

CURRICULUM VITAE

NAME: Demosthenes Kazanas

DATE OF BIRTH: Kavala, Greece, 1950

PRESENT POSITION: Astrophysicist
Laboratory for High Energy Astrophysics
NASA/Goddard Space Flight Center, Code 665
Greenbelt, MD 20771

RESEARCH AREAS: High Energy Astrophysics (The physics of compact accreting sources e.g. active galaxies, quasars, X-ray binaries); γ -ray bursts; particle acceleration processes in these objects; VHE (10^{12} eV) and UHE (10^{15} eV) γ -ray astronomy). Cosmology (inflation, interplanary of particle physics and cosmology; relativity) Gravitational Collapse (effects of neutrinos in gravitational collapse). Alternative Gravitational Theories (Conformal gravity, astrophysical applications in galactic rotation curves).

EDUCATION: 11/68 - 2/73 - University of Thessaloniki, Greece, graduated with honors.
1975 - M. S., University of Chicago.
1978 - Ph.D., University of Chicago.
1979 - Greek Army Military Service.

PREVIOUS POSITIONS: 1980 - 1982 NAS/NRC Research Associate.
1982 - 1988 Research Associate, U. of Maryland.

OTHER POSITIONS: Teaching Assistant from October 1973, through December 1975, while graduate student at the University of Chicago.

Visiting Scholar, University of Adelaide, March - April 1987.

Visiting Scholar, University of Thessaloniki, January 1995

Visiting Scholar, University of Athens, July - August, 1996

Corresponding Member, Academy of Athens, 2000

AWARDS: Four year scholarship of the Greek Scholarship Foundation, while being at the University of Thessaloniki.
Full coverage CNRS Scholarship to attend the CNES summer school on Astrophysics at La Rochelle (France) in summer of 1976.
Gravity Research Foundation: 3rd Prize, for the 1976 competition for the best essay on Gravitation.

Scholarship to attend the Workshop on Sources of Gravitational Radiation at Batelle in the summer of 1978.

NATO grant to attend the NATO sponsored Supernova Advanced Institute at Cambridge England in July 1981.

Honorable Mention for the 1982 competition for the best essay on Gravitation.

NSF travel grant to attend Active Galaxy Workshop at Max Planck Institute in Germany in July 1983.

RESEARCH GRANTS: NASA, IUE ADP Grant to study the properties of quasar emission lines 1989.

NASA, GRO Guest Investigator grant for the study of correlations between radio and gamma ray emission in quasars. 1990.

NASA, Goddard Director's Discretionary Funds Grant to study Astrophysical Applications of Weyl Gravity, 1991.

NASA grant for Theoretical High Energy Astrophysics Studies (along with Harding, Stecker, Ramaty) 1991.

NASA, GRO Guest Investigator grant for the study of γ -ray emission from quasars and other Active Galaxies. 1992.

HST, Director's Discretionary Time to observe Geminga with HSP aboard the Hubble Telescope 1992 (with J. Dolan and S. Holt).

IUE, Director's Discretionary Time to observe the γ -Ray blazar PKS 0537-441 (1992).

NASA, GRO Guest Investigator grant for timing analysis of compact galactic Sources 1999

XMM, Guest Investigator grant for timing analysis of LMC X-1, X-3

Chandra Guest Investigator grant for a search of Dark Lenses associated with Clusters of galaxies.

INTEGRAL Guest investigator grants in 2004, 2005, 2006, 2007, 2008

ADP, NASA HQ 3 year grant to produce Fourier Resolved Spectroscopy of the data of Accreting black hole of galactic or extragalactic scales

ADP, NASA HQ, 3 year grant to search for rotation induced QPO in the GBHC and AGN Power Spectra

STUDENT SUPERVISION:

Peter Giovanoni. (University of Maryland) PhD 1992. Thesis: "The Effects of Relativistic Neutrons in the Spectra of Radio Loud Quasars".

Jason Taylor (University of Maryland), (current). Thesis: "Red Giants as Emission Line Clouds of Active Galactic Nuclei".

PROFESSIONAL SOCIETY

MEMBERSHIP: APS and AAS

COMMITTEES: Goddard-U. of Maryland Colloquia Committee

INVITED LECTURES: University of Chicago Workshop on "Weak Interaction and Astrophysics", April 1976, (organized by D. N. Schramm and W. D. Arnett) on the "Competition Between Neutrino and Gravitational Radiation".

University of Chicago, Relativity Theory Group Workshop on Gravitational Radiation, March 1977 (organized by A. Ashtekhar), "Effects of Neutrino Radiation on the Non-Radial Pulsations

of Stellar Cores and its Consequences on gravitational Radiation Detectability".
Copenhagen, Supernova Meeting, May 1978 (organized by R. Epstein and D. N. Schramm), "Neutrino Viscosity Effects on Supernova Shock Wave Structure".
Göttingen, Universitätssternwarte, May 1978, on "Neutrino Effects on Supernova Shock Structure" and on "Entropy Generation in the Universe".
Madison Wisconsin, December 1978, "Entropy Generation in the Early Universe".
Goddard Space Flight Center, January 1979, "Neutrino Mediated Shocks in Supernovae".
University of Pennsylvania, January 1979, "The Effects of Neutrino Transport on the Supernova Shock Structure".
Göttingen, Universitätssternwarte, February 1979, "On the Neutrino Mediation of Supernova Shocks".
Copenhagen, NORDITA, February 1979, "On the Neutrino Mediation of Supernova Shocks".
Copenhagen, NORDITA, January 1980, "A Consistent Age for the Universe".
Stanford University, May 1980, "Dynamics of the Universe and Spontaneous Symmetry Breaking".
University of Hawaii, DUMAND International Workshop, July 1980, "Neutrino Acceleration in Supernova Shocks".
I.A.U. Symposium 104, on the Large Structure of the Universe, Crete, August 1982, "e⁺e⁻ Annihilation Line and the Cosmic X-Ray Background".
University of Maryland, September 1982, "Relativistic Particles and Gamma Rays in Quasars and Active Galactic Nuclei".
University of Thessaloniki, February 1983 "On the Interplay Between Particle Physics and Cosmology".
Naval Research Laboratory, May 1983, "Gamma Rays from Quasars and the Diffuse Gamma Ray Background".
Fermi Lab, Batavia, IL, Nov. 1983, "AGN's, QSOs and the Diffuse Gamma Ray Background".
University of Maryland, May 1984, "What are the Centauro Events?".
Institut d'Astrophysique, Paris, France, July 1984, "A Universal Spectrum for AGNs and QSOs".
CEN Saclay, France, July 1984, "SU(2) x U(1) Vacuum and the Centauro Events".
Max Planck Institute, Garching, W. Germany, "A Universal Spectrum for AGNs and QSOs".
University of Thessaloniki, Greece, October 1985, "The Spectra of Quasars and Active Galactic Nuclei".
Workshop on the 'Continuum Emission for AGNs' Univ. of Arizona Tucson, January 1986, "A Dynamical Model for the Central Engine of AGNs and QSOs".
Bartol Research Foundation, October 1986, "The Central Engine of Quasars and Active Galaxies".
University of Connecticut, February 1987, "Ultra High Energy

Photons and Muons from Accreting Binaries"
University of Adelaide, April 1987, "Strongly Interacting Particles in AGNs and QSOs".
University of Thessaloniki, April 1987, "Very High Energy and Ultra High Energy γ -Ray Astronomy".
Sofia Bulgaria, July 1987, IAU/COSPAR, workshop on accreting compact objects "Shock acceleration in accreting compact sources".
North Carolina State University, October 1989, Physics Colloquium, "Weyl Gravity and Galactic Rotation Curves".
University Thessaloniki, June 1990, workshop on "Recent Developments in Gravity", two invited lectures on Fourth Order Weyl Gravity.
University of Toledo, January 1990, Physics Colloquium, "Conformal Weyl Gravity and its Astrophysical Implications".
University of Florida, Gainesville, September 1990, "Astrophysical Aspects of Weyl Gravity", in Symposium *Nonlinear Problems in Relativity and Cosmology*.
University of Maryland, October 1990, "Dark Matter or New Physics", in Symposium *After the First Three Minutes*.
University of Maryland, October 1991, "Effects of Relativistic Neutrons in AGN", in Symposium *The AGN Paradigm*.
University of Hawaii, March 1992 "High Energy γ -Ray Emission from Radio Loud AGN", in *DUMAND* International Symposium.
University of Pennsylvania, May 1992, "The Recent AGN γ -Ray Observations and their Implications", Physics Colloquium.
Schloss Ringberg, September 1992, "Particle Acceleration in Accretion Flows", in Symposium *Energetic Particles in Astrophysics*.
1st Panhellenic Astronomical Symposium, September 1992, "The Evolution of the Early Universe".
Pylos, October 1992, "Emission of Ultra High Energy Neutrinos from Active Galaxies", in *2nd NESTOR* Symposium.
Bartol Research Foundation, March 1993, "Relativistic Hadrons and High Energy γ -Rays from Active Galaxies", Physics Colloquium.
Kardamyli, Greece, August 1993, "Gamma Rays from Radio Loud Quasars" in the Workshop on Acceleration and Radiation in Laboratory and Astrophysical Plasmas.
Pylos, Greece, October 1993, "Radio Loud AGN as Sources of TeV Neutrinos" in *3rd NESTOR* Symposium.
University of Virginia, Charlottesville, March 1994, "The Role of Hadronic Interactions in Accretion onto Compact Objects".
University of Maryland, October 1994, "Gravitational Alternatives to Dark Matter", in the Symposium *Dark Matter*.
University of Thessaloniki, January 1995, "Weyl Gravity as an Alternative to Dark Matter in Explaining the Galactic Rotation Curves".
Hellenic Astronomical Society Meeting, June 1995, "Flat Galactic Rotation Curves and New Gravitational Physics".
University of Crete, July 1996, "Conformal Gravity and Galactic Rotation Curves"
University of Athens, July 1996, "Inflation and the Evolution of the Early Universe".
University of Florida, February 1998, "Modeling the Light Curves of Accreting Compact Objects"
Cornell University, March 1999, "Probing the Structure of Accretion Flows onto Compact Objects with X-ray Timing".
Heidelberg, June 2000, "Neutrinos from AGN" (invited talk at the Gamma Ray 2000 symposium).
University of Maryland, Baltimore Campus, April 2001, "Probing the Structure of

Accreting X-ray Sources”

Academy of Athens, Greece, “The Past, Present and Future of Cosmology”

University of Maryland, October 2001, “The “knee” of the Cosmic Ray Spectrum: A Herald of New Physics?”

Yale University, October 2002, “Gamma Ray Bursts: A Personal Perspective and Some New Developments”.

Rencontres de Moriond, La Tuile, Italy March 2005 “Particle Acceleration in the vicinity of Compact Objects”

University of Maryland, Laboratory for Physical Sciences, June 2005, “The Mystery of Gamma Ray Burst and Their Physics”.

University of Maryland, Baltimore Campus, February 2006, “Gamma Ray Bursts: A Personal Perspective”

The Academy of Athens, Greece, September 2007, “Cosmological Inflation: A Personal Perspective”

Cambridge University, Conf. on “The Early Universe, 25 Years Onward” December 2007, “Cosmological Inflation: A Personal Perspective”

EEF (Enosis Ellinon Physikon – Association of Greek Physicists) meetings in 2006 and 2008; plenary talks with theme “NASA Explores the Coming of Age and Evolution of the Universe”

Rochester Institute of Technology, May 2008, “Cosmological Inflation and the Multiverse: Views of a Skeptic”

PUBLIC LECTURES:

Perspectives, ABC-TV Chicago, taped February 22, 1976.
Topic: Supernovae.

National Capital Astronomers Club, May 6, 1995, "Alternatives to Dark Matter".

Academy of Athens, October 2000, "The Past, Present and Future of Cosmology" lecture
Of Induction as a Corresponding Member of the Academy of Athens

Academy of Athens, October 2007, "Cosmological Inflation: A Personal Perspective"

Cultural Center of Xanthi, September 2009, "Inflationary Cosmology and the Multiverse"

PUBLICATIONS IN REFEREED JOURNALS:

1. 1976 "Competition Between Neutrino and Gravitational Radiation", Kazanas, D., and Schramm, D. N., *Nature*, 262, 671.
2. 1976 "Competition Between Neutrino and Gravitational Radiation" (Essay), Kazanas, D., and Schramm, D. N., *General Relativity and Gravitation*, 7, 921.
3. 1977 "Neutrino Damping of Nonradial Pulsations in Gravitational Collapse", Kazanas, D., and Schramm, D. N., *Ap. J.*, 214, 819.
4. 1977 "Neutrino Angular Momentum Losses in Stellar Collapse", Kazanas, D., *Nature*, 267, 501.
5. 1978 "Neutrino Viscosity in Collapsing Stellar Cores", Kazanas, D., *Ap. J. (Lett.)*, 222, L109.
6. 1978 "A Consistent Age for the Universe", Kazanas, D., Schramm, D. N. and Hainebach, K. L., *Nature*, 274, 672.
7. 1980 "Neutrino Mediated Shocks in Supernovae", Kazanas, D., *Ap. J.*, 238, 998.
8. 1980 "Origin of the March 5, 1979 q-ray Transient: A Vibrating Neutron Star", Ramaty, R., Bonazzola, S., Cline, T. L., Kazanas, D., Meszaros, P. and Lingenfelter, R. E., *Nature*, 287, 122.
9. 1980 "Dynamics of the Universe and Spontaneous Symmetry Breaking", Kazanas, D., *Ap. J. (Lett.)*, 241, L59-L63.
10. 1983 "On the Origin of Relativistic Particles and Gamma Rays in Quasars and Active Galactic Nuclei", Protheroe, R. and Kazanas, D., *Ap. J.*,

265 , 620.

11. 1983 "Active Galactic Nuclei and the Diffuse Gamma Ray Background", Kazanas, D. and Protheroe, R. J., Nature, 301, 228.
12. 1983 "Corequake and Shock Heating Model for the March 5, 1979 Gamma Ray Burst", Ellison, D. C., and Kazanas, D., Astron. Ap. 128, 102.
13. 1983 "Cosmic Ray Antimatter and Baryon Symmetric Cosmology", Stecker, F. W., Protheroe, R. J. and Kazanas, D., Ap and Sp. Sci. 96 (1), 171.
14. 1984 "SU(2) x U(1) Vacuum and the Centauro Events", Kazanas, D., Balasubrahmanyam, V. K., and Streitmatter, R. E., Physics Letters B, 142, 23.
15. 1984 "Photon-Photon Absorption and the Uniqueness of the Spectra of Active Galactic Nuclei", Kazanas, D., Ap. J. 287, 112.
16. 1986 "Origin of Ultra High Energy γ -rays from Cygnus X-3 and Related Sources", Kazanas, D. and Ellison, D. C., Nature, 319, 380.
17. 1986 "The Central Engine of Quasars and AGNs: Hadronic Interactions of Shock Accelerated Relativistic Protons", Kazanas, D. and Ellison, D. C., Ap. J., 304, 178.
18. 1986 "On the Two States of Cygnus X-1 and Related Sources", Kazanas, D., Astronomy and Astrophysics Letters, 166, L19-L22.
19. 1986 "Proton Acceleration in q-Ray Bursts", Kazanas, D. and Ellison, D. C., Adv. Space Res., Vol. 6, No. 4, 81.
20. 1987 "The Origin and Location of the 5 March 1979 Gamma-Ray Burst", Kazanas, D., Nature, 331, 320.
21. 1988 "Energy Momentum Tensor of Fields in the Standard Cosmology", Mannheim, P. and Kazanas, D., General Relativity and Gravitation, 20, 201.
22. 1989 "Exact Solution of Conformal Weyl Gravity and Galactic Rotation Curves", Mannheim, P., and Kazanas, D., Astrophysical Journal, 342, 635.
23. 1989 "On the Nature of Line Emitting Clouds in Quasars and AGN", Kazanas, D., Ap. J., 347, 74.
24. 1990 "Flat Spectrum Radio Sources: Cosmic Conspiracy or Relativistic Neutrons?", P. Giovanoni and D. Kazanas, Nature, 345, 319.
25. 1990 "Neutron Viscosity in Accretion Disks", N. Guessoum and D. Kazanas Ap. J., 358, 525.
26. 1991 "Solution to the Kerr and Kerr-Newman Problems in Fourth Order Weyl Gravity", P. D. Mannheim and D. Kazanas Phys. Rev. D44, 417.

27. 1991 "Astrophysical Aspects of Weyl Gravity", D. Kazanas, N.Y. Acad. of Sci., 631, 212.
28. 1991 "C IV Line Profile Correlations in NGC 4151", R. P. Fahey, A. G. Michalitsianos and D. Kazanas, Ap. J., 371, 136.
29. 1991 "General Structure for the Gravitational Equations of Motion in Conformal Weyl Gravity", Kazanas, D. and Mannheim, P.D., Astrophysical Journal Suppl., 76, 431.
30. 1991 "Probing the Higgs Vacuum with General Relativity", Mannheim, P. D. and Kazanas, D., Astrophysics and Space Sciences, 185, 167.
31. 1991 "Interaction of High Energy Radiation with Matter", in the *Astronomy and Astrophysics Encyclopedia*, p. 581, S. Maran editor, Van Nostrand, New York.
32. 1993 "Detection of far UV High Excitation Line Emission and Ly β Absorption in the Gravitational Lense Q 0957+561", A. G. Michalitsianos, et al. Ap. J. Lett., 417, L57.
33. 1994 "Exact Interior Structure of Fourth Order Conformal Weyl Gravity and the Newtonian Limit", P. D. Mannheim and D. Kazanas, GRG, 26, 337.
34. 1994 "Steps Toward Determination of the Size and Structure of the Broad Line Region in Active Galactic Nuclei, G. A. Reichert et al. Ap. J., 425, 582..
35. 1994 "The Multifrequency Spectral Evolution of Blazar 3C 345 During the 1991 Outburst, J. R. Webb, et al, 422, 570.
36. 1994 "The Optical UV Spectrum of 3C 279", H. Netzer, D. Kazanas, B. J. Wills, D. Wills, J. A. Baldwin, G. Fernald, M. Han, M.S. Brotherton & I. W.A. Browne, ApJ., 430, 191.
37. 1995 "The Phase Transition Theory of Instabilities I: The Non-Axisymmetric Second Harmonic Instability and Bifurcation Points", D. Christodoulou, D. Kazanas, I. Shlosman and J. E. Tohline, ApJ., 446, 472.
38. 1995 "Relativistic Hadrons and The Origin of Relativistic Outflows in Active Galactic Nuclei", J. Contopoulos and D. Kazanas, ApJ, 441, 521.
39. 1995 "The Phase Transition Theory of Instabilities II: Fourth Harmonic Bifurcations and λ -Transitions", D. Christodoulou, D. Kazanas, I. Shlosman and J. E. Tohline, ApJ., 446, 485.
40. 1995 "The Phase Transition Theory of Instabilities III: Non-Axisymmetric Bifurcations and Instabilities on the Jacobi Sequence and the Fission Problem", D. Christodoulou, D. Kazanas, I. Shlosman and J. E. Tohline, ApJ., 446, 500.
41. 1995 "The Phase Transition Theory of Instabilities IV: Ciritcal Points on the MacLaurin Sequence and Non-Linear Fission Processes", D. Christodoulou, D. Kazanas, I. Shlosman and J. E. Tohline, ApJ., 446, 510.

42. 1996 "Interchange Method in Incompressible Magnetized Couette Flow. I. D. Christodoulou J. Contopoulos and D. Kazanas, ApJ. 462, 865.
43. 1996 "The Black Hole Boundary Layer", S. Chakrabarti, L. Titarchuk, D. Kazanas, and K. Ebisawa, A&A Supp. 120, C163.
44. 1996 "Multiwavelength Observations of Short-Timescale Variability in NGC 4151. I. Ultraviolet Observations", Crenshaw, D. M. et al., ApJ, 470, 322.
45. 1996 "Multiwavelength Observations of Short-Timescale Variability in NGC 4151. IV. Analysis of Multiwavelength Continuum Variability", Edelson, R. A, et al., ApJ, 470, 364.
46. 1997 "Ly alpha Absorption-Line Systems in the Gravitational Lens Q0957+561", A. G. Michalitsianos, et al. ApJ, 474, 598.
47. 1997 "Low-State Gamma-Ray Emission from Blazars and the Gamma-Ray Background", D. Kazanas and E. Perlmán, ApJ, 476, 7.
48. 1997 "Temporal and Spectral Properties of Comptonized Radiation and Its Applications", D. Kazanas, X.-M. Hua and L. G. Titarchuk, ApJ, 480, 735.
49. 1997 "Phase Difference and Coherence as Diagnostics of Accreting Compact Sources", X.-M. Hua, D. Kazanas and L. G. Titarchuk, ApJL, 482, L57.
50. 1997 "The Detection of the lambda 2175 Feature and Further Analysis of the Broad Absorption Line Profile Structure in the Gravitational Lens Candidate UM 425" , A. G. Michalitsianos, E. E Falco, J. Munoz and D. Kazanas, ApJL, ...487, L.117
51. 1998 "The Duration - Photon Energy Relation of Gamma Ray Bursts and its Interpretations", D. Kazanas, L. G. Titarchuk and X.-M. Hua, ApJ, 493, 708
52. 1997 "Steadily Rotating, Perfect-Fluid, Gravitating Spheroids in Weyl Gravity", N. Spyrou, D. Kazanas, and E. Esteban, Classical and Quantum Gravity, 14, 2663.
53. 1998 "Timing Noise Properties of GRO J0422+32", J. E. Grove, M. S. Strickman, S. M. Matz, X.-M. Hua, D. Kazanas, D. and L. G. Titarchuk, ApJL, 502, L.45
54. 1998 "Multiwavelength Observations of a Dramatic High-Energy Flare in the Blazar 3C 279" A. E. Wherle et al. ApJ, 497, 178
55. 1998 "A Cosmic Battery", I. Contopoulos and D. Kazanas, ApJ, 508, 859
56. 1999 "The Axisymmetric Pulsar Magnetosphere", I. Contopoulos, D. Kazanas and C. Fendt, ApJ, 511, 351
57. 1999 "Li Production in Companions of Accreting X-ray Binaries by Neutron Spallation of C, N, O, Elements", N. Guessoum and D. Kazanas, ApJ, 512, 332
58. 1999 "Probing the Structure of Accreting Compact Sources Through X-ray Time Lags and Spectra", X.-M. Hua, D. Kazanas and W. Cui, ApJ, 512, 793
59. 1999 "Modeling the Time Variability of Compact Accreting Sources", D. Kazanas and X.-M. Hua, ApJ, 519, 750. (Also astro-ph/9902186).

60. 1999 "TeV Electrons in AGN: A Hadronic Origin?", D. Kazanas and A. Mastichiadis, ApJ Lett., 518, L..17
61. 1999 "Formation of Relativistic Outflows in Shearing Black Hole Accretion Coronae", P. Subramanian, P. A.. Becker and D. Kazanas ApJ, 523, 203 (astro-ph/9805044)
62. 1999 "The Origin of TeV Electrons in Blazars", D. Kazanas and A. Mastichiadis, Astroparticle Physics, 11, 41
63. 1999 "Magnetar Spin-Down", A. K. Harding, J. Contopoulos and D. Kazanas, ApJ Lett. 525, L125 (astro-ph/9908279)
64. 1999 "Thermal Instability and Photoionized X-ray Reflection in Accretion Disks", S. Nayakshin, D. Kazanas and T. R. Kallman, ApJ, 537, 833; astro-ph/9909).
65. 2000 "Modeling the X-ray -- UV Correlations in NGC 7469", A. J. Berkley, D. Kazanas, and J. Ozik, ApJ, 535, 712
66. 2001 "Critical Mach Numbers in Cosmic Ray Shocks" , P. A. Becker and D. Kazanas, ApJ, 546, 429.
67. 2001 "Modeling the X-ray UV Correlations in NGC 3516" D. Kazanas and S. Nayakshin, ApJ, 550, 655.
68. 2001 "Relativistic Outflows From Advection-Dominated Accretion Disks Around Black Holes", P. A. Becker, P. Subramanian and D. Kazanas, ApJ. 552, 209
69. 2001 "Cosmic Ray Knee: A Herald of New Physics?", D. Kazanas and A. Nicolaidis, Proc. 27th Intl. Cosmic Ray Conf., 5, 1760; also astro-ph/0103143
70. 2001 "Narrow, Moving Fe Ka Lines from AGN" , S. Nayakshin and D. Kazanas, ApJL I 553, L141
71. 2001 "Frequency Dependent Lags in the X-ray Emission of NGC 7469", J. Papadakis, P. Nandra and D. Kazanas, ApJL, 544, L133.
72. 2001 "Gravitational Potential of Triaxial Ellipsoids in Weyl Gravity", E. Esteban and D. Kazanas, GRG, 33, 1281.
73. 2002 "Towards Resolving the Pulsar Sigma-Problem: A Linear Accelerator?", J. Contopoulos and D. Kazanas ApJ, 566, 336.
74. 2002 "On Time-dependent X-ray Reflection by Photoionized Accretion Disks: Implications for Fe K α line reverberation studies of AGN, S. Nayakshin and D. Kazanas, ApJ, 567, 85.
75. 2002 "The Supercritical Pile Model of GRBs: Getting the νF_{ν} Peak at 1 MeV", D. Kazanas, M. Georganopoulos, A. Mastichiadis, ApJ Lett., 586, L15.
76. 2002 "The Stability of Compressible Magnetized Couette Flow: Magnetorotational and Magnetoconvective Instabilities", D. Christodoulou, J. Contopoulos, D. Kazanas, ApJ, 586, 372 (astro-ph/0211511).
77. 2003 "Relativistic and Slowing Down: The Flow in the Hotspots of Powerful Galaxies and Quasars", M. Georganopoulos & D. Kazanas, Ap J. Lett. 589, L5.

78. 2003 "Cosmic Rays and Large Extra Dimensions", D. Kazanas & A. Nicolaidis, *General Relativity and Gravitation*, 35, 1117.
79. 2003 "Broad Red-Shifted Lines as Signature of Outflows", L. G. Titarchuk, D. Kazanas P. Becker, *ApJ*, 598, 411.
80. 2003 "Decelerating Flows in TeV Blazars: A Resolution to the BL Lacertae-FR I Unification Problem" M. Georganopoulos and D. Kazanas, *ApJ*, 594, L27
81. 2003 "Relativistic Flows at the Hotspots of Radio Galaxies and Quasars?", Markos Georganopoulos and D. Kazanas, *New Astron. Rev.*, 47, 653
82. 2004 "Competition between Gravitational and Scalar Radiation" D. Kazanas and V. L. Teplitz. *ApJ*, 602, 111
83. 2004 "Witnessing the Gradual Slowdown of Powerful Extragalactic Jets: The X-Ray-Optical-Radio Connection", M. Georganopoulos and D. Kazanas *ApJ*, 604, L81
84. 2004 "Neutrino Mass, Dark Matter and Inflation", D. Kazanas, R. N. Mohapatra, S. Nasri, and V. L. Teplitz, *Phys. Rev. D*, 70, 033015
85. 2005 "Long-Lag, Wide-Pulse Gamma Ray Bursts", Norris, J. P., Bonnell, J. T., Kazanas, D., Scargle, J. D., Hakkila, J. and Giblin, T. W. *ApJ*, 627, 324
86. 2005 "Bulk Comptonization of the CMB by Relativistic Jets as a Probe of their Matter Content", Georganopoulos, M., Kazanas, D., Perleman, E and Stecker F.W., *ApJ* 625, 656
87. 2005 "Fourier Resolved Spectroscopy of the XMM Observations of MCG 06-30-15", Papadakis, I. E, Kazanas, D. and Akylas, A. *ApJ*, 631, 727
88. 2005 "The source of the TeV emission of M87" M. Georganopoulos, E. Perlman and D. Kazanas, 634, L33
89. 2005 "Non-Singular Black Hole Model as the Possible End Product of Gravitational Collapse" Manasse Mbonye and D. Kazanas, *Phys. RevD.*, 72b, 024016
90. 2005 Teplitz, V. L, Kazanas, D. & Herring, E. T. "Double Header: (1) Quark Nugget. (2) Quinton Radiation" *New Ast. Rev.*, 49, 119
91. 2006 Reig, P., Papadakis, I. E., Shrader, C. R. and Kazanas, D. "Fourier Resolved Spectroscopy of 4U 1543-34 During its 2002 Outburst", *ApJ* 644, 424
92. 2006 Mastichiadis, A. and Kazanas D. "The Supercritical Pile Model of GRB: Spectro-Temporal Properties" *ApJ* 645, 416
93. 2006 Georganopoulos, M., Perlman, E. Kazanas, D. & McEnery J. "Quasar X-ray Jets: Diagnostics of the Synchrotron and Inverse Compton Hypotheses: The Case of 3C 273, *ApJ*, 653, L5.
94. 2006 Contopoulos, J, Kazanas, D. and Christodoulou, D. "The Cosmic Battery Revisited" *ApJ*, 652, 1451.
95. 2006 Papadakis, I. E., Ioannou, Z., Kazanas, D., *Astronische Nachrichten*, 327, 1047

96. 2007 Ganguly, R. et al. , "Hubble Space Telescope Ultraviolet Spectroscopy of 14 Low-Redshift Quasars", *Astron. Journal*, 133, 479
97. 2007 Papadakis, I. E., Ioannou, Z., Kazanas, D., "Fourier-Resolved Spectroscopy of Active Galactic Nuclei Using XMM-Newton Data. I. The 3-10 keV Band Results" 661, 38.
98. 2007 Fukumura, K. and Kazanas, D. " Accretion Disk Illumination in Schwarzschild and Kerr Geometries: Fitting Formulae", *ApJ*, 664, 14
99. 2007 Mbonye, M. and Kazanas, D. "Can gravitational collapse sustain singularity-free trapped surfaces?", *Int. J. Mod. Phys.* (in press; arXiv: 07082360).
100. 2007 Shrader, C. R.; Reig, P.; Kazanas, D., " Fourier-Resolved Spectroscopy of 4U 1728-34: New Insights into Spectral and Temporal Properties of Low-Mass X-Ray Binaries", *ApJ*, 667, 1063.
101. 2007 Fukumura, K. and Kazanas, D., "Mass Outflows from Dissipative Shocks in Hot Accretion Flows", *ApJ*, 669, 85.
102. 2008 Fukumura, K. and Kazanas, D., " Light Echoes in Kerr Geometry: A Source of High Frequency QPOs from Random X-ray Bursts", *ApJ*, 679, 141 (arXiv:0712.1084).
103. 2008 Christodoulou, D., Contopoulos, I. And Kazanas, D., "Simulations of the Poynting - Robertson Cosmic Battery in Resistive Accretion Disks" (*ApJ*, 674, 388)
104. 2008 Mbonye, M and Kazanas, D. "Can Gravitational Collapse Sustain Singularity-Free Trapped Surfaces?" *Int. Jour. Mod. Phys. D.* 17, 165.
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