, 21, 485-490, October 2000. (R.E. Schlegel and H. Grant).

Modeling the Electromagnetic Response of Hearing Aids to Digital Wireless Phones, *IEEE Transactions on Electromagnetic Compatibility*, 42 (4), 347-357, November 2000. (R.E. Schlegel and H. Grant).

Applying Quality Control Charts to the Analysis of Single-Subject Data Sequences, *Human Factors*, 42 (4), 604-616, Winter 2000. (R.L. Shehab and R.E. Schlegel).

Wireless Telephone-Hearing Aid Electromagnetic Compatibility Research at the University of Oklahoma, *Journal of the American Academy of Audiology*, 12 (6), 301-308, June 2001. (R.E. Schlegel, A. Ravindran, S. Raman, and H. Grant).

An Investigation of Heat Stress Effects on Time-Sharing Performance, *Ergonomics*, 45 (3), 218-239, 20 Feb 2002. (I. Vasmatazidis, R.E. Schlegel, and P. Hancock).

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A Computerized Servo-Mechanism Procedure to Control Selected Physiological Responses, American College of Sports Medicine Annual Meeting, Miami Beach, Florida, May 1981, abstracted in *Medicine and Science in Sports and Exercise*, 13(2), 1981. (with R.A. Ratliff).

Selected Topics in Ergonomics, Occupational Safety and Health Administration, Little Rock, Arkansas, September 1981.

Funded Research at the University of Oklahoma - General Motors Project, presentation to the Board of Regents, University of Oklahoma, Norman, Oklahoma, December 1988.

Ergonomics - What Is It?, Canadian Valley Chapter, Oklahoma Society of Professional Engineers, Norman, Oklahoma, March 1989.

Influence of Impulsivity on Criterion Task Set Performance, American Psychological Society, Washington, D.C., August 1989. (with S. Mills and K. Gilliland).

Application of the Proportional Hazards Model to Human Performance Response Time Data, Human Factors Society 33rd Annual Meeting, Denver, Colorado, October 1989. (with B. Schlegel, L.M. Leemis and K. Gilliland).

Evaluating Alternative Composite Measures for SWAT Ratings, Human Factors Society 33rd Annual Meeting, Denver, Colorado, October 1989. (with J.P. Purswell and K. Gilliland).

Funded Research in the College of Engineering - General Motors Project, presentation to the CoE Board of Visitors, University of Oklahoma, Norman, Oklahoma, October 1989.

The Role of Vision and Kinesthesia in Aimed Hand Movement in an Applied Setting, North American Society for the Psychology of Sport and Physical Activity (NASPSPA 1990), Houston, Texas, May 1990. (in conference abstracts) (with N.A. Chukwu).

Tactile Stimulation of the Human Head for Information Display, Human Factors Society 34th Annual Meeting, Orlando, Florida, October 1990. (with K. Gilliland).

Aimed Hand Movements Under Direct Vision, Limited Vision and Non-Visual Conditions, Human Factors Society 34th Annual Meeting, Orlando, Florida, October 1990. (with N.A. Chukwu).

Automobile Hand Controls: A Fitts' Law Prediction of Driver Performance Under Three Visual Conditions, Canadian Society for Psychomotor Learning and Sport Psychology Conference, Windsor, Ontario, Canada, October 1990. (with N.A. Chukwu).

UTC-PAB Normative Database Development and Comparative Analysis, Human Factors Society 35th Annual Meeting, San Francisco, California, September 1991. (with K. Gilliland and M. Crabtree).

Development of Laboratory Manuals for Digital Data Acquisition in Manufacturing and Ergonomics, American Society of Engineering Education National Conference, Toledo, Ohio, June 1992. (with S. Raman).

International Microgravity Laboratory Performance Assessment Workstation, presentation to the OU Board of Regents, University of Oklahoma, Norman, Oklahoma, March 1994.

Development of a Laboratory Model of Readiness-To-Perform Testing, invited presentation to the Department of Defense Human Factors Engineering Technical Group Meeting 32, Oklahoma City, Oklahoma, May 1994. (with K. Gilliland).

Human Factors Contributions to the Evolution of an Interactive Doppler Radar and Weather Detection Algorithm Display System, WSR-88D Users' Conference, Norman, Oklahoma, October 1994. (in conference abstracts) (with S.S. Sanger, R.M. Steadham, J.M. Jarboe, and A. Sellakannu).

Preliminary Results from the Human Factors Evaluation of the Radar Analysis and Display System During the Summer 1994 Operational Test in Phoenix, WSR-88D Users' Conference, Norman, Oklahoma, October 1994. (in conference abstracts) (with J.M. Jarboe, R.M. Steadham, A. Sellakannu, and S.S. Sanger).

Performance Testing Games on the Space Shuttle *Columbia*, University of Oklahoma Alumni College Class of '95 Program, Oklahoma Center for Continuing Education, Norman, Oklahoma, July 1995.

Results of a Laboratory Model of Readiness-To-Perform Testing, American Psychological Association Annual Meeting, New York, New York, August 1995. (with Gilliland).

Performance Assessment Workstation (PAWS) Life and Microgravity Spacelab (LMS) Bedrest Study, presentation of results, Kennedy Space Center, Florida, November 1995. (with R.L. Shehab, S.G. Schiflett, and D.R. Eddy).

University of Oklahoma Hearing Aid-Cellular Phone Interaction Study, Hearing Aid Compatibility and Accessibility to Digital Wireless Telecommunications, Summit Meeting, ANA Hotel, Washington, D.C., January 3-4, 1996. (with A. Ravindran).

Cognitive Performance Assessment of Astronauts on the Space Shuttle *Columbia*, Department of Psychology Seminar Series, University of Oklahoma, Norman, Oklahoma, February 9, 1996.

Cognitive Performance Assessment at the University of Oklahoma, ANAM Conference, Baltimore, Maryland, May 31, 1996. (with K. Gilliland).

*In Vitro* Study of the Electromagnetic Interaction Between Wireless Phones and Pacemakers, AAMI 31st Annual Meeting, Philadelphia, PA, June 2, 1996 and BEMS Conference, Victoria, British Columbia, June 9, 1996. (with A. Ravindran, H. Grant, and S. Raman).

In-Vivo Results of the Wireless Phones - Hearing Aids Interaction Study, EMC Forum #3, Washington, D.C., September 11, 1996. (with A. Ravindran, H. Grant, P. Matthews, and P. Scates).

Results of the *In Vitro* Study of the Interaction Between Wireless Phones and Cardiac Pacemakers", EMC Forum #3, Washington, D.C., September 11, 1996. (with S. Raman, H.

Grant, and A. Ravindran).

*In Vitro* Study of the Interaction Between Wireless Phones and Cardiac Pacemakers, WTR Scientific Symposium, Washington, D.C., September 30, 1996. (with A. Ravindran, H. Grant, and S. Raman).

Interference with Hearing Aids - Report from the University of Oklahoma EMC Center, Canadian Wireless Telecommunications Association (CWTA), Health & Safety Committee Meeting, Toronto, Ontario, October 24, 1996.

Presentations to C63.19 Working Group (EMC Hearing Aid Phase II Research), Dallas, Texas, October 30-31, 1996 (with S. Raman)

Presentation to C63.19 Working Group (EMC Hearing Aid Phase II-C Waveguide Study), Columbia, Maryland, January 16, 1997.

Human Factors Applied to Graphical User Interface Design, 77th American Meteorological Society Meeting and Exhibition, Long Beach, California, February 2, 1997

Wireless Solutions: CTIA Training Workshop on Access to Wireless Communications for Persons with Hearing Disabilities, Washington, D.C., April 17, 1997 (with H. Grant).

Research at the Center for the Study of Wireless Electromagnetic Compatibility, Wireless Telephones and Hearing Aids: New Challenges for Audiology (The Fifth Annual Robert Monzon Memorial Conference Series), Gallaudet University, Washington, D.C., May 8-9, 1997.

Interaction Between Wireless Phones and Medical Devices, The 6th Annual Industrial Engineering Research Conference, Miami Beach, Florida, May 17, 1997. (with S. Raman).

A Human Factor's Perspective on Human External Loads, Final Briefing, FAA Regional Center, Ft. Worth, Texas, May 21, 1997. (with R.L. Shehab).

Wireless Industry Perspective, FDA/AAMI Conference on EMC/EMI: Solutions for Medical Devices, Arlington, Virginia, June 12, 1997. (with H. Grant).

Medical Device Research at the University of Oklahoma Wireless EMC Center: Pacemakers, Defibrillators, and Hearing Aids, FDA/AAMI Conference on EMC/EMI: Solutions for Medical Devices, Arlington, Virginia, June 12, 1997. (with H. Grant, S. Raman, and D. Heirman).

Presentation to C63.19 Working Group (EMC Hearing Aid Phase II Research), Piscataway, New Jersey, June 16, 1997.

Presentation to C63.19 Working Group (C63.19 Appendix A Logic), Minneapolis, Minnesota, July 21, 1997.

Microgravity Effects on Standardized Cognitive Performance Measures: PAWS, John H. Chapman Space Centre, Quebec, Canada. (with S.G. Schiflett, D.R. Eddy, and R.L. Shehab).

Overview of the University of Oklahoma EMC Center Activities, EMC Forum #4: New Advances in Wireless EMC - Industry Applications, Dallas, Texas, October 27, 1997. (with H. Grant).

Hearing Aid Research at the Center for the Study of Wireless Electromagnetic Compatibility, EMC Forum #4: New Advances in Wireless EMC - Industry Applications, Dallas, Texas, October 27, 1997.

Pacemaker-Phone Interaction Testing, Phase II: Interaction Height Testing, EMC Forum #4: New Advances in Wireless EMC - Industry Applications, Dallas, Texas, October 27, 1997. (with H. Grant).

Implantable Cardioverter Defibrillator (ICD) - Wireless Phone Compatibility Study, EMC Forum #4: New Advances in Wireless EMC - Industry Applications, Dallas, Texas, October 27, 1997. (with H. Grant).

Oklahoma EMC Center Web Site and Clearinghouse Demonstration, EMC Forum #4: New Advances in Wireless EMC - Industry Applications, Dallas, Texas, October 27, 1997.

Presentation to C63.19 Working Group (Logic Flow of the C63.19 Test Protocol), San Diego, California, December 4, 1997.

Microgravity Effects on Cognitive Performance Measures, NATO Research & Technology Organization Mission to DLR (Institute of Aviation and Space Medicine) Department of Aviation and Space Psychology, Hamburg, Germany, June 3, 1998. (with R.L. Shehab).

Readiness-to-Perform Testing as an Application of Cognitive Performance Testing, NATO Research & Technology Organization Mission to DLR (Institute of Aviation and Space Medicine) Department of Aviation and Space Psychology, Hamburg, Germany, June 5, 1998. (with R.L. Shehab).

C63.18 Immunity Testing Standard - On-Site Testing of Medical Equipment, Management of Electromagnetic Interference (EMI) from Wireless Communications Devices in Hospitals, Boston, MA, June 26, 1998.

Research Progress Report, EMC Forum #5: Advances in Wireless EMC, Arlington, Virginia, October 27, 1998. (with H. Grant).

Presentation to Hearing Industry Association (HIA) Representatives (C63.19 Test Validation), Norman, OK, December 9, 1998.

Results of the Phase III-A Objective Validation Study, presentation to the ANSI C63.19 Working Group, Boca Raton, Florida, April 27, 1999.

Impact of Wireless Phone Power Output on Hearing Aid Interference Levels, AAMI 34th Annual Meeting, Boston, MA, June 1999. (with T.L. Fry and H. Grant).

Simulation Modeling of Electromagnetic Interaction for the Evaluation of Wireless Phone

Management in Medical Facilities, AAMI 34th Annual Meeting, Boston, MA, June 1999. (with K. Herrmann and H. Grant).

Validation of the Proposed ANSI C63.19 Standard for Measuring Hearing Aid – Wireless Phone Compatibility, *EMC Focus*, University of Oklahoma Center for the Study of Wireless Electromagnetic Compatibility, Norman, OK, August/September 1999.

Validation of the C63.19 Standard: Acoustic Measurements and Subjective Evaluations, Presentation to Hearing Industry Association (HIA) and C63.19 Committee Representatives, Norman, OK, December 21, 1999.

NATO RTO HFM-056/TG-008 Working Group on *Operator Functional State Assessment*, Paris, France, May 8-9, 2000.

NATO RTO HFM-056/TG-008 Working Group on *Operator Functional State Assessment*, Bristol, England, November 6-7, 2000.

NATO RTO HFM-056/TG-008 Working Group on *Operator Functional State Assessment*, Toronto, Canada, April 23-24, 2001

Cognitive Performance Assessment: Traditional Concepts and Modern Developments (Norms Development and Assessing the Validity of Data for the ANAM), Automated Neuropsychological Assessment Metrics (ANAM) Meeting: Present Opportunities/Future Use, Pensacola, FL, May 10-12, 2001. (with K. Gilliland).

NATO RTO HFM-056/TG-008 Working Group on *Operator Functional State Assessment*, Palanga, Lithuania, September 10-11, 2001.

Methods for Assessing Operator Functional State, NATO Advanced Research Workshop on *Operator Functional State and Impaired Performance in Complex Work*, Il Ciocco, Italy, April 4-7, 2002. (R.E. Schlegel and A.W.K. Gaillard).

Dynamic-Load Performance Tests, NATO Advanced Research Workshop on *Operator Functional State and Impaired Performance in Complex Work*, Il Ciocco, Italy, April 4-7, 2002. (R.E. Schlegel and K. Gilliland).

NATO RTO HFM-056/TG-008 Working Group on *Operator Functional State Assessment*, Linkoping, Sweden, September 23, 2002.

NATO RTO HFM-104 Lecture Series 234 on *Operator Functional State Assessment: Optimizing Systems Performance*, six presentations in Brussels, Belgium, September 11-12, 2003.

**DISSERTATIONS AND THESES SUPERVISED:****Ph.D. Dissertations**

<i>Name</i>	<i>Date</i>	<i>Title</i>
Waikar, Avinash M.	Sep 1984	The Use of Strength Measurement as a Diagnostic Test for Low Back Injury
Chen, Jen-Gwo	May 1987	Prototype Expert System for Physical Work Stress Analysis
Chukwu, Nathaniel A.	Dec 1990	The Role of Vision and Kinesthesia in Aimed Hand Movements
Waltensperger, G. Mark	Dec 1992	Choice Bimanual Aiming with Unequal Indices of Difficulty
Kweon, O-Seong	May 1994	Hand Movement Characteristics Under Various Conditions of Vision, Movement Amplitude, Target Width, and Subject Characteristics
Vasmatzidis, Ioannis	May 1995	Effects of Heat Stress on Dual-Task and Complex Mental Performance
Shehab, Randa L.	Aug 1995	Individual Analysis of Stressor-Induced Variation in Cognition Performance
Swensen, Eric	May 1997	Reliability of a Psychophysical Method for Evaluating Repetitive Power Hand Grasps of Females
Whitney, Rick D.	Dec 1997	Back Belt Effect on Physiological Strain and Perceived Discomfort and Exertion during a Continuous Asymmetric Stoop Lift Task
Madala, Deepak	Aug 1998	Physiological Effects of Abdominal Belt Use During a Symmetric Lifting Task (co-chair with R.L. Shehab)
Hwang, Byeong-cheol	Jul 2001	Methodology for the Selection and Evaluation of Computer Input Devices for People with Functional Limitations
Fry, Tamy L.	Dec 2003	Development and Validation of Metrics to Evaluate Robotics Operator Performance

**M.S.I.E. Theses**

<i>Name</i>	<i>Date</i>	<i>Title</i>
Griffith Jr., Robert R.	Sep 1984	Linear Goal Programming: An Overview and

## Comparison of Two Solution Codes

Dorman, Rosemary	Sep 1984	Computer Graphics Displays in Petroleum Drilling
Brace, Thomas H.	Dec 1984	Polar Coordinate Displays for Process Monitoring and Control
<i>Name</i>	<i>Date</i>	<i>Title</i>
Freeman, John Scott	May 1987	Application of a Criterion Task Set for Secondary Task Measures of Workload
Willcoxon, Rita	May 1987	An Ergonomic Study of Powered Hand Tool Use in Automobile Assembly
Sundar, Krishna	May 1988	Effect of Display Type on Operator Performance in a Process Control Situation
Purswell, Jerry Paul	Jul 1989	Evaluating Alternative Composite Measures for SWAT Ratings
Cline, Bryan Stewart	Jul 1989	A Comparison of Deterministic Lot Sizing Techniques Using Focus Forecasts of Stochastic Demand Data
Vatturi, Arun S.	Dec 1989	Simulation of Human Mental Rotation Tasks
Lambert, Marie E.	Jul 1990	The Effects of Site Configuration on a Tactile Information Display for the Human Head
Parikh, Nilesh P.	Dec 1990	Impact of Text Formatting Variables on Proofreading of VDT Displayed Text
Kweon, O-Seong	May 1992	Automobile Power Window Control Stereotypes
Young, Frankie L.	May 1993	A Comparative Analysis of Eye Fixations During Day and Night Low-Level Flight with U.S. Army Aviators
Shehab, Randa L.	May 1993	A Test of Fitts' Law in a Simulated Driving Environment
Sellakannu, Arasendran	Aug 1995	A Video-Based Human Factors Evaluation of the Weather Radar Algorithm Display System (RADS)
Madala, Deepak	May 1996	The Effects of Abdominal Belt Use on Heart Rate, Blood Pressure and Recovery Time During a Lifting Task
Arviso, Wynette	Dec 1996	Evaluation of a Spoken Navajo Computer Interface

- Rahman, Arifur                      May 1997 Performance and Preference Issues in Graphical User Interface Widgets for Various Tasks
- Hwang, Byeong-cheol                Aug 1997 Identification of Stable Asymptotic Performance on Computer-Based Cognitive Tests
- Srinivasan, Shalini                  Aug 1997 Psychophysical Assessment of Electromagnetic Audio Interference in Hearing Aids from Digital Wireless Phones
- Rausch, Michael                      Dec 1997 Design and Evaluation of a Graphical User Interface for the WSR-88D Control Software
- Thirumalai, Ramanujan               Dec 1997 A Branch and Bound Method Using Tchebycheff Norm for Solving Bi-Criteria Integer Problems (co-chair with A. Ravindran)
- Kuriger, Glenn W.                    May 1998 Intelligent Search Methods for Nonlinear Goal Programming Problems (co-chair with A. Ravindran)
- Fry, Tamy L.                          May 1999 Predicting Speech Intelligibility for Hearing Aid Users in the Presence of Digital Wireless Phone Interference
- Williams, James J.                    May 2001 Identification and Analysis of Job Skill and Ability Requirements Using the Job Assessment Software System (JASS): A Case Study
- Chandresekaran, Pradeep             May 2004 PC Implementation and Validation of the Shepard and Metzler Test of Mental Rotation

**SERVICE: University Service**

<b>Activity</b>	<b>From</b>	<b>To</b>
Engineering Computer Advisory Committee	Sep 1980	Aug 1981
B.S. in Engineering Committee	Sep 1981	Aug 1983
Engineering Facilities Committee	Sep 1981	Aug 1982
Undergraduate Advisor for all IE Majors	Jun 1981	May 1982
Faculty Search Committee for Director, School of Industrial Engineering	Jul 1981	Feb 1982
Faculty Search Committee for Faculty Members	Oct 1981	Sep 1982
Faculty Sponsor for Alpha Pi Mu	May 1983	Present
Advisor for IE Freshmen	Jun 1983	May 1984
Committee "A" Member	Sep 1983	Aug 1985
Continuing Education Coordinating Committee	Sep 1983	Aug 1984
Engineering Physics Committee	Sep 1983	Aug 1984
Advisor for IE Sophomores	Jun 1984	May 1985
Engineering 2213 Committee	Sep 1984	Aug 1985
Ad Hoc Committee on Faculty Work Stations	Sep 1984	Aug 1985
Advisor for IE Juniors	Jun 1985	May 1986
Undergraduate Programs Coordinating Committee	Sep 1985	Aug 1986
Engineering Convocation Committee	Sep 1985	Aug 1986
IE Ad Hoc Security Committee (chair)	Jan 1985	May 1985
IE Undergraduate Committee (chair)	Sep 1985	Aug 1986
College of Engineering Academic Counselor	May 1985	Jul 1985
Advisor for IE Seniors	Jun 1986	May 1987
B.S. in Engineering Committee	Sep 1986	Aug 1987

<b>Activity</b>	<b>From</b>	<b>To</b>
IE Undergraduate Committee	Sep 1986	Aug 1987
Engineering 2213 Committee	Sep 1986	Aug 1989
IE Computer and Facilities Planning Committee Chair (Sep 1990-May 1992; Aug 1993-May 1997)	Sep 1986	Present
Ergonomics Area Committee Chair (Aug 1993-May 1997)	Sep 1986	Present
CoE Academic Appeals & Misconduct Board	Oct 1986	Sep 1989
Advisor for IE Seniors	Sep 1987	May 1988
Engineering Facilities Committee Sub-committee on Computer Charges (chair) Sub-committee on College Technicians and Shops	Sep 1987	Aug 1991
IE Undergraduate Committee (chair)	Sep 1987	Aug 1988
Faculty Search Committee, Manufacturing Position	Sep 1987	Aug 1988
Committee "A" Member	Jan 1988	Dec 1989
Advisor for IE Sophomores	Jun 1988	May 1989
Biomedical Research Support Grant - Review Committee	Jun 1988	Jun 1988
Faculty Search Committee (chair) Director, School of Industrial Engineering	Aug 1988	May 1989
University Faculty Compensation Committee Chair (Jun 1990-May 1991)	Aug 1988	May 1991
IE Graduate Committee	Sep 1988	Aug 1990
Provost's Committee on Professional Studies Degree in Aviation Options	May 1989	Present
Acting Director - IE School	Jun 1989	Aug 1989
Advisor for IE Juniors	Jun 1989	May 1990
School Representative on TEACH Test Panel to evaluate Teaching Assistants for Center for English as a Second Language (20 students)	Aug 1989	Present

<b>Activity</b>	<b>From</b>	<b>To</b>
Advisor for IE Seniors	Jun 1990	May 1991
IE Computer and Facilities Planning Committee (chair)	Sep 1990	May 1992
Committee "A" Member	Sep 1990	Aug 1992
OU Associates Research/Creativity Activity Funds-Engineering Review Subcommittee	Sep 1990	Oct 1990
Administered waivers for E3293 for incoming Graduate Students	Sep 1991	May 1992
Liaison to CoE Office of Records & Advising	Jan 1991	May 1992
Engineering Convocation Committee (Enunciator)	Jan 1991	Present
CoE Academic Appeals/Misconduct Board	Feb 1991	May 1992
College of Engineering Nominating Committee	Apr 1991	
University Faculty Senate	Aug 1991	May 1992
IE Graduate Committee	Sep 1991	May 1992
Graduate Advisor	Sep 1991	May 1992
Faculty Scholarly Misconduct Inquiry Committee	Oct 1991	Jan 1992
Assessment Liaison from School of IE	Jan 1992	May 1992
IE Technician Advisory Group	Jan 1992	Present
Faculty Sponsor for Student Chapter of Human Factors and Ergonomics Society	Jan 1992	Present
ABET Liaison from Industrial Engineering	Jan 1993	Dec 1993
Reviewer for PI Research Investment Program	Jan 1993	
Academic Appeals & Misconduct Board (CoE)	Aug 1993	Present
IE Computer and Facilities Planning Committee (chair)	Aug 1993	Present
Ergonomics Area Committee (chair)	Aug 1993	Present
IE Graduate Committee	Aug 1993	Jul 1997

<b>Activity</b>	<b>From</b>	<b>To</b>
College of Engineering Convocation Enunciator	May 1994	May 1996
Graduate College Academic Misconduct Panel	Aug 1994	May 1995
Faculty Search Committee, Human Factors Position (chair)	Aug 1994	Aug 1995
Committee "A"	Aug 1996	Aug 1998
Faculty Search Committee, Human Factors Position (chair)	Sep 1996	May 1997
IE Undergraduate Committee (chair)	Aug 1997	Aug 1999
Faculty Search Committee, Director, School of Industrial Engineering	Aug 1997	Aug 1998
College of Engineering Convocation Enunciator	May 1998	
ABET Liaison from Industrial Engineering	Mar 1998	Dec 1999
College of Engineering Reprieve Committee	Apr 1999	Present
Engineering Convocation Committee (Enunciator)	May 1999	
IE Undergraduate Committee	Aug 1999	Dec 2000
ECS/MDE Committee (representative from IE)	May 2000	Dec 2001
University Council on Faculty Awards and Honors	Aug 2000	May 2001
Presidential Professorship Selection Committee	Aug 2000	May 2001
IE Graduate Committee	Jan 2001	Present
Committee "A"	Aug 2001	Aug 2002
IE Undergraduate Committee (chair)	Jun 2001	Present
Faculty Search Committee (OR/Production Position)	Sep 2001	May 2002

**Professional Service**

<b>Activity / Office</b>	<b>From</b>	<b>To</b>
Ergonomics Committee of the American Industrial Hygiene Association	May 1980	May 1983
President-Elect and Chapter Development Chairman IIE Chapter 57 - Oklahoma City	May 1983	May 1984
President, IIE Chapter 57 - Oklahoma City	May 1984	May 1985
Engineer's Week Chairman, OSPE Canadian Valley Chapter	Sep 1985	Sep 1986
Awards Chairman, OSPE Canadian Valley Chapter	Sep 1986	Sep 1987
State Awards Committee, Oklahoma Society of Professional Engineers	Sep 1986	Sep 1987
Student Paper Award Committee Industrial Ergonomics TG - Human Factors Society	Sep 1991	Sep 1992
Student Paper Award Committee Industrial Ergonomics TG - Human Factors Society	Oct 1994	Oct 1995
Reviewer for <i>Human Factors, Ergonomics, Applied Ergonomics, International Journal of Industrial Ergonomics, Computers and Industrial Engineering, American Industrial Hygiene Association Journal, IEEE Transactions on Rehabilitation Engineering, International Journal of Hyperthermia, International Journal of Applied Aviation Studies</i>	1985	Present
U.S. Representative and Secretary to NATO RTO HFM-056/TG-008 Working Group on <i>Operator Functional State Assessment</i>	Mar 2000	2003

**COURSES TAUGHT LAST FIVE YEARS:**

- CS3053 - Graphical User Interfaces
- E 3293 - Applied Engineering Statistics
- IE 4853/5853 – Applied Research Methods
- IE 4553/5553 - Engineering Experimental Design
- IE 5813 - Information Ergonomics
- IE 6853 - Human Factors in Computer Systems