

CURRICULUM VITAE

NAME: Channon P. Price, II
BIRTH: June 1953 - Chicago, Illinois, U.S.A.
EDUCATION: B.S. California Institute of Technology, Physics, 1976
Ph.D. University of California, Santa Barbara, Physics, 1981

AWARDS:

2005 ASUAF Award for Outstanding Faculty Member of the Year
1999 Advising Center Award, Advisor of the Year
1999 ASUAF Award for Outstanding Faculty Member of the Year
1995 Teacher of the Year Award, College of Natural Sciences, University of Alaska
1986 NSF Fellowship, First Advanced Computing Institute, San Diego Supercomputer Center,
San Diego, California
1985 NSF Fellowship to Second International School for Space Simulations, Kapaa, Hawaii

TEACHING EXPERIENCE:

2008-Present Director, Honors Program, University of Alaska Fairbanks
2004-2006 Chair, Physics Department Undergraduate Curriculum Revision Committee
1997-2003 Member, Partners in Science
1995-2002 Member, POLARIS
1993-Present Associate Professor, Physics Department, University of Alaska Fairbanks
1988 Taught Honors section of PHYS 211
1987-1993 Assistant Professor, Physics Department, University of Alaska Fairbanks
1983-1984 Teaching Fellow, Physics Department, University of Alaska, Fairbanks
1982 Teaching Fellow, Physics Department, McMaster University, Hamilton, Ontario, Canada

ADVISING EXPERIENCE:

Advisor to over 80 Physics majors, including 57 graduates (22 have advanced degrees, including 15 Ph. D.'s); many have been double majors
Advisor to 16 of the last 21 students selected as the Outstanding Physics Student
Research mentor, two UAF Honors Program theses (Art Ellis, 1993; Denis Seletskiy, 2001)
Research mentor, three REU students
Chair, two master's committee (in Physics)
Member, six master's committees (five in Physics, one in Mathematics)
Chair, two doctoral committees (both in Physics; neither finished)
Member, nine doctoral committees (seven in Physics, one in Mathematics, one Interdisciplinary)
Mentor, American Indian Science and Engineering Society (1996-present)
Faculty Advisor, Society of Physics Students (1997-2005; 2006-present; the chapter has been recognized three times in that span by the national SPS organization as an Outstanding Chapter [top 10% nationally])
Faculty Member, Student Media Board; Faculty Advisor, KSUA (1994-present)

RESEARCH EXPERIENCE:

1985-1987 Research Associate, Institute for Physical Science and Technology, College Park, Maryland
1986 Participant and Physics Group leader, First Advanced Computing Institute, San Diego
Supercomputer Center, San Diego, California
1985 Participant, Second International School for Space Simulations, Kapaa, Hawaii
1983-1985 Research Associate, Geophysical Institute, University of Alaska, Fairbanks
1981-1983 Postdoctoral Fellow, Physics Department, McMaster University, Hamilton, Ontario, Canada
Over 20 articles in peer reviewed literature, and one book chapter
Over 30 scientific presentations

UNIVERSITY ACTIVITIES:

Chair, UAF Teaching Assistant Training Program Committee (2000-2002)
Member, Advanced Technology Panel, Arctic Regions Supercomputing Center oversight board (1999-2003)
Member, Program Review for Mathematical Sciences graduate program (1999-2000)
Member, Program Review for Geology/Geophysics graduate program (1996)
Chair, Chancellor's Advisory Committee for the Arctic Regions Supercomputing Center (1995-1999)
Member, Physics Department Ph. D. Comprehensive Examination Committee (1988-2006)
Member, UAF Faculty Senate Committee on Development, Assessment and Improvement (1988-present)

COURSES TAUGHT AT UNIVERSITY OF ALASKA:

- Phys 103-104 College Physics and associated lab
- Phys 113 Concepts of Physics
- Phys 211 General Physics and associated lab
- Phys 213 Elementary Modern Physics and associated lab
- Phys 275-276 Astronomy
- Phys 301 Introduction to Mathematical Physics
- Phys 311-312 Mechanics
- Phys 313 Thermodynamics and Statistical Physics
- Phys 331-332 Electricity and Magnetism
- Phys 411-412 Modern Physics
- Phys 621 Classical Mechanics
- Phys 622 Statistical Mechanics
- Phys 631-632 Electromagnetic Theory
- Phys 651-652 Quantum Mechanics

plus guest lectures in Physics, Geology, and Music courses

PROFESSIONAL AFFILIATIONS:

- Member, American Geophysical Union
- Member, American Physical Society

COMMUNITY SERVICE:

- Licensed Soccer Coach (AYSO E-license, 1999); FYSA volunteer coach (1999-2006; several indoor and outdoor championship teams)
- MATHCounts School Coach, Monroe Catholic Junior High School (2002-2007; coached two individual district champions, and three students to National competition; State coach at 2007 National competition)
- Judge, Alaska State High School Science Symposium (1997-2002)

PUBLICATIONS:

JOURNAL ARTICLES

1. Price, C.P. "Neutrino Bremsstrahlung from Quarks and the Cooling of Neutron Stars." *Phys. Rev. D* 22: 1910-1914 (1980).
2. Price, C.P., D. Swift, and L.C. Lee. "Numerical Simulation of Non-Oscillatory Mirror Waves at the Earth's Magnetosheath." *J. Geophys. Res.* 91: 101-112 (1986).
3. Price, C.P., and D. Swift. "Ion Tearing Mode Simulations with Open Boundary Conditions." *J. Geophys. Res.* 91: 11993-12004 (1986).
4. Lee, L.C., C.S. Wu, and C.P. Price. "On the Generation of Magnetosheath Lion Roars." *J. Geophys. Res.* 92: 2343-2348 (1987).
5. Price, C.P. and C.S. Wu. "The Influence of Strong Hydromagnetic Turbulence on Newborn Cometary Ions." *Geophys. Res. Lett.* 14: 856-859 (1987).
6. Price, C.P. and L.C. Lee. "Comet-Solar Wind Interaction through Ion-Proton Beam Instability." *Astrophys. J.* 324: 606-620 (1988).
7. Price, C.P., J.D. Gaffey, Jr., and J.Q. Dong. "Excitations of Low-Frequency Hydromagnetic Waves by Freshly Created Ions in the Solar Wind." *J. Geophys. Res.* 93 (no. A2): 837-844, (1988).
8. Lee, L.C., C.P. Price, C.S. Wu, and M.E. Mandt. "A Study of Mirror Waves Generated Downstream of a Quasi-Perpendicular Shock." *J. Geophys. Res.* 93 (no. A1): 247-250 (1988).

9. Wu, C.S., X.T. He, and C.P. Price. "Excitations of Whistlers and Waves with Mixed Polarizations by Newborn Cometary Ions." *J. Geophys. Res.* 93 (no. A5): 3949-3957 (1988).
10. Kainer, S., J.D. Gaffey, Jr., C.P. Price, X.W. Hu and G.C. Zhou. "Nonlinear Wave Interactions and Evolution of a Ring-Beam Distribution of Energetic Electrons." *Phys. Fluids.* 31(no. 8): 2238-2248 (1988).
11. Price, C.P. "Mirror Waves Driven by Newborn Ion Distributions." *J. Geophys. Res.* 94 (no. A11): 15,001-15,009 (1989).
12. Price, C.P. "Teacup Physics: Centripetal Acceleration." *The Physics Teacher.* 28 (no. 1): 49-50 (1990).
13. Prichard, D. and C.P. Price. "Spurious Dimension Estimates from Time Series of Geomagnetic Indices." *Geophys. Res. Lett.* 19:1623 (1992).
14. Price, C.P., D. Prichard and E.A. Hogenson. "Do the Sunspot Numbers Form a Chaotic Set?" *J. Geophys. Res.* 97 (no. A12): 19113-19120 (1992)
15. Price, C.P. and D. Prichard. "The Chaotic and Nonchaotic Behavior of Global Geomagnetic Processes." In: *Physics of Space Plasmas (1992)*, SPI Conference Proceedings and Reprint Series, Number 12, edited by T. Chang, G.B Crew, and J.R. Jasperse. Cambridge, MA, Scientific Publishers, pgs. 265-278 (1994).
16. Price, C.P. and D. Prichard. "The Non-linear Response of the Magnetosphere: October 30, 1978." *Geophys. Res. Lett.* 20:771 (1993).
17. Prichard, D. and C.P. Price. "Is the AE Index the Result of Nonlinear Dynamics?" *Geophys. Res. Lett.* 20, 2817, (1993).
18. Price, C.P., and D. Prichard. "On the Embedding Statistic." *Phys. Lett. A* 184:83 (1993).
19. Price, C.P., D. Prichard and J.E. Bischoff. "Non-Linear Input/Output Analysis of the Auroral Electrojet Index." *J. Geophys. Res.* 99 (no. A7), 13227-13238 (1994).
20. Price, C.P., D. Prichard and J.E. Borovsky. "Comment on 'Substorm Recurrence During Steady and Variable Solar Wind Driving: Evidence for a Normal Mode in the Unloading Dynamics of the Magnetosphere' by A.J. Klimas, D.N. Baker, D. Vassiliadis and D.A. Baker." *J. Geophys. Res.*, 100, (no. A11), 21995-22001. (1995).
21. Prichard, D., J.E. Borovsky, P.M. Lemmons, and C.P. Price. "Time Dependence of Substorm Recurrence: An Informational Theoretic Analysis." *J. Geophys Res*, 101, (no.A7), 15359-15369. (1996).
22. Price, C. P. and D. E. Newman. "Using the R/S statistic to analyze AE data." *J. Atm. and Solar-Terrestrial Phys.*, 63, 1387-1397. (2001).

ABSTRACTS AND PRESENTATIONS

1. Price, C.P., D.W. Swift, and L.C. Lee. "Numerical Simulation of Non-oscillatory Mirror Waves at the Earth's Magnetosheath." *EOS* 65 (no. 16): 254 (1984).
2. Price, C.P. and D.W. Swift. "Ion Tearing Mode Simulations with Open Boundary Conditions." *Second International School for Space Simulations.* Kapaa, Hawaii, (1985).
3. Price, C.P. and L.C. Lee. "Comet-solar Wind Interaction through Ion-proton Beam Instability." *EOS* 66 (no. 46): 1020 (1985).
4. Kainer, S., J.D. Gaffey, Jr., C.P. Price, X.W. Hu, and C.S. Wu. "Generation of Electromagnetic Radiation by a Ring-beam Distribution of Moderately Relativistic Electrons." *EOS* 67 (no. 44): 1144 (1986).
5. Dong, J.Q., C.P. Price and J.D. Gaffey, Jr. "Excitation of Low Frequency Hydromagnetic Waves by Freshly Created Ions in the Solar Wind." *EOS* 67 (no. 44): 1161 (1986).
6. Price, C.P. "Numerical Simulation of Electron Dynamics Associated with Magnetosheath Mirror Waves." *EOS* 67 (no. 44): 1162 (1986).
7. Wu, C.S., C. P. Price and J.D. Gaffey, Jr. "Discussion of the Slow Mode Magnetosonic Wave in MHD and Vlasov Theory." *EOS* 67 (no. 44): 1162 (1986).
8. Wu, C.S. and C.P. Price. "In Quest of Slow Shocks." *Terra Cognita* 7 (no. 2-3): 547 (1987).
9. Price, C.P. and C.S. Wu. "Newborn Ion Pickup in the Presence of Strong Magnetic Turbulence." *Terra Cognita* 7 (no. 2-3): 548 (1987).
10. Price, C.P., L.C. Lee, C.S. Wu and M.E. Mandt. "A Study of Mirror Waves Generated Downstream from a Quasi-Perpendicular Shock." *EOS* 68 (no. 44): 1427 (1987).
11. Price, C.P. "Mirror Waves Generated by Newborn Ion Distributions." *EOS* 69 (no. 44): 1289 (1988).
12. Price, C.P. "Waves on the Halfshell." *EOS* 70 (no. 43): 1181 (1989).
13. Price, C.P. and J.V. Olson. "Plasma Wave Diagnostics for Simulations." *EOS* 71 (no. 43): 1545 (1990).
14. Olson, J.V., P. Struckman, and C.P. Price. "Correlations Between Cusp Pc3 Pulsations and the Solar Wind." *EOS* 71:924 (1990).
15. Olson, J.V., P.E. Struckman, and C.P. Price. "Correlation of Cusp Region Pc3 Pulsations with Solar Wind Parameters." *ANARE Res. Notes* 80:93 (1991).
16. Price, C.P. "Lyapunov Exponents." Invited talk to the 'Workshop on Global Aspects of Nonlinear Magnetospheric Dynamics.' College Park, MD (October 1991).

17. Prichard, D. and C.P. Price. "Spurious Dimension Estimates from Time Series of Geomagnetic Indices." EOS 72 (no. 44): 402 (1991).
18. Price, C.P. and E. Hogenson. "Prediction of Sunspot Numbers Using Chaos." EOS 72 (no. 44): 384 (1991).
19. Price, C.P. "The Chaotic or Nonchaotic Behavior of Global Geomagnetic Processes." Invited talk to the 1992 Cambridge Workshop in Theoretical Geoplasma Physics, Cambridge, MA (August 1992).
20. Price, C.P. and D. Prichard. "Evidence for Nonlinear Dynamics for Periods of Constant Bz." EOS Trans. AGU, Fall Meeting Suppl., 73, 458 (1992).
21. Prichard, D. and C.P. Price. "Detecting Nonlinearity in Magnetospheric Activity." EOS Trans. AGU, Fall Meeting Suppl., 73, 458 (1992)
22. Price, C.P., D. Prichard, and J.E. Bischoff. "Non-linear Input/Output Analysis of the Auroral Electrojet Index." EOS Trans. AGU, Fall Meeting Suppl., 74, 486 (1993).
23. Price, C.P. and D. Prichard, "Nonlinear Input-output Prediction Methods for Geomagnetic Activity", EOS Trans. AGU, Spring Meeting Suppl., 76, S260 (1995).
24. Price, C.P., R. Elliott and D. Prichard, "Comparing Global and Local Electrojet Signals for Predictability", EOS Trans. AGU, Fall Meeting Suppl., 77, S341 (1996).
25. Price, C.P., "Frontiers of Physics: Black Holes, Big Bang and Theories of Everything." Invited talk given to POLARIS workshop, Anchorage, AK (September 1995).
26. Price, C. P. "Is the Solar Wind-Magnetosphere Coupling Chaotic?" Invited talk given to the Univ. Alaska Anchorage Physics Dept. (September 1995).
27. Price, C. P. "Is the Solar Wind-Magnetosphere Coupling Chaotic?" Invited talk given to the Univ. Alaska Fairbanks Physics Dept. (October 1995).
28. Price, C.P., "Hands-On Science: Cratering" Invited talk/workshop given to POLARIS workshop, Palmer, AK (February 1996).
29. Price, C. P. and D. E. Newman, "Analysis Using R/S Statistic of AE Data", EOS Trans. AGU, Spring Meeting Suppl., 80, S275. (1999).
30. Olson, J. V. and C. P. Price, "Nonlinear Prediction of Solar Cycle 23", EOS Trans. AGU, Spring Meeting Suppl., 80, S285. (1999).
31. Price, C. P. "SOC in the Magnetosphere". Invited talk given at 2001 Dynamics of Complex Systems meeting, UAF. (May 2001).
32. Price, C. P. and C. T. Fallen, "Slices of Pi: Investigations into the Statistical Properties of Some Self-Affinity Indices". Poster given at 2006 Dynamics of Complex Systems meeting, UAF. (August 2006).
33. Price, C. P. "Behavior of Various Self-Affinity Indices for Some Novel Signals". Poster given at 2007 Dynamics of Complex Systems meeting, UAF. (August 2007).
34. Price, C. P. "The New UAF Undergraduate Curriculum". Invited talk given to the Univ. Alaska Fairbanks Physics Department (April 2007).
35. Price, C. P. "The New UAF Undergraduate Curriculum". Invited talk given to the Univ. Alaska Anchorage Physics Department (March 2008).

REVIEWER:

- Journal of Atmospheric and Solar-Terrestrial Physics
- Journal of Geophysical Research
- Geophysical Research Letters
- San Diego Supercomputer Center Allocations Committee
- Annales Geophysical
- National Science Foundation
- National Space and Aeronautics Administration