

KONSTANTINOS D. KOKKOTAS

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&
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Aristotle University of Thessaloniki, Greece

CURRICULUM VITAE

October 2010

1 PERSONAL DATA

SURNAME : **Kokkotas**
NAME : **Kostas** (Konstantinos)
DATE OF BIRTH : 27/2/1959
PLACE OF BIRTH : Thessaloniki, Greece
NATIONALITY : Greek
WORK ADDRESS : Theoretical Astrophysics (TAT)
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2 DEGREES

- **Bachelor in Mathematics**, Aristotle University of Thessaloniki, 1981
- **Master of Science**, Department of Applied Mathematics and Astronomy, University of Wales, 1985.
- **PhD in Physics**, Department of Physics, Aristotle University of Thessaloniki, 1988.

3 RESEARCH APPOINTEMENTS

- **Scientific Collaborator**, Department of Physics, Aristotle University of Thessaloniki, (March 1982 – March 1988)
- **Post-Graduate Student**, Department of Applied Mathematics and Astronomy, University of Wales, U.K. (September 1984 –September 1985)
- **Honorary Visiting Research Fellow**, Department of Applied Mathematics and Astronomy, University of Wales, U.K. (September 1985 - December 1986).
- **Scientific Collaborator**, Department of Physics, Aristotle University of Thessaloniki, (October 1989 – August 1990).
- **Lecturer**, Department of Physics, Aristotle University of Thessaloniki, (August 1990 - April 1994).
- **Assistant Professor**, Department of Physics, Aristotle University of Thessaloniki, (April 1994 - November 1999).
- **Associate Professor**, Department of Physics, Aristotle University of Thessaloniki, (November 1999 – June 2007).
- **Professor**, Department of Physics, Aristotle University of Thessaloniki, (June 2007).
- **Professor**, Theoretical Astrophysics, Eberhard Karls University Tuebingen, Germany (April 2006)
- **Adjunct Professor**, Department of Physics, Georgia Institute of Technology, USA (since October 2010)

4 TEACHING

4.1 Courses

- I have given tutorial courses for many subjects (**Astronomy, Applied Mathematics, Theoretical Physics, Computing** etc.) both in the Department of Physics (Thessaloniki) and in the Department of Applied Mathematics and Astronomy (Cardiff) during the 1980s.
- I was teaching from 1993 till 2007 the course “**Calculus I**” for the 1st year students of the Department of Physics, Aristotle University of Thessaloniki.
- I was teaching from 1990 till 2007 the course “**General Relativity**” for the 4th year students of the Department of Physics, Aristotle University of Thessaloniki.
- I was teaching from 1990 till 2007 the course of “**Numerical Analysis**” for the 3rd year students of the Department of Physics, Aristotle University of Thessaloniki.
- I was teaching from 1998 till 2004 the course of “**Mathematical Methods in Physics**” (mainly numerical solution of PDE) for the post-graduate students of the Department of Physics, Aristotle University of Thessaloniki.
- I was teaching from 1998 till 2009 the course of “**Computational Physics**” for the 4th year students of the Department of Physics, Aristotle University of Thessaloniki.
- I was teaching from 2004 till 2007 the course “**Computational Mathematics**” for the M.Sc. program “Computational Physics” of the Department of Physics, Aristotle University of Thessaloniki.
- I teach since 2007 the course “**Black Holes, Neutron Stars and Gravitational Waves**” for the Physics students of Eberhard Karls University Tuebingen.
- I teach since 2007 the course “**Introduction to General Theory of Relativity**” for the Physics students of Eberhard Karls University Tuebingen.
- I teach since 2007 the course “**Computational Methods in Physics**” for the Physics students of Eberhard Karls University Tuebingen.
- I was teaching in 2008 & 2010 the course “**Field Theory**” for the Physics students of Eberhard Karls University Tuebingen.

4.2 Doctoral and Diploma Theses Students

- Dr A. Stavridis got his PhD under my supervision in 2004.
- Dr M. Vavoulidis got his PhD under my supervision in 2007.
- Dr. E. Gaertig got his PhD under my supervision in 2008.
- S. Konstantinidis expected to finish in 2010
- A. Colaiuda expected to finish in 2010
- B. Willburger expected to finish in 2011
- D. Doneva expected to finish in 2011
- I have supervised 18 Diploma Theses.
- I am a member of the advisory committee for 5 PhD students.

4.3 Post-Doctoral Researchers

- **Past**
 1. **Dr. Johannes Ruoff** (PhD Tuebingen) April 2000- April 2002 (Marie Curie Fellowship)
 2. **Dr. Emanuele Berti** (PhD Rome) November 2001 – January 2004 (TMR Network)
 3. **Dr. Ulrich Sperhake** (PhD Southampton) November 2001 – September 2002 and July-September 2003 (TMR Network)

4. **Dr. Andrea Passamonti** (PhD Portsmouth) October 2005-October 2007 (Virgo Detector (VESF) Fellowship)
 5. **Dr. Adamantios Stavridis** (PhD Thessaloniki) October 2005-August 2007 (Pythagoras Fellowship)
 6. **Dr Hajime Sotani** (PhD Tokyo) March 2006-March 2008 (Marie Curie Fellowship)
 7. **Dr. Wolfgang Kastaun**, (PhD Tuebingen) September 2007- November 2009 SFB/TR7
 8. **Dr Hajime Sotani** (PhD Tokyo) March 2008-March 2010 SFB/TR7
- **Current**
 1. **Dr Kostas Glampedakis** (PhD Cardiff) SFB/TR7 October 2008- December 2010 SFB/TR7
 2. **Dr. Erich Gaertig** (PhD Tuebingen) December 2008 – August 2011 (SFB/TR7, VESF)
 3. **Dr. Bukhard Zink** (PhD Munich) September 2009- September 2011 SFB/TR7
 4. **Dr. Paul Lasky** (PhD Melbourne) June 2009 – September 2011 (Humboldt)
 5. **Dr. Roman Konoplya** (PhD Kiev) November 2009 – September 2011 (Humboldt)
 6. **Dr. Efstratios Boutloukos** (PhD Tuebingen) December 2010-December 2012 (Humboldt)
 7. **Dr. Andrea Passamonti** (PhD Portsmouth) October 2010- October 2011

4.4 Teaching Material – Translation of Books – Editorial

- I have translated in Greek the book *The Natural History of the Universe* by Colin Ronan (1993).
- I was Science Editor for the book *“The Natural History of Life”* (1995).
- I have written Lecture Notes for undergraduate students in General Theory of Relativity.
- I have completed the writing of a textbook in *Numerical Analysis with Applications (in Greek)*. Publication is due in 2010.
- I have written Lecture Notes for the course Computational Physics, mainly related to numerical solution of PDEs.

4.5 Book Reviews

I have reviewed the book ***Gravity’s Fatal Attraction*** by M. Begelman and M. Rees for the Journal *“Celestial Mechanics and Dynamical Astronomy”*.

5 RESEARCH ACTIVITY

5.1 Research Interests

My research interests vary from Relativistic Astrophysics to Mathematical Physics; though, my work in Relativistic Stellar Oscillations and Instabilities is the most innovative one.

- **Geometrical Properties of Black Holes**
- **Black Hole Perturbations**
- **Perturbations of Relativistic Stars**
- **Rotational Instabilities of Relativistic Stars**
- **Detection of Gravitational Waves**
- **Binary Systems**
- **Data Analysis**
- **Mathematical Physics**

5.2 Seminars

Invited Speaker in Conferences and Workshops

International

1. **Relativistic Stars**, Summer School in *Astrophysical Sources of Gravitational Radiation*, Les Houches, France, 26/9 - 6/10/1995 (**invited review talk**).
2. **Estimation of Parameters of Pulsating Relativistic Stars** in *Gravitational Wave Workshop*, IUCAA, Pune, India, 9 – 12/12/1995 (**invited talk**).
3. **Gravitational Waves from Pulsating Stars: What can we learn from future observations?** in *VIRGO International Conference on Gravitational Waves: Sources and Detectors*, Cascina (Pisa), Italy, 19 – 23/3, 1996 (**invited talk**).
4. **Gravitational Waves from Pulsating Stars** in *Mathematical Aspects of Theories of Gravitation*, Warsaw, Poland, 26/2 – 30/3 1996 (**invited review talk**).
5. **Astrophysical Gravity Wave Signals for Resonant Detectors** in *Workshop on the Development of Resonant Gravitational Wave Detectors*, NIKHEF, Amsterdam 11-12/1997 (**invited review talk**).
6. **Perturbations of Spherical Stars without Modal Decomposition**, in Workshop on Neutron Star Dynamics and Gravitational Wave Emission, Potsdam, 11-15/5/1998 (**invited talk**).
7. **Tricks of the Trade: A Moderate Cataloguing and Exposition of Approximation Methods and Numerical and Analytic Tools** in *Workshop on Neutron Star Dynamics and Gravitational Wave Emission*, Potsdam, 11-15 May 1998 (**invited review talk**).
8. **Gravitational Waves**, in ASI-NATO School, *From Cosmology to Quantum Gravity*, Karpacz, Poland, 2-12/2/1999 (**3 invited review talks**).
9. **Excitation of Stellar Oscillation by Scattered Particles: Axial Perturbations** in *Gravitational Waves 2000*, Trieste, 5-9/6/2000 (**invited talk**).
10. **Oscillations and Instabilities of Relativistic Stars** in *SIGRAV Conference on General Relativity and Gravitational Physics*, Genova, 18-22/9/2000 (**plenary talk**).
11. **Instabilities of Relativistic Stars** *25th Johns Hopkins Workshop on Current Problems in Particle Theory*, Firenze, September 3-5, 2001 (**plenary talk**).
12. **Oscillations and Instabilities of Relativistic Stars**, JENAM-2001, Munich, Germany, September 12-16, 2001 (**review talk**).
13. **Oscillations and Instabilities of Relativistic Stars**, in “Gravity, Astrophysics & Strings - GAS2002”, Kitten, Bulgaria, June 10-16, 2002 (**2 review talks**).
14. **Gravitational Wave Asteroseismology**, in conference “The Relativistic Universe”, September 16-17 2002, Portsmouth, UK (**invited review talk**).
15. **Neutron Star Pulsation Modes**, in the workshop “Gravitational waves from Neutron Stars” October 24-28 2002, Penn State, USA (**invited review talk**).
16. **High Frequency Gravitational Wave Sources**, in the workshop “High Frequency Gravitational Wave Sources”, 8-9/11/2002 Trieste (**invited review talk**).
17. **High Frequency sources of Gravitational Waves**, in 5th Edoardo Amaldi Conference, Piza 7-12 July (2003) (**invited review talk**).
18. **Gravitational Waves**, in the Summer School “Particle and Nuclear Astrophysics” Nijmegen, The Netherlands, August 17-29 (2003) (**3 review talks**).
19. **Gravitational Waves and Gamma-Ray Sources**, in **TAUP 2003**, 8th International Workshop on Topics in Astroparticle and Underground Physics, September 5-9, 2003 Seattle, USA (**review talk**).
20. **Stellar Perturbation Theory**, in “SISSA International School for Advanced Studies” SISSA, Trieste Italy, September 15-20, 2003 (**2 review talks**).

21. **High Frequency Sources of Gravitational Waves** in the workshop “ “ SISSA, Triesty, Italy September 22-27, 2003 (review talk)
22. **Oscillations and Instabilities of Relativistic Stars** in the 2nd International Aegean School, Syros, Greece, September 22-30, 2003 (review talk)
23. **Gravitational Waves: Theory and Sources** in International Astroparticle School, L’Equila-Gran Sasso, Italy 28/6-9/7/2004 (2 review talks)
24. **Stellar Instabilities** in “Looking for a needle in a haystack”, Frascati, Italy 7-10/9/2004 (2 review talks)
25. **Compact Objects as Sources of Gravitational Waves**, in 5th International Workshop “New Worlds in Astroparticle Physics“, Faro, Portugal 8-10/1/2005 (review talk)
26. **Gravitational Waves: Theory and Sources** in International School of High Energy Physics, Heraclion, Greece 5/9-23/10/2005 (review talks, 6 hours)
27. **Gravitational Wave Asteroseismology** in "Einstein Week", 26-29/9/2005, in Jena, Germany. (review talk)
28. **Gravitational Waves and Related Studies** in “2nd ILIAS-GW Meeting”, 24-25/10/2005, Palma de Mallorca, Spain.
29. **Gravitational Wave Theory for Experimentalist** in 3rd ILIAS Annual Meeting, Gran Sasso 27/2-3/3/2006 (review talk)
30. **Rotating Neutron Stars as Sources of Gravitational Waves** in the XXIX Spanish Relativity Meeting, Palma de Mallorca, 4-7/9/2006 (review talk)
31. **Oscillations and Instabilities of Relativistic Stars** in the Gravitational Wave data Analysis Workshop, Paris 13-19/11/2006
32. **Status of Gravitational Wave Research** in 3rd Annual Meeting ILIAS/N6- ENTApP - European Network on Theoretical Astroparticle Physics, Paris 12- 14/12/2006
33. **Magnetized Stars, their relation to GRBs and to Gravitational Waves**, in *Problemi Attuali di Fisica Teorica*, 30/3-4/4/2007, Vietri, Italy
34. **Gravitational Wave Physics** XLVII Cracow School of Theoretical Physics, June 14 -22, 2007, Zakopane, Poland
35. **Gravitational Waves from Compact Objects** International Summer School on Theoretical Gravitational Wave Astronomy August 20-24, 2007, Bad Honnef, Germany
36. **INPE Advanced Course - II Compact Objects** September 10-14, 2007 São José dos Campos, SP Brazil
37. **Quasi Normal Modes of Black Holes**, 4th Aegean Summer School on Black Holes, Lesvos, Greece 17-22 September 2007.
38. **Future Resarch on Gravitational Waves from Compact Objects** , SFB/TR7 Meeting Garching, Germany 23-24 September 2007
39. **Gravitational Wave Astronomy**, in Cosmic Matter, 24-29 September 2007, Wuerzburg
40. **Status of Gravitational Wave Research** in 4th Annual Meeting ILIAS/N6 - ENTApP - European Network on Theoretical Astroparticle Physics, Hamburg - DESY 4-6/3/2008
41. **Gravitational Waves from Compact Stars** in the Annual DPG meeting, Freiburg 4-8/3/2008
42. **Compact Stars as Sources of Gravitational Waves**, Post-Newtonian-2008, June 11-14, Jena
43. **Introduction to General Theory of Relativity and Relativistic Astrophysics** 20th Summer School on Black Holes, Heraclion, Crete 5-10/7/2008 (4 Lectures)
44. **Gravitational Waves from Isolated Sources** 6th ILIAS annual meeting, Dresden 16-20/2/2009
45. **Neutron Star Dynamics**, Inaqueral meeting Atlanta 19-21 May 2009
46. **Gravitational Waves from Isolated Sources** 4th VESF School on Gravitational Wave Sources and Detection, Pisa, Italy May 24-20th 2009 (2 Lectures)
47. **Status of the Gravitational Wave Research** 7th Balcan Physics Union Conference, Alexandroupolis, Greece 9-13 September 2009
48. **Gravitational Waves from isolated Sources** 1st Mediterranean Conference on Classical and Quantum Gravity, Chania, Greece 14-19 September 2009
49. **Neutron Star Dynamics** in Gravitational Wave Bursts, Chichen-Itza, Yucatan, Mexico, December 9-11, 2009

50. **Neutron Star Dynamics & Gravitational Waves**, in "Physics of Neutron Stars as Gravitational Wave Sources" Rome, 25/01/2010
51. **Gravitational Waves from Isolated Sources** 5th VESF School on Gravitational Wave Sources and Detection, Sexten, Italy July 26-30th 2010 (2 Lectures)
52. **Neutron Stars and Gravitational Waves** Annual Meeting of Astronomische Gesellschaft Bonn 13-17.9.2010
53. **Neutron Star Dynamics** 32nd Course in "Particle and Nuclear Astrophysics" Erice, Sicily 16-24.9.2010
54. **Neutron Stars and Gravitational Waves** in "Multimessenger Emissions from Sources of Gravitational Waves", 29/11-3/12/2010 Sao Sebastiao, Brazil
55. **High frequency sources of gravitational waves** in "25th Texas Symposium on Relativistic Astrophysics", Heidelberg, Dec 6-10 2010

National

56. **Gravitational Wave Astronomy: a New Window into the Universe**, General Assembly of the Greek Astronomical Society, June 18th 2002, Athens, Greece (invited talk).
57. **Astrophysical Consequences of the R-mode Instability**, in Recent Developments in Gravity VIII, Samos, Greece, 26-29/8/1998 (invited speaker).
58. **Gravitational Waves**, in the 2nd Symposium of the Union of Greek Physicists 4-6 April 2003, Igoumenitsa, Greece (invited review talk)
59. **Black holes and Gravitational Waves** 2009 Year of Astronomy Celebration, Athens, Greece, May 15-17th 2009
60. **Neutron Star Dynamics & Gravitational Waves** 9th Hellenic Astronomical Conference, Athens, Greece, 20-24 September 2009
61. **Gravitational Wave Astronomy** 9th Physics Symposium "Research Challenges in Physics" Plastira Lake, Greece, 20-22 November 2009
62. **General Relativity as a tool to study the Universe**, in "13th Conference of the Greek Physicists Association" Patras, 17-21/03/2010
63. **Current status of Gravitational Wave research** in XXVIII Workshop on Recent Advances in Particle Physics and Cosmology, Thessaloniki 25-28/03/2010
64. **The Theory of Relativity as a tool to study the Universe**, in "14th Conference New Developments in Gravity", Ioannina, Greece 8-11/6/2010

Seminars at Departments & Institutes

1. **Normal Modes of Pulsating Relativistic Stars**, Department of Physics, Warsaw University, Poland, 17/10/1991.
2. **Pulsating Relativistic Stars**, 10/12/1991, Observatoire de Paris-Meudon, France.
3. **Stellar Perturbations**, Department of Physics, Friedrich Schiller University, Jena, Germany, 13/3/1996.
4. **Pulsating Relativistic Stars**, Albert Einstein Institute, Potsdam, Germany, 12/6/1996.
5. **What can we learn from the observation of pulsating relativistic stars**, Albert Einstein Institute, Potsdam, Germany, 23/4/1997.
6. **Gravitational Waves and Pulsating Relativistic Stars**, Center for Relativity, Penn State University, USA, 19/3/1998.
7. **Oscillations and Instabilities in Relativistic Stars**, Department of Physics, University of Rome "La Sapienza", 10/6/1999.
8. **Instabilities in Relativistic Stars**, Institut fuer Astronomie und Astrophysik, University of Tuebingen, 8/3/2000.
9. **The existence of a continuous spectrum in rotating relativistic stars**, Department of Physics, University of Rome "La Sapienza", 23/2/2001.

10. **High frequency sources of gravitational waves**, Department of Physics, University of Rome "Tor Vergata", 25/10/2001.
11. **Gravitational Waves**, Department of Physics, National Technical University of Athens, 1/3/2002
12. **Gravitational Waves from Unstable Strange Stars**, Institut fuer Astronomie und Astrophysik, University of Tuebingen, 18/07/2002
13. **Gravitational Wave Asteroseismology**, Center for Gravitational Wave Research, Pennn-State University, USA 4/11/2002
14. **Gravitational waves a new window into the Universe**, Department of Physics, University of Ioannina, Greece (22/10/2003)
15. **High frequency sources of gravitational waves**, Department of Physics, University of Lisbon, Portugal (19/12/2003)
16. **Black Hole Entropy and QNMs**, Center for Gravitational Wave Research, Penn-State University, USA 10/02/2004
17. **Rotating Relativistic Stars: Recents Progress**, Center for Gravitational Wave Research, Penn-State University, USA 6/5/2004
18. **Gravitational Waves: A new Window into the Universe**, Department of Physics, University of Crete, Greece 18/11/2004
19. **Oscillations and Instabilities of Compact Stars and Black Holes**, Department of Physics, University of Crete, Greece 19/11/2004
20. **Recent Progress in Gravitational Wave Asteroseismology** Institut fuer Astronomie und Astrophysik, University of Tuebingen, 26/07/2005
21. **Neutron Stars and Gravitational Waves** Department of Physics, University of Tuebingen, 28/10/2005
22. **Gravitational Waves: A new Window into the Universe**, Department of Physics, University of Athens, 10/11/2005.
23. **Gravitational Waves** National Technical University of Athens 4/4/2006
24. **Gravitational Waves: A new Window into the Universe**, Department of Physics, University of Patras, Greece, 31/10/2006.
25. **Gravitational Wave Astronomy**, Academy of Athens, 4.12.2007, Athens
26. **Gravitational Wave Astronomy**, Department of Physics, Carl von Ossietzky University Oldenburg, 08.02.2008
27. **Gravitational Wave Astronomy**, Institut für Theoretische Astrophysik / Zentrum für Astronomie der Universität Heidelberg 13.05.2008
28. **Neutron Star Dynamics**, Max-Planck Institute for Radioastronomy, Bonn. Germany 12th June 2009
29. **Recent Progress in Neutron Star Dynamics** Georgia Institute of Technology, 14th May 2010
30. **Neutron Stars: Cosmic laboratories for theoretical and computational physics** Georgia Institute of Technology, 6th October 2010
31. **Neutron Star Dynamics**: Oxford, Misissippi, October 12, 2010

Talks at International Conferences

1. **W-modes: A New Family of Normal Modes for Pulsating Relativistic Stars**, in *10th Seminar in Relativistic Astrophysics and Gravitation*, Potsdam, 20-26/10/1991.
2. **What is a Strongly Damped Mode in Stellar Oscillations**, in *6th Gregynog Relativity Workshop*, Gregynog, Wales, 23-26/8/1993.
3. **Parameter Estimation from Pulsating Relativistic Stars**, *JENAM-97*, Kallithea, Chalkidiki, Greece 2-5/7/1997.
4. **Gravitational Waves and Pulsating Relativistic Stars**, in *GR15*, Puna, 16-21/12/1997.
5. **Gravitational Waves and Pulsating Relativistic Stars**, *Nickel & Dime workshop*, Syracuse 28-29/3/1998.

6. **Oscillations and Instabilities in Relativistic Stars**, in *Journées Relativistes 99*, Weimar, 12-17/9/1999 (invited talk).
7. **Oscillations and Instabilities in Relativistic Stars**, *Applied Differential Geometry, Lie Algebras – General Relativity*, Thessaloniki 27/8-2/9/2000.
8. **Instabilities of Rotating Relativistic Stars**, *Applied Differential Geometry, Lie Algebras – General Relativity*, Thessaloniki 27/6-1/7/2001.
9. **Do the r-modes really exist?** GR16, Durban, South Africa 16-22/7/2001.
10. **Non-linear oscillations of compact stars and gravitational waves, synergy between the non-linear perturbation methods and numerical relativity** in 2nd VESF meeting, Pisa 31/3-1/4/2005
11. **Probing scalar-tensor theory of gravity via gravitational wave asteroseismology** in 1st ENTApP meeting Valencia, Spain (11-15/4/2005)
12. **Gravitational Waves from Compact Objects** in GAS2005, Kiten, Bulgaria 12-19/6/2005
13. **Spacetime modes of relativistic stars. New Developments in Gravity XII**, June 29-July 2/2006 Nafplion, Greece
14. **Nonlinear & non-axisymmetric oscillations of differentially rotating neutron stars** Gravitational Wave Advanced Detector Workshop in La Biodola, Isola d'Elba, Italy 12-18/5/2008
15. **Oscillations and Instabilities of Fast Rotating Neutron Stars. New Developments in Gravity XIII**, June 3-6/2008 Thessaloniki, Greece

Talks at National Conferences

1. **Geometrical and Physical Properties of the Black Hole Ergoregions**, *New Developments in Gravity I*, June 1984, Crete
2. **Quasi Normal Modes of Black Holes**, *New Developments in Gravity III*, September 1988, Ioannina
3. **Oscillating Relativistic Stars**, *New Developments in Gravity IV*, June 1990, Thessaloniki
4. **W-modes: a New Family of Modes for Pulsating Relativistic Stars**, *New Developments in Gravity V*, June 1992, Crete
5. **Strongly Damped Modes for Pulsating Relativistic Stars: W and Axial Modes**, 1st Greek Astronomical Conference, September 1992, Athens.
6. **Sources and Methods of Detection of Gravitational Waves**, *New Developments in Gravity VI*, September 1994, Patras.
7. **Tidal Interaction and Resonances in Coalescing Binary Systems**, *New Developments in Gravity VI*, September 1994, Patras.
8. **On Estimation of the Post-Newtonian Parameters in the Gravitational-Wave Emission of a Coalescing Binary**, 2nd Greek Astronomical Conference, July 1995, Thessaloniki.
9. **Oscillating Stars and Gravitational Waves**, *New Developments in Gravity VII*, September 1996, Athens.
10. **Oscillations and Instabilities of Relativistic Stars**, *New Developments in Gravity IX*, August 2000, Ioannina.
11. **Strange stars as persistent sources of gravitational waves**, *New Developments in Gravity X*, June 2002, Kalithea, Chalkidiki.
12. **Instabilities of Relativistic Stars: two new problems. New Developments in Gravity XI**, June 2-5/2004 Lesvos, Greece
13. **Sources of Gravitational Waves**, Thessaloniki 23-29 August 2004

Internal Major Colloquia

1. **Gravitational Waves**, Tuebingen 28/11/2007
2. **Gravitational Waves a new window into the Universe**, 14/3/2007 Thessaloniki,
3. **Gravitational Waves and Neutron Stars**, Tuebingen, 30/5/2008

Public Talks

1. **Black Holes and Gravitational Waves**, 08/12/2006 *Naousa*
2. **Gravitational Waves a new window into the Universe**, 28/3/2007 Thessaloniki, Union of Greek Physicists
3. **General Relativity: Past – Present – Future** , 06/04/2008 Volos
4. **Gravitational Waves a new window into the Universe**, Tuebingen, 20/5/2008
5. **Was Einstein Right?** in Interdisciplinary Science Collaboration, Thessaloniki, Greece 26-27/11/2008
6. **20 yeas of Hubble space telescope**, Thessaloniki 10/5/2010
7. **Einstein’s Universe** NEB-14, Ioannina, Greece 8-11 June 2010

Participation in International Conferences

1. **Early Universe and its Present Structure**, IAU Symposium No 104, Crete, 1-4/9/1982.
2. **4th Gregynog Relativity Workshop**, Gregynog, Wales, 23-26/9/1984.
3. **Gravitation en Astrophysique**, Cargese, Corsica, 15-31 July 1986.
4. **4th CESRA Workshop**, Ouranoupolis-Halkidiki, Greece, June 1991.
5. **STEP Workshop**, DASA Ottoburn, Germany, 21 April 1993.
6. **EADN Astrophysics School VI**, Thessaloniki, 13-23/7/ 1993.
7. **7th Gregynog Relativity Workshop**, Gregynog, Wales, 20-24/8/ 1995.
8. **CQG Meeting**, London, 20-9-2002
9. **Source Simulation and Data Analysis Workshop**, Penn State, 28-30/10/2002
10. **Burst sources of GWs and EU meeting**, Paris, 19-22/5/2003
11. **100 yeas of Relativity**, Golm 6-11/4/2005
12. **12th Marcel Grossman**, Paris 12-18 July 2009

5.3 Memberships

Elected Member

1. I am the **Secretary** of the *European Gravitational Physics Section* of the European Physical Society since 2001.
2. I was **member** of the Examiners Committee of the Hellenic Astronomical Society
3. I was **member** of the Governing Committee of the Hellenic Astronomical Society 2004-2006
4. I was **vice president** of the Hellenic Astronomical Society 2006-2008
5. I am **member** of the Executive Board of VESF (Virgo Ego Scientific Forum)
6. **Member** of the Governing Council of the International Society of General Relativity and Gravitation
7. **Chairman** of the “Hellenic Society for General Relativity, Gravitation and Cosmology” since 2010

Member

1. The Royal Astronomical Society (since 1985).
2. The International Society on General Relativity and Gravitation (since 1985).
3. International Astronomical Union (IAU), Commission 47 (since 1990).
4. Hellenic Astronomical Society (since 1994, founding member)
5. LIGO Research Community (since 1995)
6. European Astronomical Society (since 1998)
7. Gravitational Physics Section of the EPS (since 2001, founding member)
8. Hellenic Physical Society (since 2003, honorary member)

9. Virgo-Ego Scientific Forum (VESF) (since 2004)
10. German Astronomical Society (since 2007)
11. German Physical Society (since 2009)
12. Hellenic Society for General Relativity, Gravitation and Cosmology (since 2010, founding member)

5.4 Scholarships

I have been funded by the following organizations:

- NATO (1986)
- Science and Engineering Research Council (SERC) (1990, 1994)
- Observatories Paris-Mendon (1991)
- Max-Planck Society (1992, 1993, 1996, 1997, 1998, 1999, 2000, 2001)
- Polish Academy of Sciences (1993)
- Royal Mathematical Society (1993)
- British Council (1993, 1998)
- DAAD (1995)
- INFN (1999, 2000, 2001)
- ...

5.5 Research Grants

I have been the Principal Investigator (PI) for the following research programs:

- **PAST**
 1. Scientific collaboration between the Greek General Secretariat of Research and the British Council; 1995-97. PI for the British side: Prof. B.F. Schutz (Cardiff), **€8,800**.
 2. **Collaborative Research Grant** (NATO), 1996-98. PI for the American side: Prof. P. Laguna (Penn-State), **€12,000**.
 3. I was funded for an exchange program with Poland (1991, 1995) with Dr. A. Krolak and India with Prof. S. Dhurandhar (1997).
 4. I was the PI for a Postdoctoral Fellowship from the **5th Framework Program Marie Curie Fellowships** (2000 - 2002) for Dr. Johannes Ruoff, **€116,300**.
 5. I was the PI for the Thessaloniki node of a Research Network of 10 European Institutes funded by the **5th Framework Program**, for the period 2000-2003, **€162,150**.
 6. I got a research grant of **€34,200** for a PhD student (Program Heraclitus) for the period 2003-2007
 7. I was the PI for the program PYTHAGORAS program 2005-2007 (**€69,000**)
 8. I was the PI for a Postdoctoral Fellowship from the **5th Framework Program Marie Curie Fellowships** (2006 - 2008) for Hajime Sotani, (**€140,000**).
 9. I was the PI for a Postdoctoral Fellowship from VESF (Gravitational Wave Detector Virgo), for 2 years (2005–7) for Dr. Andrea Passamondi (**€75,000**).
 10. I was responsible for the Gravitational Waves part (1/3 of the theory part of the project) of European Network of 87 Universities and Research Institutions from the EU action "Structuring the European Research Area-Support for Research Infrastructures". The Network is on Theoretical Astroparticle Physics it will last 6 years (2004-09) with a budgeted of **€7,480,000**. I have responsibility to use/distribute about **€170,000**.
- **RUNNING**
 1. DFG/TR7 grant for the period 1/10/2007 – 31/12/2010 (**€640,000**)
 2. 4 Humboldt Fellowship Grants (Dr. K. Glampedakis, Dr. Paul Lasky, Dr. Roman Konoplya, Dr. Ef. Bouloukos) 2009-2011 ((**€400,000**))

3. I am the PI for a Postdoctoral Fellowship from VESF (Gravitational Wave Detector Virgo), for 2 years (2009–11) for Dr. Erich Gaertig (**€70,000**).
4. I am the PI for a Prefoctoral Fellowship from Cusanuswerk, for 3 years (2008–11) for Ms. Beatrix Willburger (**€80,000**).
5. 3 long term DAAD visiting grants (Prof. D. Papadopoulos, Mr. R. Fontana, Ms. D. Doneva) (**€55,000**).
6. DFG/TR7 grant for the period 1/1/2011 – 31/12/2014 (**€700,000**)

5.6 Organizing Committee of Scientific Conferences

International

1. **Member** of the Scientific Organizing Committee of the Summer School in Les Houches “Astrophysical Sources of Gravitational Radiation”, France, September 1996.
2. **Coordinator** of the Workshop for Gravitational Radiation, at the International Conference on Gravitation and Cosmology, Puna, India, December 1995.
3. **Member** of the Organizing Committee of JENAM-97, Chalkidiki, Greece, July 1997.
4. **Coordinator** of the Workshop on Cosmology and Relativity for JENAM-97, Chalkidiki, Greece, July 1997.
5. **Chairman** of the organizing committee of the 2nd EU Network Meeting, Chalkidiki, Greece, June 2001.
6. **Member** of the organizing Board of the Workshop on Gravitational Physics for JENAM-01, Munich, September 2001.
7. **Co-Chairman** of the Scientific Organizing Committee of the Black Sea Relativity Conference, Bulgaria, June 2002.
8. **Member** of the Scientific Organizing Committee of the Advanced School “Sources of Gravitational Waves” in Trieste, September 2003
9. **Member** of the Scientific Organizing Committee of the Black Sea Relativity Conference, “Gravity, Astrophysics, and Strings @ the Black Sea”, Kiten, Bulgaria, 10-16 June 2004.
10. **Member** of the Scientific Organizing Committee of the 1st ENTApP meeting, Valencia 12-16/4/2005.
11. **Member** of the Scientific Organizing Committee of the Black Sea Relativity Conference, “Gravity, Astrophysics, and Strings @ the Black Sea”, Kiten, Bulgaria, 11-17 June 2005.
12. **Member** of the Organizing Committee of the “Einstein Year Workshop on Cosmology and Gravitational Physics” December 2005
13. **Member** of the Scientific Organizing Committee of “ILIAS Meeting on Gravitational Waves”, Paris 23-24/1/2006.
14. **Member** of the Scientific Organizing Committee of the 3rd ILIAS Annual Meeting, Gran Sasso 27/2-3/3/2006.
15. **Member of the Organizing Committee** of the “The Schutz Symposium on Gravitational Waves and Relativistic Astrophysics” 24 – 26/8/2006, Santorini Island, Greece
16. **Member of the Board of the Organizing Committe** of the « 3rd VESF School on Gravitational Waves» May 5th-9th 2008, Cascina, Italy
17. **Member of the Board of the Scientific Committe** of the «Neutron Stars as Sources of Gravitational Waves» April 21st-24th 2009, Monte Porzio, Catone (Rome, Italy), Italy
18. **Member of the Board of the Organizing Committe** of the « 4th VESF School on Gravitational Waves» May 25th-30th 2009, Cascina, Italy
19. **Organizer** of the session on «Supernovae and Neutron Star Oscillations» during the 12th Marcel Grossman Meeting, Paris 12-18 July 2009
20. **Member of the Organizing Committee of** "Physics of Neutron Stars as Gravitational Wave Sources" Rome, 25/01/2010
21. **Member of the Organizing Committee** of the VESF School on Data Analysis, February 10-13, 2010 Cascina, Italy

22. **Member of the Organizing Committee** of the VESF School on Gravitational Waves, July 21-24, 2010, Sesto val Pusteria, Italy
23. **Member of the Organizing Committee** of NEB-14, Ioannina, Greece June 2010
24. **Member of the Organizing Committee** of the International School of Nuclear Physics (32nd Course) Erice, Sicily, September 2010

National

1. **Member** of the Organizing Committee of the 4th Hellenic Relativity Conference, Thessaloniki, June 1990.
2. **Member** of the Local Organizing Committee of the 2nd Hellenic Astronomical Conference July 1995.
3. **Member** of the Scientific Advisory Board for the conference Applied Differential Geometry, Lie Algebras and General Relativity, August 2000, Thessaloniki.
4. **Member** of the Scientific Advisory Board for the conference Applied Differential Geometry, Lie Algebras and General Relativity, August 2001, Thessaloniki.
5. **Chairman** of the organizing committee of the 10th Hellenic Relativity Conference, Thessaloniki, June 2002.
6. **Coordinator** of the Workshop on Cosmology and Relativity for the 4th Hellenic Relativity Conference, Athens, Greece, September 2003.
7. **Member** of the organizing committee of the 11th Hellenic Relativity Conference, Lesvos, June 2004.
8. **Coordinator** of the Workshop on Gravitational Waves in 1st ENTApP meeting, Valencia 11-16/4/2005
9. **Coordinator** of the Workshop on Cosmology and Relativistic Astrophysics and Dynamics for the 5th Hellenic Astronomical Conference, Kefallonia, Greece, September 2005.
10. **Member** of the scientific committee of the 12th Hellenic Relativity Conference, Nafplion, Greece, June 2006
11. **Member** of the scientific committee of the 6th ELASET conference, Thasos, September 2007
12. **Member** of the scientific committee of the 13th Hellenic Relativity Conference, Thessaloniki, Greece, June 2008

5.7 Referee in Scientific Journals

1. Astronomy & Astrophysics
2. Monthly Notices of the Royal Astronomical Society (MNRAS)
3. Living Reviews in Relativity
4. General Relativity and Gravitation (GRG)
5. Astrophysical Journal
6. Astrophysical Journal Letters
7. Physical Review D
8. Physical Review Letters
9. International Journal of Modern Physics D
10. Classical and Quantum Gravity
11. Journal of Physics G: Nuclear and Particle Physics
12. Advances in Theoretical and Mathematical Physics
13. Progress in Particle and Nuclear Physics
14. Physics Letters B
15. Mathematical Reviews
16. New Journal of Physics
17. Advances in Astronomy
18. Physica Scripta
19. Acta Applicandae Mathematicae

5.8 Referee of Research Proposals & Awards

1. I was panel member for the evaluation of the proposal for the construction of the Dutch Gravitational Wave Detector “**GRAIL**”, estimated cost €15,000,000 (1997).
2. I was external referee of the proposal for the construction of the Dutch Gravitational Wave Detector “**mini-GRAIL**”, estimated cost €500,000 (1999).
3. I was member of the selection committee for the **Xanthopoulos award** of the International Society for General Relativity and Gravitation (ISGRG) for the years 2002 and 2004.
4. External Referee for projects funded by PPARC and RAS.
5. Referee for projects funded by DFG & DAAD

5.9 External Examiner in Doctoral Theses

1. I was the **internal examiner** for 2 PhD theses (K.Kleides, A.Kouiroukides) in Greece.
2. I was the **external examiner** for a PhD thesis (E. Berti) in the University of Rome (La Sapienza) (November 2001).
3. I was the **external examiner** for a PhD thesis (L. Villain) in the University of Paris IV (December 2002)
4. I was the **external examiner** for the PhD thesis (V. Cardoso) in the University of Lisbon, Portugal (December 2003).
5. I was the **external examiner** for the PhD thesis (R.L.Williams) in the University of Southampton, UK (February 2004).
6. **External reporter** for the PhD thesis (W. Kastaun) University of Tuebingen, Germany (February 2007).
7. Internal Examiner for the PhD thesis (Tanzer) University of Tuebingen, Germany May 2008
8. I was the **external examiner** for the PhD thesis (Sam Lander) in the University of Southampton, UK (May 2010).

5.10 Scientific Distinctions

1. In June 1997 I was awarded the prize of €3,000 from the **Empeirikion Foundation** for the best scientific research paper (by a Greek scientist) in the area of Sciences for the period 1992-93 (B7 paper).
2. The paper **B24** was widely acknowledged within the Physical Scientific Society and it has been considered by the **American Physical Society**, as the most innovative research work published the last week of October 1996. Furthermore, extended references to the importance of the paper and its results appeared in the electronic version of **Science** as well as in a variety of scientific journals on the Internet. Finally, **Economist** devoted a two page review on the importance of the aforementioned paper in *Astrophysics* (8/12/1996).
3. The papers **B28** και **B30** were addressed in the press release of the Albert Einstein Institute. It has to be noted, that this was the first press release of the Institute after a period of four years of operation (August 1999). The press release included a presentation of the scientific result as well as an interview of the author, which was further published in different newspapers, journals and Internet sites in Germany.
4. The paper **B52** has been selected among the **highlight papers** for the year 2004 from the journal *Classical and Quantum Gravity*.

5.11 Editorial Boards

- **Managing Editor** for International Journal of Modern Physics D since October 2009.
- I was member of the Editorial Board of the **Scientific American** (Greek Edition)
- I was Editor of "Hipparchos" the journal of the Hellenic Astronomical Society 2003-7.

5.12 Administration

- I was chairman of the computers committee of the Physics Department 1999-2004.
- I have been elected as member of the Physics Department's Assembly for the academic years 1996-2002.

6 PUBLICATIONS

6.1 Thesis

- A1 **Normal Modes of Pulsation of Relativistic Stars,**
Master of Science Thesis, University of Wales (1985)
- A2 **Contribution in the study of charged and rotating black holes,**
PhD Thesis, Aristotle University of Thessaloniki (1988)

6.2 Articles in Refereed Journals

- B1 **Normal Modes of a Model Radiating System,**
K.D. Kokkotas and B.F. Schutz
Gen. Rel. Grav. **18**, 913-921 (1986)
- B2 **Reversible Evolution of Charged Ergoregions,**
K.D. Kokkotas and N.K. Spyrou
Gen. Rel. Grav. **19**, 681-691 (1987)
- B3 **Black Hole Normal Modes: A WKB approach.**
III The Reissner--Nordstrom black hole,
K.D. Kokkotas and B.F. Schutz
Phys. Rev. D **37**, 12, 3378-3387 (1988)
- B4 **The Geometry of the Kerr-Newman Ergosurface,**
K.D. Kokkotas
Gen. Rel. Grav. **20**, 8, 829-839 (1988)
- B5 **WKB equivalent potentials for the q-deformed harmonic oscillator,**
D. Bonatsos, C. Daskaloyannis and K.D. Kokkotas
J. Phys. A **24**, L795--L801 (1991)
- B6 **Normal Modes of the Kerr black hole,**
K.D. Kokkotas
Clas. Quantum Grav. **8**, 2217-2224, (1991)
- B7 **W-modes: A new family of normal modes for pulsating relativistic stars,**
K.D. Kokkotas and B.F. Schutz
M.N.R.A.S. **255**, 119-128 (1992)
- B8 **WKB equivalent potentials for the $SU_q(1,1)$ and $U_q(2)$ models,**
D. Bonatsos, C. Daskaloyannis and K.D. Kokkotas
Chem. Phys. Lett. **193**, 191-196 (1992)
- B9 **Classical potential for q-deformed harmonic oscillator,**
D. Bonatsos, C. Daskaloyannis and K.D. Kokkotas
Phys. Rev. A **45**, R6153-R6156, (1992)
- B10 **WKB Equivalent Potentials for q-Deformed Harmonic and Anharmonic Oscillators,**
D. Bonatsos, C. Daskaloyannis and K.D. Kokkotas
J. Math. Phys. **9**, 2958-2965 (1992)

- B11 Normal Modes of the Kerr-Newman black hole,**
K.D. Kokkotas
 Il Nuovo Cimento **108B**, 991-998 (1993)
- B12 Statistical Analysis of the Estimators of the Parameters of the Gravitational Wave Signal from a Coalescing Binary,**
K.D. Kokkotas, A. Krolak and G. Tsegas
 Class. Quantum Gravity **11**, 1901-1918 (1994)
- B13 Quantum-algebraic Description of Quantum Superintegrable Systems in two dimensions,**
 D. Bonatsos, C. Daskaloyannis and **K.D. Kokkotas**
 Phys. Rev. A **48**, R3407-R3410 (1993)
- B14 Axial Modes for Relativistic Stars,**
K.D. Kokkotas
 M.N.R.A.S. **268**, 1015-1018 (1994)
- B15 Gravitational Radiation from Pairs of Realistic, Non-Accreting Compact Stars,**
 N.K. Spyrou and **K.D. Kokkotas**
 Astrophys. J. **431**, 254-263 (1994)
- B16 Deformed Oscillator Algebras for Two-Dimensional Quantum Superintegrable Systems,**
 D. Bonatsos, C. Daskaloyannis and **K.D. Kokkotas**
 Phys. Rev. A **50**, 3700-3709 (1994)
- B17 Tidal and Tidal-Resonant Effects in Close Binary Systems,**
K.D. Kokkotas and G. Schaefer
 M.N.R.A.S. **275**, 301-308 (1995)
- B18 A new numerical approach to the oscillation modes of relativistic stars,**
 N. Andersson, **K.D. Kokkotas** and B.F. Schutz
 M.N.R.A.S. **274**, 1039-1048 (1995)
- B19 On estimation of the post-Newtonian parameters in the gravitational-wave emission of a coalescing binary,**
 A. Krolak, **K.D. Kokkotas** and G. Schaefer
 Phys. Rev. D **52**, 2089-2111 (1995)
- B20 On the oscillations spectra of ultra compact stars,**
 Y. Kojima, N. Andersson and **K.D. Kokkotas**
 Proc. Roy. Soc. London **451**, 341-348 (1995)
- B21 On the oscillations spectra of ultracompact stars: An extensive survey of gravitational-wave modes,**
 N. Andersson, Y. Kojima and **K.D. Kokkotas**
 Astrophys. J. **462**, 855-864 (1996)
- B22 On the estimation of parameters of the gravitational-wave signal from coalescing binaries by a network of laser interferometers,**
 P. Jaranowski, **K.D. Kokkotas**, A. Krolak and G. Tsegas
 Class. Quantum Grav. **13**, 1279-1307 (1996)
- B23 Spacetime modes of relativistic stars,**

- N. Andersson, **K.D. Kokkotas** and B.F. Schutz
M.N.R.A.S. **280**, 1230-1234 (1996)
- B24 Gravitational waves and pulsating stars: What can we learn from future observations?**
N. Andersson and **K.D. Kokkotas**
Phys. Rev. Lett. **77**, 4134-4137 (1996)
- B25 Pulsation Modes for increasingly relativistic polytropes,**
N. Andersson and **K.D. Kokkotas**
M.N.R.A.S. **297**, 493-496 (1998)
- B26 Gravitational waves from pulsating stars: Evolving the perturbation equations for a relativistic star,**
G. Allen, N. Andersson, **K.D. Kokkotas** and B.F. Schutz
Phys. Rev. D **58**, 124012 (1998)
- B27 Towards gravitational-wave asteroseismology,**
N. Andersson and **K.D. Kokkotas**
M.N.R.A.S. **299**, 1059-1068 (1998)
- B28 Gravitational radiation limit on the spin of young neutron stars,**
N. Andersson, **K.D. Kokkotas** and B.F. Schutz
Astrophys. J. **510**, 846 (1999)
- B29 Analytic description of the r-mode instability in uniform density stars,**
K.D. Kokkotas and N. Stergioulas
Astronomy & Astrophysics **341**, 110-116 (1999)
- B30 On the relevance of the r-mode instability for accreting neutron stars and white Dwarfs,**
N. Andersson, **K.D. Kokkotas** and N. Stergioulas
Astrophys. J. **516**, 307-314 (1999)
- B31 Quasi-Normal Modes of Stars and Black Holes,**
K.D. Kokkotas and B.G. Schmidt
Invited Review (refereed),
in Living Reviews in Relativity 2:2, (1999)
- B32 On the r-mode spectrum of relativistic stars,**
H.R. Beyer and **K.D. Kokkotas**
M.N.R.A.S. **308**, 745-750 (1999)
- B33 Neutron Star Collisions: The Close Limit,**
G. Allen, N. Andersson, **K.D. Kokkotas**, P. Laguna, J. Pullin and J. Ruoff
Phys. Rev D **60**, 104021 (1999)
- B34 Construction of Astrophysical Initial Data for Perturbations of Relativistic Stars,**
N. Andersson, **K.D. Kokkotas**, P. Laguna, Ph. Papadopoulos and M.S. Sipiior
Phys. Rev D **60**, 1240004 (1999)
- B35 Non-linear evolution of rotating relativistic stars,**
J.A. Font, N. Stergioulas and **K.D. Kokkotas**
M.N.R.A.S. **313**, 678 (2000)
- B36 R-mode runaway and rapidly rotating neutron stars,**

N. Andersson, D.I. Jones, **K.D. Kokkotas** and N. Stergioulas
Astrophys. J. Lett. **534**, 75, (2000)

- B37 Scattering of particles by neutron stars: Time-evolutions for axial perturbations,**
V. Ferrari and **K. D. Kokkotas**
Phys. Rev. D **62**, 107504 (2000)
- B38 Radial Modes of Relativistic Stars,**
K.D. Kokkotas and J. Ruoff
Astronomy & Astrophysics **366**, 565-572 (2001)
- B39 The R-mode Instability in Rotating Neutron Stars,**
N. Andersson and **K.D. Kokkotas**
Invited Review (refereed)
Inter. J. of Modern Phys. D **10**, 381 (2001)
- B40 Using the gravitational-wave fingerprints of a neutron star to reveal the equation of state,**
K.D. Kokkotas, Th. Apostolatos and N. Andersson
M.N.R.A.S. **320**, 307-315 (2001)
- B41 On the origin of compact radio sources. The binary black hole model applied to the gamma-bright quasar PKS 0420-014,**
S. Britzen, J. Roland, J. Laskar, **K.D. Kokkotas**, R.M. Cambell and A. Wintzel
Astronomy & Astrophysics **374**, 784-799 (2001)
- B42 On the r-mode spectrum of relativistic stars in the low frequency approximation,**
J. Ruoff and **K.D. Kokkotas**
M.N.R.A.S. **328**, 678-688 (2001)
- B43 On the r-mode spectrum of relativistic stars: Inclusion of the radiation reaction,**
J. Ruoff and **K.D. Kokkotas**
M.N.R.A.S., **330**, 1027 (2002)
- B44 Evolution equations for the perturbations of slowly rotating relativistic stars ,**
J. Ruoff, A. Stavridis and **K.D.Kokkotas**
M.N.R.A.S., **332**, 676 (2002)
- B45 Strange stars as persistent sources of gravitational waves,**
N.Andersson, D.I.Jones, **K.D.Kokkotas**
M.N.R.A.S., **337**, 1224-1232 (2002)
- B46 Inertial modes of slowly rotating relativistic stars in the Cowling approximation,**
J. Ruoff, A. Stavridis, and **K.D. Kokkotas**
M.N.R.A.S. , **339**, 1170-1182 (2003)
- B47 Quasinormal modes of the Reissner-Nordstrom-anti-de-Sitter black holes: scalar, electromagnetic and gravitational perturbation.**
E.Berti and **K.D.Kokkotas**
Phys.Rev.D **D67:064020** (2003)
- B48 Asymptotic quasinormal modes of Reissner-Nordstrom and Kerr black holes**
E.Berti and **K.D.Kokkotas**
Phys.Rev.D **68:044027** (2003)
- B49 Stability of five-dimensional rotating black holes on the brane.**

- E.Berti, **K.D.Kokkotas** and E.Papantonopoulos
Phys.Rev.D **68**:064020 (2003)
- B50 Highly damped quasinormal modes of Kerr black holes**
E.Berti, V.Cardoso, **K.D.Kokkotas** and H.Onozawa
Phys. Rev. D. Phys.Rev. D **68**:124018, (2003)
- B51 High Frequency Sources of Gravitational Waves,
K.D. Kokkotas**
Class. Quantum Gravity **21**, S501 (2004)
Selected by the journal as a Highlight Paper for the year 2004
- B52 On the w-mode instability of rotating relativistic stars,
K.D. Kokkotas**, N. Andersson and J.Ruoff
Phys. Rev. D **70**:043003 (2004)
- B53 Probing Strong-Field Scalar-tensor Gravity with Gravitational Wave
Asteroseismology**
H.Sotani and **K.D.Kokkotas**
Phys. Rev. D **70**:084026 (2004)
- B54 Evolution equations for slowly relativistic stars**
A.Stavirids and **K.D. Kokkotas**
Int.J.Modern.Physics D **14**, 543-571 (2005)
- B55 Quasinormal modes of the Kerr-Newman black hole: Coupling of electromagnetic
and gravitational perturbations.**
E. Berti and **K.D.Kokkotas**
Physical Review D **71**, 124008 (2005)
- B56 Stellar Oscillations in Scalar-Tensor Theory of Gravity.**
H.Sotani and **K.D.Kokkotas**
Physical Review D **71**, 124038 (2005)
- B57 Torsional Oscillations of Relativistic Stars with Dipole Magnetic Fields**
H. Sotani, **K.D. Kokkotas** and N. Stergioulas
M.N.R.A.S. **375**:1, 261–277 (2007), astro-ph/0608626
- B58 Torsional Oscillations of Relativistic Stars with Dipole Magnetic Fields II. Global
Alfven Modes.**
H. Sotani, **K.D. Kokkotas**, N. Stergioulas and M. Vavoulidis
M.N.R.A.S (2006) astro-ph/0611666
- B59 Non-radial Oscillations of Slowly and Differentially Rotating Compact Stars**
A. Stavridis, A. Passamonti and **K.D. Kokkotas**
Phys. Rev. D **75**, 064019 (2007), gr-qc/0701122
- B60 Torsional Oscillations of Rotating Stars**
M. Vavoulidis, A. Stavridis, **K.D. Kokkotas** and H. Beyer
M.N.R.A.S. **377**, 1553 (2007),
- B61 Gravitational Radiation from weakly magnetized dust collapse**
H. Sotani, Shijun Yoshida and **K.D. Kokkotas**
Phys. Rev. D **75**, 084015 (2007), gr-qc/0702091

- B62 Non-Axisymmetric Oscillations of Differentially Rotating Compact Stars**
A. Passamonti, A. Stavridis and **K.D. Kokkotas**
Phys. Rev. D **77**, 024029 (2008)
- B63 Alfen QPOs in Magnetars**
H. Sotani, **K.D. Kokkotas** and N. Stergioulas
M.N.R.A.S **385**, L5-L9 (2008) astro-ph/0710.5658
- B64 Constraints on the Magnetic Field of Magnetars**
H. Sotani, A. Colaiuda and **K.D. Kokkotas**
M.N.R.A.S **385** 2161-2165 (2008) astro-ph/0711.1518
- B65 Crustal Oscillations of Slowly Rotating Relativistic Stars**
M. Vavoulidis, **K.D. Kokkotas** and A. Stavridis
M.N.R.A.S **384** , 1711 -1724 (2008) astro-ph/0712..1263
- B66 Oscillations of Rapidly Rotating Relativistic Stars**
E. Gaertig, **K.D. Kokkotas**
Phys. Rev. D **78** 064063 (2008) gr-qc/0809.0629
- B67 Alfvén Polar Oscillations of Relativistic Stars**
H. Sotani, and **K.D. Kokkotas**
M.N.R.A.S **395**, 1163 (2009) arXiv:0902.1490 [astro-ph.HE]
- B68 On the QPOs oscillation in Magnetars.**
A. Colaiuda, H. Beyer and **K.D. Kokkotas**
M.N.R.A.S **396**, 1441 (2009) arXiv:0902.1401 [astro-ph.HE]
- B69 Relativistic g-modes in rapidly rotating neutron stars**
E. Gaertig, **K.D. Kokkotas**
Phys. Rev. D **80**, 064026 (2009) astro-ph/0905.0821
- B70 Gravitational waves from neutron stars: Promises and challenges**
N. Andersson, V. Ferrari, D.I. Jones, **K.D. Kokkotas**, B. Krishnan, L. Rezzolla, B. Zink
G.R.G in press (2010) eprint arXiv:0912.0384
- B71 Oscillations and instabilities of fast and differentially rotating relativistic stars**
C. Kruger, E. Gaertig & **K.D. Kokkotas**,
Phys. Rev. D **81**, 084019 (2010), eprint arXiv:0911.2764
- B72 Charged Anti - de Sitter scalar-tensor black holes and their thermodynamic phase structure**
D.D. Doneva, S.S. Yazadjiev, **K.D. Kokkotas**, I.Zh. Stefanov, M.D. Todorov
Phys. Rev. D **81**, 104030 (2010), eprint arXiv:1001.3569
- B73 Third generation of gravitational wave observatories and their science reach**
Michele Punturo et al (**K.D. Kokkotas** & 134 authors)
Class. Quantum Grav. **27** 084007 (2010).
- B74 MYRIAD : A new N-body code for simulations of star clusters**
S. Konstantinidis & **K.D. Kokkotas**
A&A in press (2010) arXiv:1006.3326v1 [[astro-ph.IM](#)]
- B75 Gravitational wave asteroseismology with fast rotating neutron stars**
E. Gaertig and **K.D. Kokkotas**

Phys. Rev. D in press (2010) arXiv:1005.5228v1 [[astro-ph.SR](#)]

B76 On the saturation amplitude of the f-mode instability

W. Kastaun, B. Willburger and **K. D. Kokkotas**

Phys. Rev D **82**, 104036 (2010) [arXiv:1006.3885v1](#) [[gr-qc](#)]

B77 The Einstein Telescope: a third-generation gravitational wave observatory

Michele Punturo et al (134 authors)

Class. Quantum Grav. **27** 194002 (2010).

B78 Quasi-normal modes, bifurcations and non-uniqueness of charged scalar-tensor black holes

D.D. Doneva, S. S. Yazadjiev, **K.D. Kokkotas**, I.Zh. Stefanov

Phys. Rev. D **82**, 064030 (2010) arXiv e-print (arXiv:1007.1767)

B79 High-order perturbations of a spherical collapsing star

David Brizuela, Jose M. Martin-Garcia, Ulrich Sperhake, and **K.D. Kokkotas**

Phys. Rev D **82**, 104039 (2010) arXiv:1009.5605v1 [[gr-qc](#)]

B80 Magnetars oscillations in the presence of a crust

A. Colaiuda and **K.D. Kokkotas**

MNRAS in press (2010)

B81 Bayesian timing analysis of giant flare of SGR 1806–20 by RXTE PCA

V. Hambaryan, R. Neuhauser, and **K.D. Kokkotas**

A&A Letters submitted (2010)

B82 Quasinormal modes, scattering and Hawking radiation of Kerr-Newman black holes in a magnetic field

K. D. Kokkotas, R. A. Konoplya, A. Zhidenko

Phys. Rev D submitted [arXiv:1011.1843v1](#) [[gr-qc](#)]

B83 Oscillations of magnetized stars and black holes

K.D. Kokkotas, **H. Sotani**, C. Sopena and P. Laguna

Preprint (2010)

B84 The f-mode instability in relativistic neutron stars

E. Gaerdig, K. Glampedakis, **K.D. Kokkotas**, B. Zink

Preprint (2010)

6.3 Review Articles and Invited Articles / Book Editor

Book Editor

Recent Developments in Gravity: Proceedings of the 10th Hellenic Relativity Conference Kalithea/Chalkidiki, Greece 30 May - 2 June 2002

Kostas D Kokkotas (Editor), Nikolaos Stergioulas (Editor); River Edge, USA: World Scientific (2003)

Long Review Articles

- C1 Pulsating Relativistic Stars,**
K.D. Kokkotas
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in *Astrophysical Sources of Gravitational Radiation*, 26/9-6/10, 1995, Les Houches,
Editors J.A. Marck & J.P. Lasota, Cambridge University Press p.89-102 (1997)
- C2 Gravitational Radiation,**
B.L. Iyer and **K.D. Kokkotas**
Workshop Review,
in *International Conference on Gravitation and Cosmology, (ICGC-95)*, 13-19/12/1995,
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- C3 Stellar Pulsations and Gravitational Waves,**
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- C4 Gravitational Wave Astronomy: A New Window to the Universe,**
K.D. Kokkotas
Invited Review,
in the volume in honor of L. Mavridis, p.263-276 , Thessaloniki (1997)
- C5 Gravitational Wave Physics,**
K.D. Kokkotas,
Invited Article (refereed),
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- C6 Oscillations and Instabilities of Stars,**
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- C7 Instabilities of Rotating Relativistic Stars,**
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- C8 Oscillations and Instabilities of Relativistic Stars,**
K.D. Kokkotas
Review
Proceedings of the "Gravity, Astrophysics and Strings 2002", Kitten, Bulgaria (2002)
- C9 Gravitational Wave Astronomy: A New Window to the Universe,**
K.D. Kokkotas

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Special Volume of the Greek Physical Society (2003)

- C10 Gravitational Waves: The high frequency window**
N. Andersson and **K.D. Kokkotas**
Lectures presented at the 2nd Aegean Summer School on the Early Universe, Syros, Greece, September 2003,
Lect. Notes Phys. **653**, Springer-Verlag (2005)
- C11 Gravitational Waves from Compact Sources**
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Proceedings of 5th International Workshop "New Worlds in Astroparticle Physics"
World Scientific (2005)
- C12 Gravitational Waves,**
K.D. Kokkotas
Review Article
Acta Physical Polonica B, 38, 3891—3923 (2007)
- C13 Gravitational Wave Astronomy,**
K.D. Kokkotas
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Vol 20, "Cosmic Matter", WILEY-VCH, Edi.S. R"oser (2008)

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- D1 Pulsating Relativistic Stars: What can we learn from future observations?,**
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- D2 Instabilities of Rotating Relativistic Stars,**
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- D3 Greek Relativity Conference, NEB-X**
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- D4 Gravitational Wave Astronomy**
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- D5 High Frequency Sources of Gravitational Waves**
K.D.Kokkotas
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- D6 Status of Gravitational Wave Research**
K.D.Kokkotas

6.4 Articles in Conference Proceedings

- E1 WKB equivalent potentials for the q-deformed harmonic and anharmonic Oscillators,**
D. Bonatsos, C. Daskaloyannis and **K.D. Kokkotas**
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- E2 W-modes: A new family of normal modes for pulsating relativistic stars,**
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- E3 Strongly Damped Modes for pulsating relativistic stars: W and Axial Modes,**
K.D. Kokkotas
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- E4 Deformed Oscillator Algebras for 2-dimensional Quantum Superintegrable Systems,**
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- E5 Dynamical Symmetries for 2-dimensional Quantum Superintegrable Systems,**
D. Bonatsos, C. Daskaloyannis and **K.D. Kokkotas**
in Proceedings of the Third International Wigner Symposium, Oxford August 1993,
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- E6 On the detectability of the post-Newtonian effects in the gravitational-wave emission of a coalescing binary,**
K.D. Kokkotas, A. Krolak and G. Schaefer
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- E7 On the detectability of the post-Newtonian effects in the gravitational-wave emission of a coalescing binary,**
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- E8 On estimation of the post-Newtonian parameters in the gravitational-wave emission of a coalescing binary,**
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- E9 Evolutions of stellar oscillations,**

G.D. Allen, N. Andersson, **K.D. Kokkotas** and B.F. Schutz
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- E10 Non-linear evolution of rotating relativistic stars,**
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- E11 General-relativistic Hydrodynamical Simulations of Rotating and Pulsating Neutron Stars,**
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Proceedings of the 4th Hellenic Astronomical Conference, Samos (1999)
- E12 Formation of a National Center for Computational Astrophysics,**
L. Vlahos, **K.D. Kokkotas** and H. Varvoglis
Proceedings of ASTRONOMY 2000+
Editors E. Kontizas, R. Korakitis and J. Ventura
- E13 Scattering of Particles by Relativistic Stars and Black Holes,**
K.D. Kokkotas and V. Ferrari
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- E14 R-mode runaway and rapidly rotating neutron stars**
N. Stergioulas, **K.D.Kokkotas**, I.Jones, N.Andersson
In Proceedings of Marcel Grossman, World Scientific (2001)
- E15 Oscillations and Instabilities of Relativistic Stars**
K.D.Kokkotas
In proceeding of Thessaloniki workshop in Geometry and Relativity, (2002)
- E16 LMXBs as Sources of Gravitational Waves**
K.D. Kokkotas
Conference Information: 10th Hellenic Relativity Conference on Recent Developments in
Gravity, MAY 30-JUN 02, 2002 UNIV THESSALONIKI, KALLITHEA, GREECE Source:
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- E17 Study of the non-radial oscillations of Slowly Rotating Relativistic Stars**
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- E18 Rotating Relativistic Stars: Two problems**
K.D. Kokkotas and M. Vavoulidis
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IOP Journal of Physics: Conference Series **8** (2005), p 71-80
- E19 Gravitational Wave Asteroseismology in Scalar-Tensor Theory of Gravity**
K.D.Kokkotas and H. Sotani
Proceedings of "Gravity, Astrophysics and Strings" in Black Sea (2005)
- E20 Possibility to Probe Gravitational Theory by Gravitational Waves**
H. Sotani and **K.D.Kokkotas**

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- E21 Gravitational Wave for Axial Perturbation in Scalar-Tensor Theory**
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- E22 Stellar Dynamics in Scalar-Tensor Theory of Gravity**
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AIP Conference Proceedings -- August 25, 2006 -- Volume 848, pp. 767-773
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- E23 W-modes in rotating relativistic stars**
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- E24 Torsional Oscillations of Relativistic Stars**
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- E25 W-modes in rotating relativistic stars**
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- E26 Analytic approximations, perturbation methods, and their applications**
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- E27 Magnetic Torsional Oscillations in Magnetars**
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- E28 Neutron Star Dynamics and Gravitational Waves**
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- E29 Neutron Star Dynamics and Gravitational Waves**
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- E30 Polar oscillations in magnetars**
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6.5 Articles in Newspapers, Magazine etc(in Greek)

- F1 ΒΑΡΥΤΙΚΑ ΚΥΜΑΤΑ: Ένα νέο παράθυρο στο Σύμπαν**
Κ.Κόκκοτας
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- F2 ΒΑΡΥΤΙΚΑ ΚΥΜΑΤΑ: Ένα νέο παράθυρο στο Σύμπαν**
Κ.Κόκκοτας
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- F3 ΒΑΡΥΤΙΚΑ ΚΥΜΑΤΑ: Ένα νέο παράθυρο στο Σύμπαν**
Κ.Κόκκοτας
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- F4 Παρατηρώντας το Σύμπαν με τα μάτια του Αισταιν**
Κ. Κόκκοτας
“Μαύρες Τρύπες” (έκδοση Ιδρύματος Ευγενίδη) 2006
- F5 Είμαστε μόνοι στο Σύμπαν (2 άρθρα)**
Κ. Κόκκοτας
Περιοδικό “Νεας Απολλωνίας” (2008)
- F6 Μαύρες Τρύπες & Βαρυτικά Κύματα**
Κ. Κόκκοτας
Ειδικό ένθετο Ελευθεροτυπίας Φεβρουάριος (2009)
- F7 Αστρονομία Βαρυτικών Κυμάτων: η μελέτη της αρχής του Κόσμου**
Κ. Κόκκοτας
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