

Stelios P. Kapranidis

CURRICULUM VITAE

Education

University of Athens, Greece	Mathematics	B.S.	1969
University of Washington	Astronomy	M.S.	1978
University of Washington	Theoretical Astrophysics	Ph.D.	1981
University of Kansas	Computer Science	M.S.	1985

Professional Experience

University of Ioannina, Greece	Teaching/Research Assistant	1972-74
University of Washington	Teaching/Research Assistant	1977-81
Iowa State University	Visiting Assistant Professor	1982-83
Benedictine College	Visiting Assistant Professor	1983-84
Kansas Geological Survey	Data Manager	1984-85
Washburn University	Assistant Professor	1985-86
University of South Carolina Aiken	Assistant Professor	1986-92
	Associate Professor (Tenured)	1992-present

Teaching Experience

Astronomy/Astrophysics

Graduate level: Radiative Transfer, Stellar Atmospheres and Spectroscopy

Undergraduate level: Introduction to Astrophysics I and II (senior level), Introductory Astronomy, Astronomy Laboratory.

Physics

Electricity and Magnetism I and II (junior level), Quantum Mechanics (senior level), Optics and Optics Lab (senior level), Calculus Based Physics I and II (sophomore level, with labs) Algebra Trigonometry Based Physics I (with lab).

Mathematics

Calculus I, II, and III, Business Calculus, College Algebra, Discrete Mathematics, Basic Concepts of Elementary Mathematics I and II (two courses for elementary teachers).

Computer Science

Data Structures, Operating Systems, Artificial Intelligence, Introduction to Algorithmic Design, Assembly Language, FORTRAN, BASIC, Introduction to Computer Science.

University Committee Service

Academic Services Committee (1986-87).

Student Life Committee (1987-88).

Campus Life Committee (1988-90), Chair, Commencement Subcommittee (1989-90).

Institutional Effectiveness Self-Study Committee (1989-90).

Search Committee for the Director of Job Development and Cooperative Education (1989).
University Service Award Selection Committee (1990).
Scholastic Standing and Petitions Committee (1991-94).
University Planning Committee (1998-00).
Institutional Planning Cabinet (1999-00).
Academic Assessment Committee (2000-2003).
Academic Grievance Committee (2003-2006), Chair of a subcommittee (2005-06)
Promotion and Tenure Committee (2004-2007)
Academic Grievance Committee (2007-2010)
Faculty Welfare Committee (2007-2014)

Publications

Refereed Journals

E. Bohm-Vitense, T. Dettman, S. Kapranidis, "On the energy Distribution of Sirius B", 1979, *Ap. J. (Letters)*, 232, L189.

K. H. Bohm and S. Kapranidis, "The Basic Structure of Hot White Dwarf Atmospheres as a Function of Composition", 1980, *Astron. Astrophys.*, 87, 307-314.

S. Kapranidis and K. H. Bohm, "The Peculiar Structure of Very Cool Non-DA White Dwarf Atmospheres", 1982, *Ap. J.*, 256, 227.

S. Kapranidis and W. T. Sullivan III, "The Orientation in Space of Spiral Galaxies in the Local Supercluster", 1983, *Astron. Astrophys.*, 118, 33.

D. Geisler and S. Kapranidis, "Photography in the Washington System", 1983, *A. J.*, 88, 461.

S. Kapranidis, "Model Atmospheres of Red Degenerate Stars", 1983, *Ap. J.*, 275, 342.

S. Kapranidis, "Emerging Monochromatic Fluxes and Colors of Red Degenerate Stars", 1985, *Ap. J.*, 294, 634.

S. Kapranidis and J. Liebert, "The Chemical Composition of the Very Cool White Dwarf LP 701-29", 1986, *Ap. J.*, 305, 863.

S. Kapranidis and R. Koo, "Variations of the Sliding Ladder Problem", *College Math. J.* **39** (2008) 374-379

S. Kapranidis and R. Koo, "Physics of a Sliding Ladder", Wolfram Demonstrations Project, 2011.

S. Kapranidis, "The Effects of a Force on the Orbit of an Artificial Satellite", Wolfram Demonstrations Project, 2011.

S. Kapranidis, "Usual an Unusual Pendulums", Wolfram Demonstrations Project, 2013.

S. Kapranidis and R. Russzczyk, "The physics of Spiderman's Swing", Wolfram Demonstrations Project, 2014.

S. N. Svolopoulos and Kapranidis, "Photoelectric Observations of the Eclipsing Binary U Coronae Borealis", 1972, Commission 27 of the I. A. U. Information Bulletin on Variable Stars, Number 731.

S. Kapranidis, "The Structure of Very Cool, Helium Rich, White Dwarf Atmospheres", 1982, Ph. D. Thesis, University of Washington.

S. Kapranidis, "Halley's Comet" (in Greek), 1986, Kyklos and Arkadi.

S. Kapranidis, "Elements of Algebra", 1994, University of South Carolina, Aiken, (in two volumes and with a complete software tutorial designed for a self-paced course.)

Contributed Papers

S. Kapranidis, "Model Atmospheres of Red Degenerate Stars", Northwest Astronomical Conference, University of Washington Laboratory, Friday Harbor, San Juan Island, April 1981.

S. Kapranidis, "Pure Helium Atmospheres of Red Degenerate Stars", 92nd Annual Meeting of the Astronomical Society of the Pacific, University of Washington, Seattle, July 1981. Abstract: 1981, P.A.S.P., 93,548.

S. Kapranidis, "The Exotic Atmospheres of Very Cool Non-DA White Dwarf Stars", 12th Annual Mid-America Regional Astrophysics Conference, Linda Hall Library, Kansas City, April 1982.

S. Kapranidis, "Emerging Monochromatic Fluxes and Colors of Red Degenerate Stars", 161st A.A.S. Meeting, Boston, Jan. 1983. Abstract: 1982, Bull. A.A.S., 14, 876.

S. Kapranidis and K. Salsbery, "The Effective Temperature of the White Dwarf VB 11", 13th Annual Mid-America Regional Astrophysics Conference, Linda Hall Library, Kansas City, March 1983.

S. Kapranidis, "Some Further Studies of Very Cool, Non-DA White Dwarf Atmospheres", 3rd Delaware Workshop on White Dwarf Stars, Universite de Montreal, Montreal Canada, June 9-10, 1983.

S. Kapranidis, "The Chemical Composition of the Atmosphere of the Cool White Dwarf LP 701-29", 163rd A.A.S. Meeting, Las Vegas, NV., Jan. 1984. Abstract: 1984, Bull. A.A.S., 20, No. 16, 409.

S. Kapranidis, "The Temperature, Radius and Mass of the Red Degenerate Star VB 11" 173rd A.A.S. Meeting, Boston, Jan. 1989. Abstract: 1988, Bull. A.A.S., 20, No. 4, 1099.

S. Kapranidis "Black Holes: Are they Real or Just a Mathematical Singularity?" S. C. Council of Teachers of Mathematics Fall Meeting, Myrtle Beach, November 3-4, 1989.

Eckert, Kapranidis and Phillips, "Calculus as a Laboratory Course" Fourteenth Annual S.I.A.M. Meeting, South Eastern Atlantic Section, March 23, 1990.

S. Kapranidis, "A Mathematica Based Calculus III Course and its Effects on the Traditional Calculus Based Physics Courses", presented at the International Conference on the Teaching of Mathematics, Samos, Greece, July 3-6, 1998. This paper is also published in the Proceedings of the meeting.

S. Kapranidis, A. Akritas and A. Kataliphou, "Possibilities for Alternative Uses of the Calculus and Mathematical Approach", presented by A. Akritas at the IMACS-ACA 1999 Meeting in El Escorial, Spain, June 25-27.

S. Kapranidis, S. King and M. May, "CBL Data Collection and Analysis for Trigonometry", presented at the 23rd Annual Conference of the S. C. Council of Teachers of Mathematics, at Hilton Head, SC, November 18-19, 1999.

S. Kapranidis, S. King and M. May, "Understanding What We Hear Through Trigonometry. A hands-on CBL Workshop" 14th Annual Mathematics Conference, Georgia Perimeter College, Clarkston, Georgia, February 9-10, 2001.
Also presented at the Instructional Fair, Ruth Patrick Science Education Center, USC Aiken, January 27, 2001.

S. King, S. Kapranidis and M. May, "Trig Is More than Triangles: A Hands-on CBL and TI-83 Workshop", 25th Annual Conference of the South Carolina Council of Teachers of Mathematics, Greenville, South Carolina, November 15-16, 2001.
A modified version was also presented at the 15th Annual Georgia Perimeter College Mathematics Conference, February 8, 2002.

Michelle Williams and S. Kapranidis, "An interesting Application of the Principle of Conservation of Mechanical Energy", 75th Annual Meeting of the South Carolina Academy of Science, University of South Carolina Aiken, April 12, 2002. Abstract Published in the Bulletin of the SCAS, Vol. 64, p. 103, 2002.

S. Kapranidis, "The role of the Teacher in a Technology Based Calculus Class", 2nd International Conference on the Teaching of Mathematics, July 1-6, 2002, Crete, Greece. This paper is also published in the Proceedings of the meeting.

S. King, M. May and S. Kapranidis, "Pendulum Motion: A Hands-on CBL and TI-83 Workshop", Fifth Carolinas Mathematics Conference, Charlotte, North Carolina, October 17-18, 2002.

Michelle Williams, Stelios Kapranidis and Reginald Koo, "Solutions of the General Differential Equation of a Pendulum", 78th Annual Meeting of the South Carolina Academy of Science, Winthrop University, March 16, 2005. Abstract Published in the Bulletin of the SCAS, Vol. 67, p. 112, 2005.

Ancil Atkins, Stelios Kapranidis and Reginald Koo, "A Huygens Pendulum", 78th Annual Meeting of the South Carolina Academy of Science, Winthrop University, March 16, 2005, Abstract Published in the Bulletin of the SCAS, Vol. 67, p. 59, 2005.

A. Schulz and S. Kapranidis, "Astrophotography at USCA", Poster Presentation at the University of South Carolina Aiken Research Day, April 17, 2009.

S. Kapranidis, "The Lorentz Transformation", SACS-AAPT Spring 2010 Meeting, University of South Carolina – Aiken, March 20, 2010.

A. Schulz and S. Kapranidis, "The Orbit of an Artificial Satellite", 2010 Annual Meeting of the South Carolina Academy of Science, College of Charleston, April 17, 2010.

Talks and Presentations

Astronomy talks during the "Star Parties" organized by the Ruth Patrick Science Education Center at USC Aiken:

"Spirit and Opportunity" November 20, 2004.

"The Planet Mars" April 24, 2004.

"The Moon", November 8, 2003.

"Quasars", May 10, 2003.

"The Leonid Meteor Shower", November 15, 2002.

"Asteroids: 200 Years after Their Initial Discovery", November 30, 2001.

"Telescopes Large and Small", April 28, 2001.

"The Solar Cycle", November 4, 2000.

"Planetary Conjunctions", May 6, 2000.

"Meteors, Meteorites and Meteor Showers", November 13, 1999.

"Near Earth Asteroids", May 15, 1999.

"The Lunar Prospector Mission", November 14, 1998.

"The Galileo Mission", May 2, 1998.

"Our Universe", November 8, 1997.

"Comets", April 12, 1997.

Academy for Lifelong Learning, Astronomy Short Course consisting of three one-hour presentations entitled "The Solar System: A Historical Perspective", "The Milky Way and Other Galaxies" and "Cosmology". September 10, 17 and 24, 2007.

"The Concept of Spacetime in Modern Physics", two one-hour presentations in Dr. Premo-Hopkins APHL 303 class, February 23 and March 16 2006.

Academy for Lifelong Learning, Astronomy Short Course consisting of three one-hour presentations entitled “Black Holes”, “Cosmology” and “Life in the Universe”, November 6, 13, 20, 2002.

“Thermodynamics”, a workshop for middle school students, GEAR UP program, Ruth Patrick Science Education Center, USC Aiken, January 26, 2002.

“Space Exploration and Astronomy”, presented to the Math Club of the Allelnia Community Middle School, April 13, 2000.

“The Math of General Relativity and the Big Bang” presented in Dr. Nieves McNulty’s Math/CS Capstone Seminar, Spring 1997.

An analysis of Constantine P. Cavafy’s poem “Ithaka” presented in Dr. Stanley Rich’s AEGL 389 Class, March 27, 1995.

“Spectroscopy in Astronomy”, a workshop presented during the 2nd Annual Science Week at Oakwood-Windsor Elementary School, March 1994.

“Artificial Intelligence”, S. C. Junior Academy of Science, Fall Workshop, October 5, 1991, USC Aiken.

“General Relativity and Black Holes”, USC Aiken, Math Awareness Week, April 21, 1990.

A presentation on Homer’s Iliad given in Dr. Donald Blount’s AEGL 390 Class, September 14, 1989.

“Very Cool White Dwarf Stars”, Physics and Astronomy Colloquium, USC Columbia, January 16, 1989.

“Math Gets Under the Skin of the Sun”, USC Aiken, Math Awareness Week, April 1988.

“Stellar Evolution”, Aiken Astronomy Club, February 1988.

“White Dwarf Stars”, presented at the Ames Area Amateur Astronomers Meeting, July 18, 1983.

Other Scholarly Activities

Reviewer of the book “Fundamentals of Assembler Language Programming” by Broquard and Westley, MacMillan Publishing Company, October, 1991.

Participated in the NSF Summer Workshop on Integrating Calculus and Physics, Colorado School of Mines, July 26-28, 1990.

Reviewer of an application for NSF research grant, Summer 1985.

Referee for an article submitted to the *Astrophysical Journal*, September 1983.

Grants

NASA Research Grant (administered by the American Astronomical Society) (1984).

University of South Carolina Faculty Exchange Program (1988).

Honors and Awards

Excellence in Teaching Award, 2002-03, University of South Carolina Aiken.

Governor's Distinguished Professor Award, South Carolina, 2003.