

## CURRICULUM VITA

NAME: Blair A. Rowley

BIRTH PLACE: Idaho Falls, Idaho

HOME ADDRESS: 1128 Ludlow Road  
Xenia, Ohio 45385  
Phone (937) 372-7066

BUSINESS ADDRESS: Department of Biomedical & Human Factors Engineering  
College of Engineering & Computer Science  
Wright State University  
Dayton, Ohio 45435  
Phone (937) 775-5073

### EDUCATION:

PhD EE	University of Missouri - Columbia, 1970
MS EE	University of Missouri - Columbia, 1963
BS EE	Missouri School of Mines & Metallurgy, 1962
College Management Program	Carnegie Mellon University, 1990

### CURRENT POSITION:

Director Freshman Engineering Program and  
Professor, Department of Biomedical and Human Factors Engineering (BHE), College  
of Engineering and Computer Science (E&CS), Wright State University (WSU), Dayton, Ohio.

Professor, Department of Internal Medicine, School of Medicine (SOM), WSU.

### PROFESSIONAL LICENSES AND CERTIFICATIONS:

Registered Professional Engineer (Ohio)  
Certified Clinical Engineer

MILITARY SERVICE: Captain, U.S. Army  
Security Clearance - Top Secret

### SPECIAL APPOINTMENTS:

Site Visitor, Accreditation Board for Engineering and Technology 1989 to 2003

### ADMINISTRATIVE APPOINTMENTS:

September 1984 to July 1991  
Chair, BHE, E&CS & SOM, WSU - responsible for undergraduate and graduate  
programs in Biomedical Engineering and in Human Factors Engineering.

March 1974 to September 1984  
Chair, Department of Biomedical Engineering and Computer Medicine, Texas  
Tech University Health Sciences Center (TTUHSC), SOM, Lubbock, Texas.

March 1981 to September 1984  
Chair (Interim), Department of Preventive Medicine and Community Health,  
TTUHCS, SOM.

January 1983 to April 1983  
Manager (Interim), Radiation & Health Safety Office, TTUHSC.

#### ACADEMIC APPOINTMENTS:

September 1984 to present

Professor, Department of Biomedical and Human Factors Engineering, College of Engineering and Computer Science, Wright State University, Dayton, Ohio;

September 1992 to present

Professor, Department of Internal Medicine, School of Medicine, WSU

March 1981 to September 1984

Professor, Department of Biomedical Engineering and Computer Medicine, Texas TTUHSC, SOM, Lubbock, Texas.

March 1973 to March 1981

Associate Professor, Department of Biomedical Engineering and Computer Medicine, TTUHSC, SOM

September 1970 to March 1973

Assistant Professor, Department of Physical Medicine and Rehabilitation, SOM, University of Missouri-Columbia.

#### RESEARCH APPOINTMENTS:

September 1971 to March 1973

Investigator, Space Sciences Research Center (Dalton Research Center), University of Missouri-Columbia.

##### Responsibilities:

Research and design in area of Remote Health Care Delivery. Research in the area of biological reaction to therapeutic electrical currents. Principal investigator on DOE project titled "In Vivo Effect of Low Intensity Direct Current on Viability of Pseudomonas Aeriginosa Infection." Co-investigator on Missouri Heart Association Grant, "Cardiac Pacing System Powered by an Implanted Hybrid Power Cell." Co-investigator on NASA Grant "Telemed - A Proposal for a Telemeter Linked Medical Care Network."

September 1970 to September 1971

##### Responsibilities:

Same as below and co-investigator of "TELEMED: A Proposal for a Telemeter Linked Medical Care Network" granted by NASA.

March 1970 to September 1970

Research Associate in Physical Medicine and Rehabilitation and Assistant to the Director for Engineering in the Space Sciences Research Center. University of Missouri-Columbia.

##### Responsibilities:

Responsibility for all engineering design and support activities for the Space Sciences Research Center including management of mechanical and electronic shops and computer facility. Furnish consultation service for all SSRC investigators in the area of Biomedical Instrumentation. Research and design in the area of biological reactions to electrical currents and bioengineering research of PM&R. Primary investigator on methods of early detection of stroke and other cerebral vascular diseases for PM&R.

June 1967 to February 1970

Research Associate and Biomedical Engineer, Bioengineering Project, Missouri Regional Medical Program, University of Missouri-Columbia.

Responsibilities:

Responsibility for developing a bioengineering electronics laboratory and supervision of lab engineers and technicians. Administrative responsibility for references and NASA technological utilization for the University.

Responsibility for developing a bioengineering Wet lab research facility to study effects of electrical currents on growth and metabolism.

Research in the area of medical diagnosis and therapeutics to aid in the early detection of stroke, heart disease, and cancer.

Design and development of instrumentation for measuring various body parameters and functions.

Development of instrumentation and devices for mass screening of humans for disease.

June 1965 to June 1967

Research Engineer, Biomedical Research Division, Zenith Radio Corporation, Chicago, Illinois.

Responsibilities:

Design and development of instrumentation and circuits for the detection of physiological events, EKG, R-wave detection and peripheral blood flow.

Research, design, and development of advanced diagnostic ultrasound equipment. This was my main effort. It entailed whole body soft tissue scanners and A-scan echo equipment. Some of the circuits involved highly stable continuously variable sweep generators, pulse transmitters, high gain pulse amplifiers, specialized gain control circuitry and signal conditioners. The development was based on solid state devices, including discrete components and integrated circuits.

April 1964 to June 1965

Biomedical Engineer, Department of Biological Instrumentation, The Lovelace Foundation for Medical Education and Research, Albuquerque, New Mexico.

Responsibilities:

Design, construction, and interfacing of various instrumentation with research projects; types of instrumentation involved AC & DC instrumentation tape recorders, timers, signal averaging computers, signal conditioning devices, radio towers, and antennas.

Programming of analog data into Algol language for processing with Burroughs 5000 computer. Attended a three week course on Algol language.

Consulting work with local business firms on biomedical engineering problems. Engineering support for classified projects.

Originated research into the use of ultrasound for diagnosis in medicine for the Foundation; evaluated currently available equipment and made final selection of equipment for a research project in ultrasound. I had direct responsibility for the operation of the ultrasound research laboratory performing A-scan, time motion scan, and compound B-scan on a selected group of control subjects to establish a set of normals to work from.

February 1962 TO May 1963

Research assistant in Department of Surgery, Medical Center, University of Missouri-Columbia.

Responsibilities:

Performed work in research on a cardiac pacemaker system and energy transport through the closed chest wall to furnish power for an artificial heart. Assisted in surgery on dogs in creating heart blocks. Built micromodule pacemaker receiver and assisted in attaching it to dog hearts. Designed and built a high frequency energy transport coil. Operated on dogs and installed the coil for power transport study. Made study in vivo of electrolysis of pacemaker electrodes in dog muscle.

RELATED EXPERIENCE PRIOR TO 1964:

June 1960 to September 1960

Employed by Department of Army, Post Engineering, Fort Leonard Wood, Missouri. Did a study on automation of Post Utilities which involved the water treatment plant, the sewage treatment plant, and steam generating plants.

HONOR SOCIETIES:

1. Eta Kappa Nu
2. Phi Kappa Phi
3. Sigma Xi
4. Tau Beta Pi

SCHOLARSHIPS:

1. USPH Traineeship

AWARDS:

1. University of Missouri Curators Award, 1954
2. Missouri School of Mines Gold Key Award, 1959
3. Phi Kappa Phi Book Plate Award, 1959
4. Certificate of Appreciation, Institute of Electrical and Electronics Engineers, Engineering in Medicine and Biology Society, 1976, 1977, 1991.
5. Best Paper Award, '68 Micro Journal, May 1982.
6. BME Student Faculty Award, 1987.
7. Fritz J. Russ Award for Achievement in Bio-Engineering, IEEE Dayton Section, 1991.
8. Certificate of Appreciation as Founding Chair, Council of Chairs in Bio/Biomedical Engineering, 1992.
9. ASEE Centennial Certificate of Recognition, 1993.
10. Innovation Award, The Ohio Rehabilitation Technology Association, 1996
11. Mentor Award, Rehabilitation Engineering Society of North America, June 2000.
12. Outstanding Teaching Award, College Engineering & Computer Science, WSU, 2001.
13. Learning Communities Award for Outstanding Integration of Technology, WSU, 2002.
14. Award for Outstanding Professional Achievement for professional accomplishment and enhancing the stature of the engineering and scientific professions, Engineering & Science Foundation of Dayton, 2003..

MEMBERSHIPS IN SCIENTIFIC AND PROFESSIONAL SOCIETIES:

1. American Society for Engineering Education (ASEE)
2. Association for the Advancement of Rehabilitation Technology (RESNA)
3. Institute of Electrical and Electronics Engineers (IEEE)
4. IEEE Engineering in Medicine and Biology Society

PRINCIPAL AREAS OF RESEARCH:

1. Augmentative Communications for the Severely Disabled
2. Technology in Rehabilitation
3. Computers in Medicine
4. Medical Instrumentation
5. Technology in Health Care Delivery
6. Bioelectric Phenomena

## GRANTS and CONTRACTS:

1. Co-Investigator - "Telemed - A Proposal for a Telemeter Linked Medical Care Network," NASA, \$50,000, 1970-1971.
2. Co-Investigator - "Cardiac Pacing System Powered by an Implanted Hybrid Power Cell," 1971-1972.
3. Principal Investigator - "In Vivo Effect of Low Intensity Direct Current on Viability of Pseudomonas Aeriginosa Infection," DOD, \$20,000, 1972-1973.
4. Principal Investigator - "Computer Applications to the Medically Underserved," DHEW, 4 years, \$606,343, 1974-1978.
5. Principal Investigator - "Investigation of Low Intensity Direct Current on Neural Regeneration," American Paralysis Association, 1st year, \$34,767, 1983-1984.
6. Principal Investigator - "Rapid Procedure Method Text Processing for the Handicapped," Wright State University Research Council, \$2,031, 1985-1986.
7. Co-Principal Investigator - "Advanced Augmentative Communications Program for the Disabled," Ohio Rehabilitation Services Commission, \$100,000, 1985-1986.
8. Co-Principal Investigator - "Advanced Augmentative Communications Program," State of Ohio Research Challenge Grant, \$60,000, 1987.
9. Principal Investigator - "Text Generation for the Communications Impaired," U.S. Dept. Education, NIDRR, \$67,119, 1987-1988.
10. Co-Principal Investigator - 1988 Academic Challenge Grant, State of Ohio, competitive program development grant #661483: \$325,000.
11. Co-Principal Investigator - 1989 Academic Challenge Grant, State of Ohio, competitive program development grant #66160: \$325,000.
12. Co-Investigator - "An Artificial Bladder Control System - II," RJF International/Ohio Edison Grant, \$50,000, 1989.
13. Principal Investigator - "Workshop on Undergraduate Curricula in Bioengineering," National Science Foundation, \$45,019, 1990.
14. Principal Investigator - "Rehabilitation Engineering and Technology Training," RSA, U.S. Dept. Education, \$300,000, 1991-1994.
15. Principal Investigator - "Cognitive Associate for Individuals with Aphasia," Pruetz Seed Grant, WSU School of Medicine, \$5,000, 1992.
14. Principal Investigator - "Rehabilitation Engineering and Technology Training," RSA, U.S. Dept. Education, \$321,000, 1994-1997.
15. Principal Investigator - "Rehabilitation Engineering Post Graduate Professional Training," Ohio Rehabilitation Services Commission, \$229,040, 1997-1998.
16. Principal Investigator - "Rehabilitation Engineering and Technology Training," RSA, U.S. Dept. Education, \$300,000, 1997-2000.
17. Principal Investigator - "Rehabilitation Engineering Post Graduate Professional Training Phase II," Ohio Rehabilitation Services Commission, \$270,612, 1999-2000.
18. Principal Investigator - "Cognitive Associate" Lillie P. Howard, WSU, \$3,000, 2003.
19. Co-I - "Temperature/Telemetry Satellite Project at Wright State University", OSGC, \$5,750, 2004.
20. Co-I - "Temperature/Telemetry Satellite Project at Wright State University", OSGC, \$7,300, 2005.

## ACADEMIC ACTIVITIES:

1. Teaching activities have involved introductory courses and labs for freshmen engineering, graduate courses in rehabilitation engineering, undergraduate and graduate courses in biomedical engineering, computer medicine, and rehabilitation device design.; medical school courses in biostatistics, computers, and continuing medical education; and school of nursing courses in health care technology.
2. Major advisor to 58 master's students.
3. Major advisor to 3 Ph.D. students, one completed before moving to WSU.
4. Permanent member of Graduate Faculty, Wright State University, 1985 - present.
5. Full member of Biomedical Sciences Faculty, Wright State University, 1985 - present.
6. Member, Admissions Committee, Biomedical Sciences Ph.D. Program, WSU, 1984 - 1991.
7. Member, Engineering and Computer Science Due Process Committee, WSU, 1989 - 1999.

8. Member, College of Engineering and Computer Science Executive Committee, WSU 1986-1991.
9. Member, Graduate Council, WSU.
10. Member, Engineering and Computer Science Ph.D. Planning Committee, Wright State University.
11. Member, Curriculum Committee, College of Science and Engineering, WSU 1985-1986.
12. Member, Executive Board, School of Medicine, WSU, 1984-1991.
13. Member, Dean's Search Committee, College of Engineering and Computer Science, WSU, 1985-1986.
14. Member, Search Committee for Director of University Placement Services, WSU, 1985-1986.
15. School of Medicine Representative to University Graduate Council, Wright State University, 1986-1988.
16. Member, Buildings and Grounds Utilization and Planning Committee, Wright State University, 1986-1987.
17. Member, Egr. & CS Due Process Committee, 1986-1992.
18. Member, LCME Site Visit Task Force, 1987.
19. Chair, E&CS Academic Computing Advisory Committee 1991-1993.
20. Member WSU Academic Computing Advisory Committee 1991-1993.
21. Member of graduate faculty Texas Tech University, 1974 to 1984.
22. Member, graduate council, TTUSM 1974 to 1984.
23. Member, TTUSM Medical Curriculum Council, 1974-1984.
24. Director Master of Engineering program in Biomedical Engineering through the TTU College of Engineering, 1974-1984.
25. Director Master of Science program in Computer Medicine through the Interdisciplinary Studies Degree TTU Graduate School, 1974-1984.
26. Director Interdisciplinary Ph.D. program in Biomedical Engineering through the TTU College of Engineering, 1974-1984.
27. Coordinator of a new graduate program that was being developed in Health Computing at Texas Tech U. which was an interdisciplinary effort involving health care, computer science, information science, and business administration.
28. Member, Dean's Advisory Committee, TTUHSCSM, 1974-1984.
29. Chairman, Radiation Safety Committee, TTUHSC, 1975-1984.
30. Member, Graduate Council, TTUHSCSM, 1975-1984.
31. Member, Clinical Chairmen's Committee, TTUHSC, 1981-1984.
32. Member, Steering Committee, International Conference on Health Related Problems in Arid and Semi-Arid Lands, 1982-1984.
33. Member, Ad Hoc Committee on Research for HSC, 1983-1984.
34. Member, Special Faculty Council Funding Committee for HSCSM, 1983.
35. Member, Objectives Committee of the Curriculum Council, TTUHSC, 1982-1983.
36. Elected Senator, Faculty Senate, WSU, 2001-2002.
37. Member, Common Text Selection Committee, WSU, 2003.
38. Member, Foundations of Excellence Taskforce for the First Year of College, WSU, 2005

#### BOARDS, COMMITTEES, AND OTHER ACTIVITIES:

1. Chair, Biomedical Engineering Division Am. Asso. Egr. Education 1987-1988.
2. Chair, Council of Chairs in Bio and Biomedical Engineering, 1991.
3. Chair, Education Committee IEEE/EMBS 1985 - 1991.
4. Chair, Information and Communications Committee of Southwestern Gerontological Institute, 1980.
5. Chair, Program Requirements Subcommittee of the Education Committee, Engineering in Medicine and Biology Society, Institute of Electrical and Electronic Engineers, 1976.
6. Chair, Standards Committee, Engineering in Medicine and Biology Society, Institute of Electrical and Electronic Engineers, 1977-1981.
7. Member, Standards Board, Institute of Electrical and Electronic Engineers, 1978, 1980.
8. Member, Education Committee, Engineering in Medicine and Biology Society, Institute of Electrical and Electronic Engineers. 1976.

9. Member, Standards Committee, The Society of Computer Medicine.
10. Member, Missouri Governor's Task Force on Technology in Health Care Delivery.
11. Member, South Plains Association of Governments Subcommittee on Emergency Medical Services Communications.
12. Member, Executive Committee of Lubbock General Hospital, 1981-1984.
13. Member, Advisory Committee on Nursing 4-East Project, Lubbock County Hospital, 1982-1983.
14. Member, IEEE/EMBS Administrative Committee (elected position), 1982-1984.
15. Member, Editorial Board, Journal of Clinical Engineering, 1984 - 1990.
16. Member Science Advisory Board American Paralytic Association, 1986 - 1989
17. Member IEEE Committee on Education, 1986-1987.
18. Member IEEE/EAB Technical Activities Advisory Committee, 1986-1990.
19. Member, Editorial Board of Rehabilitation Technology, 1988-2002.
20. Member Ohio Rehabilitation Technology Assoc. 1990-present.
21. Member ad hoc Steering Committee for the Academic Council, American Institute for Medical and Biological Engineering. 1991-1992.
22. Reviewer - Journal of Clinical Engineering, 1984 - 1990.
23. Reviewer - National Science Foundation, 1981 - present.
24. Reviewer - American Paralysis Association 1985.
25. Reviewer - IEEE Engineering in Medicine and Biology Magazine, 1983 - 1990.
26. School of Medicine Representative to University Graduate Council, WSU, 1986-1988.
27. Treasurer (elected), WSU chapter Phi Kappa Phi, 1991-93.
28. Vice Chair ASEE/Biomed. Egr. for Education 1989-2001.
29. Board of Directors, Deaton Ashcraft Group, Inc, 1994-1998
30. Board of Directors, Rehabilitation Technology Center, 1994-2002.
31. Member RESNA Education Committee, 1994 - 2002

#### CONSULTING:

1. Consultant - Texas Tech University Health Sciences Center Hospital on Patient Monitoring Systems.
2. Consultant - Texas Instruments, Inc., in the area of Computers in Medicine.
3. Consultant - Texas Tech University School of Medicine on Design of Electrical system for Laboratory Instrumentation and Computers.
4. Consultant - 21st Century Enterprises, Inc., in area of Small Microcomputer Systems.
5. Consultant - Health Sciences Center Hospital on Specifications for Intensive Care Monitoring Equipment.
6. Consultant - Southwestern Gerontological Institute on Medical Information Systems.
7. Consultant - Texas Governor's Commission on Aging on Computer Systems and Medical Information Systems.
8. Consultant - Health Sciences Center Hospital on Redesign of Heart Catheterization Laboratory.
9. Consultant - Lokata local school district in Ohio on augmentative communications for a disabled student.
10. Consultant - Staodyanmics, Inc. on TENS use for skin ulcer healing.
11. Consultant - Jaycor Company, on graphics data base.
12. Consultant - Legal cases involving medical device liability and patents.
13. Consultant - Deaton Ashcraft Group on SBRI grant
14. Consultant - HP Company
15. Consultant - CBJ Engineering

#### EXHIBITS or PRODUCTIONS:

1. Chairman - Technical Session on Standards, 8 papers, IEEE Engineering on Medicine and Biology Society Conference, 1979.
2. Chairman - Panel and discussion with directors of biomedical engineering programs. IEEE Engineering in Medicine and Biology Society Conference. 1980.

3. Lecturer - Tutorial on computers in the Practice of Medicine and Biology Society Conference, 1979.
4. Lecturer - Tutorial on computers in the Practice of Medicine, IEEE Engineering in Medicine and Biology Society Conference, 1980.
5. Lecturer - Summer Workshop for Gifted and Talented Children - Shake Hands With Your Future, Computer Science Elective, 4 weeks, Texas Tech University, 1981, 1982, 1983.
6. Lecturer - "Computer Terminology" at the Computers in Nutrition Conference, Lubbock, Texas, 1983, 1984.
7. Director and Lecturer - "The Use Of Computers in the Practice of Medicine," Galveston, Texas, 1983.
8. Lecturer - "Using Technology to Open Doors for Employment of the Non-Writing and Non-Speaking Disabled," Dayton, Ohio, December 3, 1986.
9. Lecturer - "Biotechnology," Ohio Department of Education, 3rd Annual Staff Development Conference, Oct., 1986.
10. Lecturer - "Biomedical Engineering," Data Processing Mgmt. Asso., Columbus, OH, June 1987.
11. Presented talk on Computer use in BME at scientific programs of Biomedical Engineering division of ASEE at Annual Meeting, June 1988.
12. Poster Session- "Interfacing to IBM PC Computers," Augmentative and Alternative Communication: Toward Employment, A Symposium presented by St. Elizabeth Rehabilitation Center and Ohio Rehabilitation Services Commission, Dayton, Ohio, March 1989.
13. Scientific Exhibit - "Computer Applications in Medical Practice," 114th Annual Session of the Texas Medical Association, 1981.
14. Workshop Director - "Computers and Nursing: The New Game in Town," Lubbock, Texas, 1983.
15. Workshop Director - "The Use of Computers in the Practice of Medicine," Lubbock, Texas, 1979, 1980, 1981, 1982, 1983.
16. Workshop Director - "1978 Workshop on Computer Laboratory Health Care Resources," Lubbock, Texas, 1978.
17. Workshop Director - "The Use of Computers in the Practice of Medicine," El Paso, and Amarillo, Texas, 1984.
18. Workshop Director - "Biomedical Engineering," Ohio Dept. Education, 4th Annual Staff Development Conference, Oct., 1987.
19. Workshop director - "Workshop on the Undergraduate Curricula in Bioengineering," March 7-10, Dayton, OH, 1991.
21. Workshop director - "Computers in Service Delivery," Inservice Program for Ohio Rehabilitation Services Commission, July 30-31, Dayton, Ohio, 1992.
22. Videotape No. 28, Bullock, J.D., Rowley, B.A., Kuehne, L.A., "The Computerized Pupil," American Academy of Ophthalmology Meeting, October 8-12, 1988.
23. Workshop director - "Computers in Service Delivery," Inservice Program for Ohio Rehabilitation Services Commission, June 24-25, Dayton, Ohio, 1993.
24. Workshop director - "Introduction to Computers," Inservice Program for Ohio Rehabilitation Services Commission, July 15-16, Dayton, Ohio, 1993.
25. Workshop director - Computers in Service Delivery," Inservice Program for Ohio Rehabilitation Services Commission, July 28-29, Dayton, Ohio, 1994.
26. Workshop director - "Introduction to Computers," Fidelity Orthopedics inservice program, May 12-13, 1995.
27. Workshop director - Computers in Service Delivery," Inservice Program for Ohio Rehabilitation Services Commission, July 26-27, Dayton, Ohio, 1995.

#### PUBLICATIONS:

1. Schuder, J.C., H.E. Stephenson, and B.A. Rowley. "Excitation of a Large Coil Set for the Transport of Energy into the Chest," Digest of the 1962 15th Annual Conference on Engineering in Medicine and Biology, p.57, 1962.
2. Rowley, B.A. "Electrolysis - A Factor in Cardiac Pacemaker Electrode Failure," IEEE Transactions on Bio-Medical Electronics. 10:4. p.176. 1963.

3. Rowley, B.A., A.H. Purdy, and B.J. Schultz. "Automated ECG Chair," Proceedings 21st Annual Conference on Engineering in Medicine and Biology, p.40.5, 1968.
4. Wolcott, L.E., E.D. Wheeler, H.M. Hardwick, and B.A. Rowley. "Accelerated Healing of Skin Ulcers by Electrotherapy: Preliminary Clinical Results," Southern Medical Journal, 62:7 pp.795-801, 1969.
5. Evans, R.D., R. Wallace, M.L. Lee, B. Rowley, W. Sherman and R. Schiffman. "An Economic Analysis of Telemed," Proceedings of the 24th Annual Conference on Engineering in Medicine and Biology, p.336, 1971.
6. Rowley, B.A. "Electric Current Effects on E. coli Growth," Proceedings of the Society for Experimental Biology and Medicine, 139:3, pp. 929-934, 1972.
7. Rowley, B.A., et al. "Electrical Current Effects on the In Vivo Viability of an Infecting Microorganism in Wounds," Proceedings 25th Annual Conference on Engineering in Medicine and Biology, p. 266, 1972.
8. Jacobs, H.K., D.P. McConnell, B.A. Rowley, F.E. South. "A Force Transducer for Cardiac Muscle Strips," J. Applied Physiology, 35:3, pp. 436-438.
9. Rowley, B.A., et al. "The Effects of Electrical Current Modalities on an Infecting Microorganism in Wounds," Proceedings 26th ACEMB, 15:92, 1973.
10. Rowley, B.A., J.M. McKenna, and L.E. Wolcott. "A Biological Model for Studying Low Intensity Electrical Current Phenomena," Proceedings 28th ACEMB, p. 209, 1975.
11. Jarzembki, W.B. and B.A. Rowley. "Professional Engineering Registration and Clinical Engineering," J. Clinical Engineering, Vol 1, No. 1, pp. 56-62, 1976.
12. Rowley, B.A. "Technology and Remote Medical Care," Proceedings 29th ACEMB, Boston, Massachusetts, October 15, 1976, p. 262.
13. Anderson, D.E., B.A. Rowley, J.M. Cameron, and T.A. Nicholas. "Evaluation of a Computerized Problem-Oriented Medical History in a Rural Outreach Clinic for Migrant Workers," Biomedical Sciences Instrumentation, Vol. 13, pp. 101-106, April 1977.
14. Jarzembki, W.B., D.E. Anderson, J.M. Cameron and B.A. Rowley. "A Hospital Engineering Management Educational Program," J. Clinical Engineering, 2:1, pp. 67-72, 1977.
15. Rowley, B.A., J.H. Chinn, D.E. Anderson. "Computer Backup for a Family Practice Clinic in a Medically Underserved Area," Proceedings, First Annual Symposium on Computer Applications in Medical Care, pp. 188-189, 1977.
16. McCarroll, G.D., B.A. Rowley. "A Statistical Look at Locating Acupuncture Points Using Electrical Impedance Measurements," Proc 30th Ann Conf Egr in Med & Bio, 19, p.265, 1977.
17. Cameron, J.M., B.A. Rowley, and D.E. Anderson. "Evaluation of Computer Applications in Rural Health Care Delivery," Proc 30th Ann Conf Egr in Med & Bio, p.443, 1977.
18. Powers, R.F., D.E. Anderson, B.A. Rowley, J.M. Cameron, T.A. Nicholas, and M.M. Ayoub. "Evaluation of Computer Applications for Health Care Delivery," Proc Svmop Comp Appls Med Health Care. pp. 188-189. Washington, D.C., Oct. 1977.

19. Rowley, B.A., et. al. "Computerized Review of Physical Systems - An Evaluation," Proc 31th Ann Conf Egr in Med & Bio, Vol. 20, p. 26, October, 1978.
20. Rowley, B.A., et. al. "Physical Examination Reporting System," Proc 2nd Ann Sym Comp Appl Med Care, pp. 436-440, November 1978.
21. Rowley, B.A. "Computer Medicine Educational Program for Medical Students and Others," Proc 3rd Ann Sym Comp Appl Med Care, pp. 214-216, October 1979.
22. McCarroll, G.D. and B.A. Rowley. "An Investigation of the Existence of Electrically Located Acupuncture Points," IEEE Trans Biomed Egr, Vol. BME-26, No. 3, pp. 177-183, March 1979.
23. Rowley, B.A. and D.E. Anderson. "Evaluation of a Computerized Review of Physical Systems," J. Clinical Egr, Vol. 5, No. 3, pp. 243-249, July-September, 1980.
24. Rowley, B.A. "Intercommunication between UNIFLEX and RSTS," 68 Micro Journal, Vol. 4, No. 5, pp. 19-22, May 1982.
25. Way, A.B., Rowley, B.A., and White, M.A. "Microcomputer Nurse-Practitioner Protocols," Proc 6th Ann Sym Comp Appl Med Care pp. 668-672, October 1982.
26. Bhansali, B., W. Cheong, G. Havashi, and B. Rowley. "A Microcomputer Controlled Servo Ventilator System," IEEE Frontiers of Egr in Health Care - 1982, Vol. 1, pp. 159-162, 1982.
27. Bhansali, P.V. and B.A. Rowley. "A Microcomputer-Controlled Servo Ventilator," J. Clinical Egr, pp. 47-51, January-March 1984.
28. Kim, H.W., B.A. Rowley, et. al. "Preparation of Bovine Hemoglobin Solution As a Blood Substitute," Proc 37th ACEMB, Los Angeles, California, p.6.2, September 1984.
29. Rowley, B.A., G.C. Roman, H. Strahlendorf, and W.F. Chung. "Electrical Resistance in Low Level Direct Current Enhancement of Sciatic Nerve Regeneration," J. Neuro. Ortho. Surg., 6:3, pp. 279-281, 1985.
30. Roman, G.C., B.A. Rowley, et. al. "Stimulation of Sciatic Nerve Regeneration in the Adult Rat by Low-Intensity Electric Current," Experimental Neurology, 98:2, pp. 222-232, 1987.
31. Rowley, B.A., Davis, C.A., "Interfacing Computers to the Severely Disabled," 10th Annual; Conf IEEE/EMBS, Vol. 10, p.1583, 1988.
32. Rowley, B.A., C.A. Davis, O.E. Amos, "Interfacing the Disabled to Computer Software Through Virtual Interfaces," Int. Conf. Asso. Adv. Rehab. Tech., Vol 3, pp 380-381, 1988.
33. Kim, K.W., M. Feola, B. Rowley, L. Roberts, "Effects of Hemoglobin Perfusion on Contractile Function of the Isolated Ventricular Sert," Biomat., Art. Cells, Art. Organs, 16:1-3, pp. 331-345, 1988.
34. Bullock, J.D., B.A. Rowley, L.A. Kuehne, "The Computerized Pupil," J. Clin. Neuro-Ophthalmology, 11:1, pp. 50-52, 1991

35. Rowley, B.A., et. al., "Workshop on the Undergraduate Curricula in Bio/Biomedical Engineering," Proc. 13th Annual International Conf. IEEE/EMBS, 13:5, pp. 2348-2349, 1991.
36. Rowley, B.A., "The Rehabilitation Engineering Training Program at Wright State University", Proc, RESNA '93 Annual Conference, pp. 54-56, 1993.
37. Rowley, B.A., "Rehabilitation Engineering Training - The Practical Side", Proc, RESNA '94 Annual Conference, pp. 40-42, 1994.
38. Rowley, B.A., et. al., "Noun Cuing for Broca's Aphasics", Proc, RESNA '95 Annual Conference, pp. 626-628, 1995.
39. Rowley, B.A., D. F. Mitchell, C. Weber, "Educating the Rehabilitation Engineer as a Service Provider", Assistive Technology, 9.1, pp. 62-69, 1997.
40. Edwards, R.F., B.A. Rowley, "A Telemetry Based Pressure Sensing System," RESNA Annual Conference, pp. 174-176, 1999.
41. Rowley, B.A., "A Survey of Assistive Technology Providers- Some Initial Results", RESNA Annual Conference, pp. 228-230, 2000.
41. Rowley, B.A. and K. Yelamarthi, "Freshman Design Project with Senior Students as Team Leaders", ASEE/NCE Spring Conference, pages 5 April 2004.
42. Yelamarthi, K., P.R. Mawasha, B.A. Rowley, and T.L. Bazzoli, "The Temperature Satellite", ASEE/NCE Spring Conference, pages 6, April 2004.
43. Rowley, B.A., "BME Senior Design and Freshmen Engineering", Proceedings 2005 American Society for Engineering Education Annual Conference & Exposition, Session 1109, 7 pgs, 2005.
44. Rowley, B.A., T.L. Bazzoli, "Freshman Engineering & Computer Science Program at Wright State University, Proceedings 2005 American Society for engineering Education Annual Conference & Exposition, Session 1793, 5 pgs, 2005.
45. Mawasha, P.R., K. Yelamarthi, P.C. Lam, and B.A. Rowley, "Mentorship in Engineering Education: The role of faculty, graduate and undergraduate students on the career development of pre-college students", Proceedings ASEE/NCS 2005 Spring Conference, 9 pages, 2005.

#### INVITED PAPERS AND PRESENTATIONS

1. Rowley, B.A., et. al. "The Influence of Electrical Current on an Infecting Microorganism in Wounds," Electrically Mediated Growth Mechanisms in Living Systems, *Annals N.Y Acad. Sci.*, 238:543-551, 1974.
2. Rowley, B.A., et. al. "Computer Applications to the Medically Underserved," Proc. 1978 Workshop on Comp laboratory Health Care Resources, p. 309-29, 1978.
3. Anderson, D.E., B.A. Rowley, et. al., "Evaluation of Computer Applications for Health Care Delivery," Proc. 1978 Workshop on Comp laboratory Health Care Resources, pp.3-14, 1978.
4. Rowley, B.A. "The Baby Roared - What Do You Tell The Parents?," *Med. Infor.*, 9:305-306, 1984.
5. Rowley, B.A. "Electrical Enhancement of Healing," *IEEE NAECON Record* 1985, Vol.2, pp.994-999, 1985.

6. Rowley, B.A., "The Business of Technology Transfer," The Second UCPA Rehabilitation Technology Conference & The Midwest Regional Meeting of RESNA, September 16, 1988.
7. Rowley, B.A., "Management Concerns Related to Software," IEEE Engineering Management Conference, October 24-26, 1988.
8. Rowley, B.A., et. al., "Panel Discussion and Open Forum Concerning the Use of Rehabilitation Technology in Job Placement," Ohio Rehabilitation Association Conference," 2 Hrs, 1992.
9. Rowley, B.A., "Computers - Basic Knowledge for Survival - Turning On the Light," Ohio Rehabilitation Association Conference," 2 Hrs, 1992.

#### BOOKS AND CHAPTERS

1. Simmons, E., E. Litchi, S. Dwyer, B.A. Rowley, et. al. "Detection of Microparticles During Cardiopulmonary Bypass by Use of Electronic Devices," Mechanical Devices for Cardiopulmonary Assistance, Advances in Cardiology, Vol. 6, pp. 94-110, 1971.
2. Portnoy, W.M., ed., L.A. Akers, B.A. Rowley, and D.L. Vines. "Clinical Applications of Medical Electronics," The Texas Tech Foundation, 108 pages, May 1974.
3. Ramsey, J.D., B.A. Rowley, and M.D. Vaughn. "Occupational Safety and Health in Hospitals and Institutions," Occupational Safety and Health Handbook, Chapter 18, H.F. Lund, ed., McGraw-Hill Book Company, 1975.
4. Rowley, B.A. and W.B. Jarzembski, ed. "Proceedings: 1978 Workshop on Computer Laboratory Health Care Resources," Texas Tech University Health Sciences Center, 316 pages, 1978.
5. Rowley, B.A. and D.E. Anderson. "Evaluation of a Computerized Review of Patient Physical Systems," Computers in Clinical and Biomedical Engineering, Quest Publishing Company, pp. 70-76, 1983.
6. Rowley, B.A. "Home Modification Design," Standard Handbook of Biomedical Engineering & Design. Chapter 34, pp. 34.1-34.20, 2003.

#### ABSTRACTS AND UNREVIEWED PUBLICATIONS:

1. Rowley, B.A. "A Study of the Micromodule Pacemaker Receiver." Master's Thesis, University of Missouri, 1963.
2. Wolcott, L.E., B.A. Rowley, et. al., "Treatment of Ischemic Skin Ulcers with Low Intensity Direct Current," 62nd Annual Meeting Southern Med Assoc, 1968.
3. Purdy, A.H., B.A. Rowley, et. al., "Health Screening - Transduction Problems and Solutions," 6th Ann. Rocky Mountain Bioengineering Symp, p. 28, 1969.
4. Rowley, B.A., et. al., "Pulse Wave Timer," Seventh Annual Meeting Society of Engineering Sciences, St. Louis, Missouri, 1969.
5. Wheeler, P.C., L.E. Wolcott, H.M. Hardwick, and B.A. Rowley, "Neural Influence on Tissue Regeneration During Therapeutic Regimen of Applied Low Intensity Direct Current: Findings and Theory," Proc. Neuroelectric Conference, 1969.
6. Simmons, E., B.A. Rowley, et. al., "Detection of Microbubbles by Electronic

- Methods," 5th Annual Meeting of AAMI, Boston, Massachusetts, 1970.
7. Rowley, B.A., "Electrical Current Effects on E. coli Growth Rates," Ph.D. Thesis, University of Missouri, 1970.
  8. Rowley, B.A. and R.L. Wallace, "Remote Medical Care Facilities," 7th Annual Meeting AAMI, 1972.
  9. Anderson, D. and B.A. Rowley, "Blind Spot Analysis Using An Automated Visual Sensitivity Testing Device," Proc. 11th Annual Rocky Mountain Bioengineering Symposium, 11:7-8, 1974.
  10. Rowley, B.A., J.M. McKenna, and L.E. Wolcott, "The Use of Low Level Electrical Current for Enhancement of Tissue Healing," Proc. 11th Annual Rocky Mountain Bioengineering Symposium, 11:111-14, 1974.
  11. Rowley, B.A., et. al., "Investigation of the Effects of Low Intensity Electrical Currents on Wound Infection and Healing," NTIS, AD783518, 30 pages, 1974.
  12. Vines, D.L., K. Sattawhite, B.A. Rowley, "Teaching Computer Hardware Aspects to Medical Personnel," Region 5 IEEE Conference/Biomath Conference, Houston, Texas, April 1975.
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  16. Kim, H.W., B.A. Rowley, M. Feola, L.A. Roberts, "Effects of Stroma-Free Hemoglobin on an Isolated Perfused Rabbit Interventricular Septum," Proc. Federation of American Societies for Experimental Biology (FASEB) Annual Meeting, p. 765, March 1983.
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  18. Reynolds, D.B., B.A. Rowley, "Undergraduate Degree in Biomedical Engineering: the Wright Approach to Employment," ASEE Ann. Conf. Proc., pp 952-955, 1985.
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  20. Rowley, B.A., "RPM for Accessing Large Vocabulary Files," Proc. 10th Ann. Conf. on Rehabilitation Engineering, pp 165-167, 1987.
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24. Rowley, B.A., "Students, Senior Design and the Disabled - Reality," Biomedical Engineering Society Conference 1994, #316, Oct. 15, 1994.
25. Rowley, B.A., "Educating the Rehabilitation Engineer as a Service Provider," RESNA '95 Annual Conference, 1995.

Revised March 2006