

VITA FOR SHARON L. ROSELL

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TEACHING EXPERIENCE:

Assistant Professor of Physics, Central Washington University, 1989 - present. Teach both lower and upper-division physics and astronomy courses. Have also taught engineering and math courses.

Instructor, Tacoma Community College, Tacoma, Washington, 1979 - 1989. Taught physics, mathematics and chemistry courses on a part-time basis.

Instructor, Green River Community College, Auburn, Washington, 1983-1986. Taught physics and chemistry courses on a part-time basis. Was full-time in 1984-1985.

Instructor, Pierce College, Steilacoom, Washington, 1976-1979, and fall quarter, 1982. Taught chemistry, physical science for fire protection, and engineering courses on a part-time basis. Also served as chemistry laboratory technician 1976-1977 and fall, 1978.

Teacher, St. Mary's Adult High School, Fort Lewis, Washington, May, 1979-February, 1980. Taught physical science, biology and mathematics.

Instructor, Olympic College, Bremerton, Washington, September, 1977-August, 1978. Taught mathematics and chemistry courses on a part-time basis.

Associate Instructor in Chemistry, Indiana University, Bloomington, Indiana, 1973-1974.

Teaching Assistant in Chemistry, Marshall University, Huntington, West Virginia, January-August, 1973

OTHER RELATED SCIENTIFIC EXPERIENCE:

Lab Assistant, Columbia Basin Ground Water Study, Central Washington University, Ellensburg, Washington, July – September 2008. Did ion chromatography analysis on ground water samples under Dr. Carey Gazis of the Geology Department, and Dr. Dmitri Vlassopoulos of S.S. Papadopoulos & Associates.

Test Question Writer for the Educational Testing Service, Princeton, New Jersey, 2002-present. Write test questions in physics and general science for Praxis and Major Field Tests.

Graduate Research, Nuclear Physics Laboratory, University of Washington, Seattle, Washington, September, 1986-March, 1988. Did research involving the polarization of protons in (^3He , p) reactions under Dr. William G. Weitkamp.

Booster Project Staff Member, Nuclear Physics Laboratory, University of Washington, Seattle, Washington, September, 1986-March, 1988. Helped to build a prototype gas chromatograph for testing the gases in the cryogenic system of a superconducting booster that was being built on a tandem Van de Graaff accelerator under Douglas Will.

Desk Attendant, Chemistry Library, Indiana University, Bloomington, Indiana, May-December, 1974. Included reference work.

Graduate Research, Chemistry Department, Indiana University, Bloomington, Indiana, October-December, 1973. Did research involving the emission spectrum of propynal in the region of 820 \AA under Dr. Charles Parmenter.

Graduate Research, Chemistry Department, Marshall University, Huntington, West Virginia, February-May, 1973. Did research involving ultraviolet absorption studies of various pyridine monocarboxylic acids in pure water to pure alcohol mixtures under Dr. John Larson.

Research Assistant, Physics Department, University of Maryland, College Park, Maryland, February-April, 1971. Did research investigating critical point anomalies in binary liquid phase transitions by means of laser light scattering under Dr. Carroll O. Alley, Jr.

Research Assistant, Institute for Molecular Physics, University of Maryland, August-November, 1970. Did research involving aurora and other atmospheric data, with special emphasis on the 3600μ line in the upper atmosphere under Dr. William Benesch.

CSUI Honors Student, Argonne National Laboratory, Argonne, Illinois. February-May, 1970. Did research involving studies of crystal growth and crystal structure analysis using X-ray diffraction techniques under Dr. Jack Williams.

National Science Foundation-Undergraduate Research Participation Program in Chemistry, Oklahoma State University, Stillwater, Oklahoma, June-August, 1969. Did research involving ultrasonic absorption studies of the lanthanide picolines under Dr. Neil Purdie.

Research Assistant in Chemistry, University of Colorado Denver Center, September, 1968-February, 1969. Did Extended Hückel Theory Calculations on various substituted diboranes and on pentaborane under Dr. Dennis Williams.

National Science Foundation-Undergraduate Research Participation Program in Chemistry, University of Colorado, Boulder, Colorado, June-August, 1968. Did research involving using NMR spectroscopy in a structural study of ethoxydecaborane-14 under Dr. Arlan D. Norman.

Research Assistant in Chemistry, Loretto Heights College, Denver, Colorado, August, 1966-May, 1968. Did research involving finding the infrared stretching frequency and the enthalpy of complexation for a group of organic bases in cyclohexane under Sr. Alonza Smith.

EDUCATION:

Master of Science (Physics), University of Washington, Seattle, Washington, March, 1988.

Master of Science in Education, Indiana University, Bloomington, Indiana, August 30, 1977. Coursework included 16 semester hours in graduate level chemistry courses.

Graduate Study in Chemistry, Marshall University, Huntington, West Virginia, January-August, 1973.

Bachelor of Arts (Chemistry), Loretto Heights College, Denver, Colorado, May 16, 1970. Coursework included 27 semester hours in physics and 24 hours in mathematics.

PUBLICATIONS:

Weitkamp, W.G., Rosell, S.L., et al, Polarization of Protons from the $^{59}\text{Co}(^3\text{He},p)$ Reaction. Nuclear Physics Laboratory Annual Report, University of Washington, 32-33, 1988.

Storm, D.W., Rosell, S.L., et al, Construction of the Superconducting Booster Accelerator. Nuclear Physics Laboratory Annual Report, University of Washington, 61-62, 1987.

Weitkamp, W.G., Rosell, S.L., et al, Polarization of Protons from the $(^3\text{He},p)$. Nuclear Physics Laboratory Annual Report, University of Washington, 41-42, 1987.

Norman, Arlan D. and Rosell, Sharon L., Evidence for Terminal Ethoxy Group Substitution in Ethoxydecaborane-14. Inorganic Chemistry 8:2818-2820, 1969.

TALKS:

"Enthalpy Values of Complexation of Phenol with a Group of Organic Bases in Cyclohexane." Meeting in Miniature of the American Chemical Society, Colorado State University, Fort Collins, Colorado, May 4, 1968.

"Extended Hückel Theory Calculations on Possible Derivatives of Diborane." Meeting in Miniature of the American Chemical Society, Colorado State College, Greeley, Colorado, April 26, 1968.

"Polarized Protons from the $^{59}\text{Co}(\text{}^3\text{He}, \text{p})$ Reaction," with W.G. Weitkamp et al. 7th International Conference on Polarization Processes in Nuclear Physics, Paris, France, July, 1990.

"Can You See A Song," A Workshop for Middle-School Girls." AAPT-Washington Section, Washington State University, Pullman, Washington, October 29, 1994.

"Adventures of a Successful Society of Physics Students Chapter." AAPT-Washington Section, North Seattle Community College, Seattle, Washington, October 21, 1995.

"Can You See A Song," a Workshop for Middle-School Girls." National Summer Meeting of AAPT, University of Maryland, College Park, Maryland, August, 1996.

"A 3-2 Program for Students Double-Majoring in Physics and Engineering." National Summer Meeting of AAPT, University of Denver, Denver, Colorado, August 15, 1997.

"Grand Unification Theories: A Brief Discussion of the Theories of Everything," given as a poster by my advisee Greg Engleman. Undergraduate Research Symposium, Central Washington University, Ellensburg, Washington, May 16, 1998.

"Should General Physics Labs Be Open or Closed?" National Summer Meeting of AAPT, University of Nebraska, Lincoln, Nebraska, August 5, 1998.

"What can an active SPS chapter do for your school?" AAPT-Washington Section, Seattle Pacific University, Seattle, Washington, October 10, 1998.

"Twistors & Twistor Space: A Unifying Theory Of Physics," given as a poster by my advisee Justin Stambaugh. Undergraduate Research Symposium, Central Washington University, Ellensburg, Washington, May 8, 1999.

"Einstein's 'Annus Mirabilis.'", National Summer Meeting of AAPT, Trinity University, San Antonio, Texas, August 7, 1999.

"Einstein's 'Annus Mirabilis,'" AAPT-Washington Section, Central Washington University, October 3, 2000.

"It's an Established Fact: The Sun Is Made of Iron," National Summer Meeting of AAPT, Rochester, New York, July 24, 2001.

"Using Spreadsheets in Introductory Statistical Mechanics," National Summer Meeting of AAPT, Boise State University, Boise, Idaho, August 5, 2002.

"It's an Established Fact: The Sun Is Made of Iron," AAPT- Washington Section, Eastern University, Cheney, Washington, October 12, 2003.

"Bose-Einstein condensates use in atom lasers," given as a poster by my advisee Johnathan Swab. Symposium on Undergraduate Research & Creative Expression, Central Washington University, May 20, 2004.

"2005 World Year of Physics in Zone 17," invited poster, The 2004 Quadrennial Congress of Sigma Pi Sigma, University of New Mexico, Albuquerque New Mexico, October 15, 2004.

"Einstein's Annus Mirabilis, 1905," Natural Science Seminar, Central Washington University, January 14, 2005.

"Using BlackBoard in an Introductory Algebra-based Physics Course," National Summer Meeting of AAPT, Greensboro, North Carolina, July 30, 2007.

"Electronic Realization of Chaotic Systems," given as a poster by Society of Physics (which I advise) Students Christopher Parker and Jeffrey Leiseth at the 10th Annual Meeting of the Northwest Section of APS, Portland, Oregon May 16, 2008.

"Atoms are Fictions of the Chemists," National Summer Meeting of AAPT, Portland, Oregon, July 19, 2010.

PROFESSIONAL AFFILIATIONS:

American Association of Physics Teachers

American Physical Society
Division of Physics in Society
Division of Particles and Fields

American Chemical Society
Division of Chemical Education
Division of the History of Chemistry

Affiliate Member of the Union of Pure and Applied Chemistry

Sigma Pi Sigma National Physics Honor Society

Iota Sigma Pi, National Chemistry Honorary Sorority

OFFICES HELD:

American Association of Physics Teachers-Washington Section
Committee on Physics Two-Year College Representative, 1986-1987
President-elect, 1987-1988, 1994-1995
President, 1988-1989, 1995-1996
Past-President, 1989-1990, 1996-1997

Pacific Northwest Association for College Physics
Board of Directors, 1997-1999, 2001-present
Treasurer, 2002-present
President 2009-present

Society of Physics Students

Zone 17 Councilor, 1998-2004 (covers Washington State, Oregon,
northern Idaho and Alaska)

National Committee on Judging Research and Outreach Awards, 2000-
2001, 2003 - 2005.

National Committee on Sigma Pi Sigma, 2004 - 2005.

National Nominating Committee, 2005 – 2007, 2010-present

American Physical Society-Northwest Section
Nominating Committee, 2005

CENTRAL WASHINGTON UNIVERSITY SERVICE:

Faculty Senate, 1992-1998 Senator, 2006-2007, 2008-present Alternate
Code Committee, 1992-1993
Public Affairs Committee, 1998-2002
Parking Violations Appeals Board, March, 1996-2002
Pre-Engineering Advisor, 1997- 2006
Physics Major's and Minor's Advisor, 1992-present
Advisor for the Society of Physics Students, 1993-1998, 2000-present
Library Advisory Committee, 2002-2005
General Education Committee, 2003-present

BIOGRAPHICAL CITATIONS:

Have references in many editions of the following Marquis Publications:

Who's Who in America

Who's Who in the World

Who's Who in Science and Engineering

Who's Who in American Education

Who's Who of American Women

Who's Who in the West

Who's Who of Emerging Leaders in America

Included in:

Northwest Women in Science, Women Making a Difference, A Role Model Guidebook,
published by NORCUS-The Northwest College and University Association for Science,
1992

AWARDS:

Women's Achievement Award, February 17, 2000, given by the Central Washington University Center for Student Empowerment for helping women succeed.

The Central Washington Section of the Society of Physics Students that I advise has won national Outstanding Chapter Awards for the 1993-1994, 1994-1995, 1995-1996, 1996-1997, 1997-1998, 1998-1999, 1999-2000, 2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008, 2008-2009, and 2009-2010 school years, A Blake Lilly Outreach Award in 1997 and national Research Awards in 1996 and 2007. CWU students won national SPS Leadership Scholarships in 1994, 1997, and 2008. (Note: In the school years 1998-1999, and 1999-2000 Andy Piacsek was the advisor for SPS as I was serving on the National Council. I helped with the club those years.)

Distinguished Non-Tenure Track Faculty Teaching Award 2011