

# Fred L. Wilson

## Vita

### PRESENT POSITION

Teaching Astronomy in ASU's Department of Physics and Geological Sciences

### EDUCATION AND DEGREES

BA in Physics and in Mathematics (double major), Murray State University, Murray, KY—1959

Ph.D. in Nuclear Physics, University of Kansas, Lawrence, Kansas—1964

### PROFESSIONAL EXPERIENCE

Adjunct, Department of Physics and Geological Sciences, Angelo State University, teaching Physics, Astronomy. Developed several courses for Blackboard online learning. Certified in QM and have completed several online-learning courses

Visiting Assistant Professor, Department of Physics and Geological Sciences, Angelo State University, teaching Physics, Astronomy, and Geomorphology

Adjunct Professor, Southern Illinois University, Carbondale. Teaching Managerial research and reporting, and also Technical Communication for SIU at Goodfellow Air Force Base, San Angelo, TX. 1998-2018

Member, Civilian Research and Development Foundation Physical Science Review Panel for Ukraine (evaluating and making recommendations on proposals for cooperative research projects between U.S. and former Soviet scientists and engineers.) 2001

Director, TexPREP program at Angelo State University; a program to recruit and give an intense math, engineering, physics, and computer experience and development to minority youth 6<sup>th</sup>– 11<sup>th</sup> grades., 2000-2003

Adjunct Professor in the Physics Department, Angelo State University 1999-2004 teaching undergraduate physics

Chair, Division of Humanities, College of Liberal Arts, July 1993 to 1996. The Humanities Division consists of four departments: History, Fine Arts, Philosophy, and Science, Technology, and Society (STS). It has 29 faculty members. Taught courses in modern weapons and arms control, public policy related to weapons of mass destruction. Taught physics courses as needed for the Department of Physics.

Chair, Department of Science, Technology and Society, December 1992-June 1993. Professor, Science, Technology and Society -- September, 1981 to 1996 (now emeritus)

Joint appointment with National Technical Institute for the Deaf (NTID) at RIT and the College of Liberal Arts, RIT. Teaching courses to hearing and deaf students in the area of Science, Technology and Society. September, 1979 to September, 1981

Professor, NTID Division of General Studies. Responsible for teaching general education courses in Science, Technology and Society to deaf and hearing RIT students, and curriculum development for deaf students in general education. October, 1978 to September, 1979

Director, Management Information Project for NTID. Responsible for developing a systems approach to resolving NTID's information problems in coordination with the total RIT effort. January, 1978 to October, 1978

Director, Division of Management Services, NTID. Led the move to make the Office of Program Analysis of NTID a division; responsible for coordinating educational and financial planning, providing data processing, institutional research, employment research, personnel records, and all systems development May, 1977 to January, 1978

Director, Office for Program Analysis, NTID: provided the data collection, analysis, and processing arm for the Dean, NTID; instituted an automated scheduling program for NTID students; set up NTID's first program in institutional research. Named adjunct professor, College of General Studies (currently College of Liberal Arts), RIT in 1976 (continuing until formal joint appointment in 1978)

Administrative Assistant to the Dean, NTID: responsible for preparing quarterly reports for the Department of Health, Education, and Welfare, and annual NTID report, and for narrative descriptions for the NTID budget submission to DHEW, the Office of Management and Budget (OMB), and Congress. January, 1972 to September, 1974

Department Chair for Support Services for the College of Science of RIT (formerly titled "Educational Specialist"), representing NTID's interests in that college. Taught physics courses and coordinated support services for deaf students taking courses in the College of Science. Joined RIT with rank of Associate Professor. June, 1969 to January, 1972.

## Other Professional Experience

Esso Production Research Center, Houston Texas. Studied the physics of ocean waves and the ocean surface; storm wave analysis; analysis of the state-of-the-art of measurement of ocean versus cost. November, 1966 to June, 1969

U.S. Army Foreign Science and Technology Center, Division of Missiles and Space, Washington, D.C. Responsible for assessment of U.S. and Soviet missile defense systems technology. Analysis of nuclear weapons systems, defense systems, and technical intelligence. Awarded U.S. Army Commendation Medal for service as a nuclear weapons specialist in November, 1964 to November, 1966. Rank: Captain

## SPECIAL ACCOMPLISHMENTS

Certified in Quality Matters; Extensive experience in Blackboard teaching platform.

Professional Development Leave, March-June 1989; RIT Eisenhart Award for Outstanding Teaching (1986); Professional Recognition Award of the Association on Handicapped Student Service Programs in Post-Secondary Education, for outstanding efforts toward making higher education accessible to disabled students (1983); Promoted to Professor (1977); Tenured in RIT (1975)

## SPECIAL SERVICE TO RIT

Chair, Advisory Committee on Strategic Planning, College of Engineering of RIT, (1993 to 1995) Task Force on Transfer of CCE Programs (1989)

RIT National Alumni Council (1988-1991)

Chair of Faculty Council (1987-88); Past Chair, and Executive Committee (1988-89)

Provost's Special Committee to Evaluate Tenure Policy (1987-88)

Member of Policy Council Steering Committee (1987-88)

Member of Policy Council (1987-88)

Member, Ad Hoc Committee to determine salary increment process (1987)

Member of Institute Committee to evaluate tenure process at RIT (1987-88)

Member of Faculty Council (1986-89); chair of Faculty Salaries and Benefits Committee (1986-7)

Part-time Professor, Department of Physics, RIT (1986 to present)

Member, Institute Grievance Committee (1983-86); chair of committee (1986)

Member, Priorities and Objectives Committee (1984)

Member of review committee for RIT's graduate program in Statistics (1983; 1978)

Faculty advisor to RIT Outing Club (1981-82)

Institute Energy Committee (1980-81)

Adjunct Professor, College of Continuing Education (CCE), RIT, teaching courses in Science, Technology and Society (1979 to present)

Institute Graduate Study Council (1978-79)

Member of the Policy Advisory Board on Institute Computing, RIT (1978-79)

Member of Review Committee on graduate programs in Engineering (1978)

Member of Financial Systems Task Force (1978)

Committee on Evaluation of Professional Performance for NTID (1978)

Member of the Economic Study Task Force of RIT's Economic Study Commission (1977)

NTID Tenure Committees (1976-78)

Advisor to the Academic Affairs Committee, NTID Student Congress (1976)

Chair, Special Task Force on Scheduling and Time in Learning (1976)

Member of the Curriculum Design Committee for Computer Science (1975)

Chair, Standing Research Committee of NTID (1973-76)

## COMMITTEES AND ACTIVITIES OF THE COLLEGE OF LIBERAL ARTS

College Administrative Committee (1993–) College Curriculum Committee (1993– ) College Promotion Committee (1993–)

College Tenure Committee (1985-6; 86-7; chair, 1986-7)

Chair, Department of Science, Technology and Society (12/1/92-6/30/93)

Advisor for students in Technology and Liberal Studies Program (1985-present)

Academic Committee Chair, Science, Technology and Society (1983-85)

Academic Advisor for the College (1982-4)

College Curriculum Committee (1981-4)

College Colloquium Committee (1981-3)

College Research Committee (1980-3)

College Computing Committee (1981-1996)

## Physics and Geosciences Courses Taught

### Angelo State University:

Astronomy, physical science, university physics, dynamics, digital electronics, physical science for education majors, Geomorphology, Fundamentals of Astronomy, Solar System Astronomy, Stellar Astronomy Lab, Solar System Astronomy Lab, General Studies: Science and Human Values

### Rochester Institute of Technology:

University Physics, College Physics, Foundations of Scientific Thinking, Modern Physics, Nuclear Physics, Manual Communication for Social Workers, Science as a Humanity, Technology in American History, Mechanical Universe (Distance Learning Format), Oceanus (Distance Learning Format)

## COURSES TAUGHT IN SCIENCE, TECHNOLOGY AND SOCIETY

Science, Technology and Values, Science and Technology Policy, Face of the Land, Energy and the Environment, Social Consequences of Technology, Modern Weapons Technology and Arms Control Problems(classroom and distance learning formats), Special Topics: Strategic Defense Initiative, History of Science, Time, Space and Reality, Introduction to Environmental Studies, Science and Technology in

China since Mao Zedong; Vietnam and Technowar

## PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

American Physical Society (APS) – member of the society’s Committee on International Scientific Affairs

– Vice Chair, 1995, Chair, 1996 ; New York State Section, APS (Secretary-Treasurer, 1979-1996); Society of the Sigma Xi; Society of Physics Students, Sigma Pi Sigma. As CISA chair served on numerous activities related to China; represented APA at IUPAP meeting to make recommendations for support of physics in the newly independent Eastern European States (meeting in Vienna). Attended the World Congress of Physical Societies (1995) in Tokyo representing CISA.

Frequent proposal reviewer for U.S. Civilian Research and Development Foundation (proposals from Ukraine, and from states that formed the Former Soviet Union.)

Visiting Foreign Professor, Shanghai, University of Technology, and Shazhou Vocational Institute of Technology, Jiangsu Province, China (1989)

Visiting Foreign Professor, Shanghai, University of Technology, China (1987)

Teacher, “Science and the Future”, Center for Science and Technology at RIT (for junior high students from 11 school districts in Monroe County)

Visiting Foreign Professor, Shanghai, University of Technology, People’s Republic of China (1987)

Review Board Member, *Journal of College Science Teaching*, 1987 to present

Presented paper on “The Contradictory Faces of Physics” for the Philosophy Colloquium (Fall, 1986)

Presenter at Eighth Annual Conference of the Association on Handicapped Student Service Programs in Post-Secondary Education, Atlanta, GA, July 24-27, 1985

Chair and organizer of session on “Physics and Public Policy: Arms and Security,” at the Annual Meeting of the American Physical Society in Toronto, Ontario, January 21, 1985

Presenter at Seventh Annual Conference of the Association on Handicapped Student Service Programs in Post-Secondary Education, Kansas City, MO, July 31-August 2, 1984

Invited Speaker for American Association of Physics Teachers, New York State Section, meeting at the U.S. Military Academy, West Point, NY on “Teaching About Physics and Nuclear Weapons”, April 7, 1984

Workshop leader for the Chaplains of the 98th Infantry Division, USAR, on “The Nuclear Arms Race,”

April 10-11, 1984

Presenter at Sixth Annual Conference of the Association on Handicapped Student Service Programs in Post-Secondary Education, Oakland, CA, July 20-23, 1983; “Modification of Instruction: How to Make it Happen”

Editor of the Proceedings of the Sixth Annual AHSSPPE Conference, 1983

Presenter at Fifth Annual Conference of the Association on Handicapped Student Service Programs in Post-Secondary Education, Columbus, OH, July , 1982

Presenter at the 15th Symposium on Research and Utilization of Educational Media for Teaching the Deaf, March 29-31, 1982 at the University of Nebraska, Lincoln

Invited speaker at the Rehabilitation Medicine Division Seminar, Strong Memorial Hospital: “The Therapeutic Capabilities of American Sign Language,” May 11, 1979

## CONSULTANTSHIPS

Salamanca, NY School District, Ontario Hearing Society, Toronto, Canada; Gallaudet University, Washington, DC; James Madison University, Harrisonburg, VA; Community College of the Finger Lakes, Canandaigua, NY; City School District, Middletown, NY; Metropolitan Toronto (Canada) School Board; Montgomery County School District, Pennsylvania; Warren, Michigan Consolidated School District; Bergen County Special Education Unit, NJ; BOCES, Poughkeepsie, NY; BOCES, Elmira, NY; George Brown Technical College, Toronto, Ontario; Texas State Technical Institute, Waco, TX

## CIVIC AND COMMUNITY ACTIVITIES

Rochester Regional Library Council, member, Board of Trustees (1989-);  
Member, Board of Education, Pittsford, NY Central School District (1984-87; 87-90); president of board, 1987-88  
Monroe County School Boards Association; Executive Committee (1987-88); Steering Committee (1987-88); chair, Labor Relations Committee (1987-88)  
Member, Board of Cooperative Educational Services, BOCES, Monroe #1, Monroe County, NY (1983-88)  
Member, Environmental Board, Town of Pittsford, NY (1983-84)  
Chair, Subcommittee on Population and Enrollment, Citizen’s Committee on the Future of Pittsford Schools (1979-80)  
Member, Board of Management, SE Area YMCA (1978-81); chair of Health Fitness Committee  
First chair of the Board of the Monroe County Association for the Hearing Impaired of the Health Association of Monroe County, NY

## PUBLICATIONS AND WRITINGS

### Publications on Physics

"Fermi's Theory of Beta Decay," *American Journal of Physics*, Vol. 36, No. 12 (December, 1968), pp. 1150-1160

"Statistical Analysis of Thermal Shock in Disks (Flat Faces Insulated)," *Journal of Applied Physics*, Vol. 39, No. 3 (February 15, 1968), pp. 1403-1407

"Erickson Fluctuations in the Reaction  $S^{32}(d,p)S^{33}$ ," (with F. W. Prosser, Jr.), Paper Y14, *Bulletin of the American Physical Society*, Series II, Vol. 9, No. 6 (October 23, 1964), pp. 669

"On the Possible Existence of Four New States in  $Be^8$ ," (with F. W. Prosser, Jr.), *Nuclear Physics*, Vol. 54 (May, 1964), pp. 148-154

*Cross-Section Fluctuations in the Reaction  $S^{32}(d,p)S^{33}$ , for Deuteron Bombarding Energies from 0.8 to 3.0 MeV*, Thesis, University of Kansas, 1964

### Publications on Science and Technology Policy

"Teaching the Social Significance of Science in the Science Curriculum," *Journal of College Science Teaching*, Vol. 16 (May, 1987), pp. 507; 561

"Physics and Public Policy: Arms and Security," a paper presented at the Annual Meeting of the American Physical Society, Forum on Physics and Society, Toronto, Ontario, January 21, 1985

"Teaching on Physics and Nuclear Arms," invited paper, New York State Section, American Association of Physics Teachers, meeting at the United States Military Academy, West Point, New York, April 7, 1984

"Possible Soviet Countermeasures to U.S. Ballistic Missiles," *Defense Intelligence Digest*, 1967

### Publications on Educational Mainstreaming

"Building Bridging Programs That Work: The Nature of The Bridge," a paper presented at the Eighth Annual AHSSPPE meeting in Atlanta, GA, July 24-27, 1985. Published in the Proceedings of the Conference.

"Modification of Instruction: How to Make it Happen," a paper presented at the Sixth Annual AHSSPPE meeting in Oakland, CA, July 20-23, 1983. Published in the Proceedings of the Conference.

"The Role of Interpreters in Educational Settings: A Teacher's Perspective," a paper presented at the Seventh Annual AHSSPPE meeting in Kansas City, MO, August 2, 1984. Published in the Proceedings of the Conference.

"Strategies for Course Modification for Enhanced Accommodation of Nontraditional Learners," an invited paper for the premier issue of AHSSPPE, the Bulletin of the Association on Handicapped Student Services in Post-Secondary Education Programs, Vol. 1, (Winter, 1983), pp. 15-26.

"Course Modification Strategies That Really Work," a paper presented at the Fifth Annual AHSSPPE meeting in Columbus, OH, July, 1982. Published in the Handicapped Student Service Programs in Postsecondary Education: It Doesn't Cost, It Pays! Conference Proceedings, pp. 65-72.

"Energy and Environment: An Approach to Modeling that Breaks Barriers for the Hearing Impaired," American Annals of the Deaf, Vol. 127 (September, 1982), pp. 645-651.

"Helping Faculty to Manage Support Services in the Classroom," a paper presented at the Fourth Annual AHSSPPE meeting in Boston, MA, July, 1981. Published in The Accessible Institution of Higher Education: Opportunity, Challenge, and Response, Conference Proceedings, pp. 13-16.

"The Tutor/Notetaker as a Support Service for Deaf Students: Viewpoint of a Classroom Teacher," a paper presented at the Third Annual AHSSPPE meeting in Denver, CO, May 18- 21, 1981. Published in The Handicapped Student on College Campuses - Advocacy, Responsibility, and Education, Conference Proceedings, pp. 174-176.