

Stephen Riter, Ph.D., P.E.

Vice President for Information
Resources and Planning
University of Texas at El Paso
Administration Bldg. Rm. 310
El Paso, TX 79968-0510
(915) 747-5725
email: sriter@utep.edu

Home Address
836 Cherry Hill Lane
El Paso, TX 79912
(915) 581-9440

CURRENT

POSITION: Vice President for Information Resources and Planning
The University of Texas at El Paso

PROFESSIONAL

INTERESTS: Environmental Policy
Technology Transfer

EDUCATION:

B.A., Rice University, 1961
B.S.E.E., Rice University, 1962
M.S.E.E., The University of Houston, 1967
Ph.D. The University of Houston, 1968

APPOINTMENTS:

Provost and Vice President for Academic Affairs
The University of Texas at El Paso, 1996-2004
Interim Vice President for Academic Affairs,
The University of Texas at El Paso, 1995-1996
Dean, College of Engineering, The University of Texas at
El Paso, 1989-1995
Director, Center for Manufacturing and Materials Management,
The University of Texas at El Paso, 1993-1994
MacIntosh Murchison Professor of Engineering, The University
of Texas at El Paso, 1993-present
Director, Center for Environmental Resource Management, The
University of Texas at El Paso, 1989-1995
Chairman and Professor, Electrical Engineering, The University
of Texas at El Paso, 1980-1989
Chairman, Computer Science, The University of Texas at
El Paso, 1985-1989
Halliburton Professor, Electrical Engineering, Texas A&M
University, 1979-1980
Director, Texas Energy Extension Service, 1977-1979
Associate Director, Center for Energy and Mineral Resources,
Texas A&M University, 1976-1980

APPOINTMENTS:

(Cont'd) Professor, Electrical Engineering, Texas A&M University,
1976-1979
Associate Director, Center for Urban Programs, Texas A&M
University, 1974-1976
Associate Professor, Electrical Engineering, Texas A&M
University, 1972-1976
Assistant Professor, Electrical Engineering, Texas A&M
University, 1968-1972
Research Associate, The University of Houston, 1966-1968
Aerospace Technologist, NASA, Manned Space Center,
Houston, TX, 1964-1966
Lieutenant, U.S. Army, 1962-1964

**ADMINISTRATIVE
ASSIGNMENTS:**

Vice President for Information Resources and Planning, The University of Texas at El Paso: responsible for organizing new division combining information delivery, storage, collection and interpretation. These include Information Technology, Instructional Support Services, Center for Institutional Evaluation, Research and Planning, and University Library.

Provost and Vice President for Academic Affairs, The University of Texas at El Paso; responsible for teaching, research, academic support and outreach programs of the University. This requires supervision of six academic colleges, the graduate school, library and related support activities. The University is an urban public university with approximately 18,600 students, 800 faculty of whom 500 are full time and a major local public service mission; 1995-present.

Dean, College of Engineering, The University of Texas at El Paso; responsible for teaching and research programs of the College of Engineering. The College had five academic departments, 58 faculty, 1600 undergraduate students, 400 graduate students, an academic budget of \$4 million per year and external research support of \$10 million per year; 1989-1995.

Director, Center for Manufacturing and Materials Management, The University of Texas at El Paso; responsible for management of interdisciplinary manufacturing outreach program designed to link regional industry with university expertise and impact regional economic development; 1993-1994.

**ADMINISTRATIVE
ASSIGNMENTS:**

(Cont'd) Principal Investigator, Comprehensive Regional Center for Minorities in Math, Science and Engineering, The University of Texas at El Paso; responsible for a variety of pre-college programs to promote interest in scientific and technical fields and

raise capacity of local schools to prepare students to pursue such fields in college; 1991-1994.

Director, Center for Environmental Resource Management, The University of Texas at El Paso; responsible for establishing university-wide center to address environmental research and policy issues facing the southwest border region. The Center involves faculty from Engineering, Science, Liberal Arts and Nursing in multidisciplinary research and outreach programs; 1989-1995.

Chairman, Electrical Engineering Department and Computer Science Department, The University of Texas at El Paso responsible for teaching and research programs in electrical engineering and computer science. The departments had an instructional budget of over \$1.3 million per year, 1000 undergraduate students, 140 graduate students, 24 faculty and externally supported research of approximately \$600,000 per year; E.E. 1980-89; C.S. 1985-89.

Director, Texas Energy Extension Service; developed proposal for and managed the establishment of the Texas Energy Extension Service, one of ten Department of Energy funded pilot programs to test methods for providing energy conservation advice and assistance to small energy users in Texas. This entailed management of a program involving six universities and two state agencies for the Governor's Office of Energy Resources and funded at a level of \$1.8 million for two years; 1977-1979.

Associate Director, Center for Energy and Minerals Resources, Texas A&M University; responsible for the development of the Energy Advisory Service for Texas program, interdisciplinary conservation related research, energy policy research and liaison with other Texas universities and agencies involved in energy matters; 1976-1980.

**ADMINISTRATIVE
ASSIGNMENTS:
(Cont'd)**

Assistant Director, Center for Urban Programs, Texas A&M University; responsible for the development of an urban technology research program; secured support of approximately one half million dollars for projects involving faculty from Colleges of Liberal Arts, Business Administration and Architecture as well as other Departments in Engineering;

1974-1976.

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FUNDED RESEARCH:

National Science Foundation, Co-PI El Paso Math-Science Partnership, \$29,000,000, 2002-present

National Science Foundations, UTEP-A Model Institution for Excellence, \$12,500,000, 1995-present.

National Science Foundation, Co-PI El Paso Urban Systemic Initiative, \$15,000,000, 1994-1999.

Jet Propulsion Laboratory, CUESTA, \$280,000, 1992-1995.

U.S. Environmental Protection Agency, Environmental Research Center, \$2,000,000, 1993-1995.

National Science Foundation, Comprehensive Regional Center for Minorities in Math, Science and Engineering, \$4.6 million, 1991-1994.

Ford Foundation, Bi-National Water Resource Planning, \$337,000, 1991-1995.

Oak Ridge National Laboratories, Enclosed Space Detector, \$150,000, 1988-1990.

NASA Ames Research Center, An Assessment of Research Areas for Extension of the DI-MOD Project in the Americas, \$25,000, 1988-1989.

U.S. Army White Sands Missile Range, Meteorological Sensors for Remotely Piloted Vehicles, \$450,000, 1986-1990.

U.S. Department of Justice, Image Enhancement using Artificial Intelligence, \$250,000, 1985-1989.

**FUNDED RESEARCH:
(Cont'd)**

U.S. Department of Justice, Advanced Surveillance and Detection System, \$60,000, 1984-1985.

U.S. Energy Research and Development Administration, Energy Advisory Service for Texas, \$400,000, 1976-1978.

National Science Foundation, Urban Technology Systems,

\$150,000, 1976-1978

U. S. Department of Housing and Urban Affairs, Co-PI Texas Management Assistance Project, \$220,000, 1974-1976.

Law Enforcement Assistance Administration, Police Command and Control Systems, \$31,000, 1973-1974.

National Science Foundation, Underwater Acoustic Communication, \$46,000, 1969-1972.

***Principal Investigator unless otherwise indicated**

**UNIVERSITY
SERVICE:**

Have served on a wide variety of permanent and ad-hoc committees including search committees for Deans and Vice Presidents. Served as Chair of University Entrance Committee (1982-1985), Undergraduate Program Self Study for Southern Association Accreditation (1985-1986), and Chair for University and pre-college mathematics improvement initiatives (1992-1993).

**CONSULTING
EXPERIENCE:**

Consultant to numerous public and private organizations including AMF Tuboscope, Lawrence Berkeley Laboratories, Law Enforcement Assistance Administration, Texas Municipal League, Public Technology Inc., Public Management Systems Inc., KOBA Associates, Texas Instruments, Oceanography Int., U.S. Department of Energy, Rand Corp., Lockheed Electronics, Battelle Labs., Raytheon Inc., and the U.S. Office of Technology Assessment; 1967-present.

**SOCIETY
MEMBERSHIPS:**

Sigma Xi
Phi Kappa Phi
Eta Kappa Nu
Tau Beta Pi
Institute of Electrical and Electronics Engineers
American Society for Engineering Education
Texas Society of Professional Engineers
National Society of Professional Engineers

LICENSES: Registered Professional Engineer (Texas)

**PROFESSIONAL
SERVICE:**

Chairman, Board of directors, National Telecommunications Conference; 1970-1972.

Administrative Committee, IEEE Geoscience Electronics; 1972-1976.

Editor, IEEE Trans. On Geoscience Electronics, 1972-1976.

IEEE Aerospace and Electronic Systems Society; Board of Governors, 1974-1980.

IEEE Energy Committee; 1978-1982; Vice-Chairman; 1980-1982.

IEEE Regional Coordinator, West Texas and New Mexico; 1981-1984.

IEEE Region V Executive Committee; 1981-1984.

Associate Editor, IEEE Aerospace and Electronic Systems; 1983-1988.

Texas society of Professional Engineers; Executive Committee and Board of Directors; 1991-1995.

Chairman, Texas Deans of Engineering; 1991-1995.

Chairman, Educational Advisory Committee, Texas State Board of Registration for Professional Engineers, 1991-1995.

**PROFESSIONAL
SERVICE:
(Cont'd)**

Executive Committee, Engineering Deans Council, American Society for Engineering Education; 1993-1995.

Policy Advisory Committee, Houston Advanced Research Center, 1993-2002.

Texas Chief Academic Officers, Chair, 2003-present

**PUBLIC
SERVICE:**

El Paso Symphony Orchestra, Board member; 1996-present and Chair; 2001-2002

El Paso Water Utility Public Service Board; 1996-2000

El Paso Public Utility Regulatory Board; 1984-1992
Chairman, 1988-1992

Texas Interagency Task force on Border Health and Environmental
Issues, 1989-1992.

Water Conservation Committee, El Paso Public Service Board,
1989-1990.

Policy Advisory Committee, Texas Dept. of Community Affairs,
1979-1982.

University Coordinating Committee, Texas Energy and Natural
Resources Advisory Council, 1975-1980.

Energy Conservation Committee, City of El Paso, 1980-1983.

LISTINGS:

Who's Who in America
American Men of Science
Who's Who in the Southwest
Who's Who in Technology Today

HONORS:

Halliburton Professor, Texas A&M University, 1979-1980.

Conquistador Award, City of El Paso, 1992.

Texas Society of Professional Engineers, West Texas Engineer of
The Year, 1992

HONORS:

(Cont'd)

MacIntosh Murchison Professor, The University of Texas at El
Paso, 1993-present.

PUBLICATIONS:

“Practical Phase Reference Detectors for Fully Modulated PSK
Signals,” Eascon 69 Suppl. To IEEE Trans. On Aerospace &
Electronic Systems, Vol. AES-4, S-1, pp. 198-203, November,
1968.

“An Optimum Phase Reference Detector for Fully Modulated PSK
Signals,” IEEE Trans. On Aerospace & Electronic Systems, Vol.
AES-5, pp. 627-631, July, 1969.

“Threshold Performance of Suboptimum PPM Receivers,” IEEE
Trans. On Aerospace & Electronic Systems, Vol. AES-6, No. 2,
pp. 257-259, March, 1970

“Pulse Position Modulation Communications via the Underwater Acoustic Channel,” SWIEE Conf., Paper No. 224, Dallas, Texas, April, 1970.

“Underwater, Acoustic Telemetry”, Offshore technology Conf., Paper No. 1174, Houston, Texas, 1970.

“Design Considerations for a PPM Underwater Acoustic Communication System,” Proceedings of 1971 IEEE Int’l. Conf. On Engineering in an Ocean Environment, Panama City, Florida, September, 1970.

“Dereverberation by Linear Systems Techniques,” IEEE Trans. On Geoscience Electronics, Vol. GE-9, No. 1, pp. 28-31, January, 1971.

“Noise and Its Effects on Communications,” Proc of the 1971 IEEE EMC Symposium, June, 1971.

“PPM Acoustic Communication,” IEEE Trans. On Audio & Acoustics, AU-19, No. 2, pp. 166-173, June, 1971.

“On Zero Crossing Shifts as a Detection Criteria,” J. Acoustical Soc. Amer., September, 1971.

PUBLICATIONS:
(Cont’d)

“The Performance of Fadding FSK Telemetry Systems with Bandpass Limiters,” Proc. 1971 IEEE FEC, pp. 284-289, October, 1971.

“On Underwater Electroacoustic Measurements,” Marine Technology Society Journal, Vol. 6, No. 2, p. 59, April, 1972.

“One Present and Future Civil Uses of Underwater Sound,” Marine Technology Society Journal, Vol. 6, No. 2, p. 61, April, 1972.

“Fadding FSK TM Systems with Bandpass Limiters,” IEEE Trans. On Communications, Vol. Com. 20, No. 3, pp. 403-406, June, 1972.

“ERTS Experiments,” IEEE Trans. On Geoscience Electronics, Vol. GE-11, No. 1, January, 1973.

“The Use of a Level Crossing Detector in a Digital Underwater Acoustic Communication System,” Proceedings of the 1972 IEEE

National Telecommunications Conference, IEEE pub. No. 72CHD-601-S-NTC, December, 1972.

“Automatic Vehicle Monitoring Systems,” TEES Technical Bulletin, No. 73-2 pp. 11-15, April, 1973.

“The Effect of Background Noise on Phase Ranging Measurement in Urban Vehicle Monitoring Systems.” IEEE Trans. On Vehicular Technology, Vol. VT-2, pp. 11-15, April, 1973.

“Speeding the Deployment of Emergency Vehicles,” IEEE Spectrum, Vol. 10, No. 121, pp. 56-62, December, 1973.

“AVM-Current Trends and Requirements,” Proceedings Carnahan Crime Countermeasures Conference, Lexington, Kentucky, pp. 188-191, April, 1974.

“Telecommunications in Urban Public Services,” IEEE Trans. On Communications, Vol. Com.-23, No. 1, pp. 15-20, January, 1975.

PUBLICATIONS:
(Cont'd)

An Evaluation of the Benefits of Automated Command and Control Systems,” Proceedings Carnahan Crime Countermeasures Conference, Lexington, Kentucky, May, 1975.

“Comments on S.3145,” Hearing Before the Subcommittee on Energy and Water Resources Committee on Insular Affairs, U.S. Senate, pp. 90-99, April 30, 1976, U.S. Govt. Printing Office, Washington, D.C.

“The Energy Advisory Service for Texas,” Proceedings of Workshop on Energy Extension Services, Lawrence Berkeley Laboratory, LBL-5236, pp. 156-161, May, 1977.

“Automatic Vehicle Location,” IEEE Transactions on Vehicular Technology, Vol. VT-25, No. 1, pp. 7-11, February, 1977.

“An Approach to Needs Analysis in Municipal Organizations,” Public Affairs Forum, Vol. VI, No. 2, pp. 17-21, December, 1977.

“Energy advisory Service for Texas,” Selected Papers on Energy Extension, Energy Research and Development Administration, Washington, D.C., June, 1978.

“Review of Communications Systems Principles,” IEEE Communications, Vol. 16, No. 6, pp. 65-66, November, 1978.

“Energy Technology Transfer for Industry,” Proceedings of Conference on Industrial Energy Conservation, Texas Industrial Commission, pp. 670-673, April, 1979.

“The Texas Energy Extension Service Pilot Program,” Proceedings of the 87th ASEE Annual Convention, ASEE/AC-2, pp. 15-19, June, 1979.

“Organization and Evaluation of the Texas Energy Extension Service.” Energy Communications, Vol. 6, No. 1, pp. 45-51, January, 1980.

“A Review of Electronic Meetings: Technical Alternatives and Social Choices,” IEEE Communications, Vol. 19, No. 4, pp. 51-53, July, 1981.

PUBLICATIONS:
(Cont'd)

“Energy Information Resources,” IEEE Trans. on Ed., Vol. 24, No. 3, pp. 252-255, August, 1981.

“A Review of Automatic Vehicle Locating Systems,” IEEE Spectrum, Vol. 19, No. 5, pp. 85-86, May, 1982.

“An Evaluation of the use of Low Level Light Television for Intrusion Control Along an International Boundary,” Proc. 1985 Carnahan Conference on Security Technology, pp. 89-92, May, 1985.

“An Automated Imaging System for Border Control,” Proc. 1986 Carnahan Int. Conference on Security Technology, Gothenburg, Sweden, pp. 169-173, August, 1986.

“Receiver Bandwidth for Optical Fiber PPM Communications,” IEEE Trans. on Communications, Vol. Com. 34, No. 11, pp. 1165-1167, November, 1986.

“Security Applications of Low Light Level Television,” Advances in Security Technology, edited by R.R. Deming, pp. 135-143, Butterworth Publishing Co., Boston, Mass., 1987.

“Security Applications of Computer Motion Detection,” SPIE Proceedings, Vol. 786, pp. 512-517, May, 1987.

“A Comparison of Four Motion Detection Techniques,” Optical Engineering, Vol. 27, No. 7, pp. 524-527, June, 1988.

“Computer Detection and Tracking of Moving People in Television Images,” Proc. 1988 IEEE Int. Conf. On Systems, Man and Cybernetics, pp. 1013-1016, August, 1988.

“Computer Detection and Tracking of Multiple Objects in Television Images,” Proceedings U.S. Army Symposium on AI Research for Exploitation of the Battlefield Environment, pp. 231-241, November, 1988.

“Automated Tracking of Multiple Objects,” SPIE Proceedings, Vol. 1095, pp. 106-114, March, 1989.

PUBLICATIONS:
(Cont'd)

“An Enclosed Space Detector Based Upon the Ballistocardiogram,” Proc. 1989 Carnahan International Conference on Security Technology, pp. 133-136, October, 1989.