

Curriculum Vitae

Studies

- 27/6/2013: **PhD** diploma (University of Ioannina – Department of Physics). My research was conducted under the supervision of Prof. P. Kanti having as subject: **Study of black hole solution properties in the context of 4- and higher-dimensional gravity theories.**
- June 2006: concluded the attendance of the postgraduate cycle in Theoretical Physics with overall grade 8.5/10 – mark “excellent” (highest grade in class) [Never got an official MSc diploma though - see last page of the CV for explanations]
- September 2006: degree in **Physics** (University of Ioannina – Department of Physics) with overall grade 8.53/10 – mark “excellent” (highest grade in class)
- September 2002: degree in **Medicine** (University of Ioannina – Medical School) with overall grade 7.29/10 – mark “very good”
- June 1996: finished high school in Ioannina with overall grade 19.3/20 – mark “excellent”

Published work (as seen in the inspirehep.net database of Stanford University)

- **Large and Ultra-compact Gauss-Bonnet Black Holes with a Self-interacting Scalar Field**, A. Bakopoulos, P. Kanti, N. Pappas, arXiv 2003.02473 [hep-th], *Phys. Rev. D* 101 (2020) 084059.
- **Incorporating Physical Constraints in Braneworld Black-String Solutions for a Minkowski Brane in Scalar-Tensor Gravity**, T. Nakas, P. Kanti, N. Pappas, arXiv 2001.07226 [hep-th] , *Phys. Rev. D* 101 (2020) 0840596.
- **Existence of solutions with a horizon in pure scalar-Gauss-Bonnet theories**, A. Bakopoulos, P. Kanti, N. Pappas, arXiv: 1910.14637 [hep-th], *Phys. Rev. D* 101 (2020) 044026.
- **Scalar-Gauss-Bonnet Theories: Evasion of No-Hair Theorems and novel black-hole solutions**, P. Kanti, A. Bakopoulos, N. Pappas, *PoS CORFU2018 (2019) 091*.
- **New Black-String Solutions for an Anti-de Sitter Brane in Scalar-Tensor Gravity**, T. Nakas, N. Pappas, P. Kanti , arXiv: 1904.00216 [hep-th], *Phys. Rev. D* 99 (2019) 124040.
- **Anti-Gravitating Brane-World Solutions for a de Sitter Brane in Scalar-Tensor Gravity**, P. Kanti, T. Nakas, N. Pappas , arXiv: 1807.06880 [gr-qc], *Phys. Rev. D* 98 (2018) 064025.
- **Hawking Radiation Spectra for Scalar Fields by a Higher-Dimensional Schwarzschild-de-Sitter Black Hole**, T. Pappas, P. Kanti, N. Pappas , arXiv: 1604.08617 [hep-th], *Phys. Rev. D* 94 (2016) 024035.
- **Cosmic censorship revisited from a quantum mechanical standpoint**, N. Pappas, *PoS PLANCK2015 (2015) 097*.
- **On the Localisation of 4-Dimensional Brane-World Black Holes II: the general case**, P. Kanti, N. Pappas, T. Pappas, arXiv: 1507.02625 [hep-th], *Class. Quant. Grav.* 33 (2016) 1, 015003.
- **Greybody Factors for Scalar Fields emitted by a Higher-Dimensional Schwarzschild-de-Sitter Black-Hole**, P. Kanti, T. Pappas, N. Pappas, arXiv: 1409.8664 [hep-th], *Phys. Rev. D* 90 (2014) 124077.
- **A little quantum help for cosmic censorship and a step beyond all that**, N. Pappas, arXiv: 1312.3471 [gr-qc], *AHEP* 2013 (2013) 236974

- **On the localization of 4-dimensional brane-world black holes**, P. Kanti, N. Pappas, K. Zuleta, arXiv: 1309.7642 [hep-th], *Class. Quant. Grav.* 30 (2013) 235017
- **Angular profile of particle emission from a higher-dimensional black hole: analytic results**, P. Kanti, N. Pappas, arXiv: 1209.3616 [hep-th], *JHEP* 1212 (2012) 019
- **On the preservation of unitarity during black hole evolution and information extraction from its interior**, N. Pappas, arXiv: 1201.0475 [gr-qc], *Mod. Phys. Lett. A*, vol.27, No19 (2012) 1250109.
- **Bulk decay of (4+n)-dimensional simply rotating black holes: Tensor-type gravitons**, N. Pappas, *J. Phys. Conf. Ser.* 283 (2011) 012028.
- **A new approach to information loss (no) problem for black holes**, N. Pappas, arXiv: 1009.5111 [gr-qc], *Int. J. Theor. Math. Phys.* vol.2, No2 (2012) pp 5-9.
- **Emission of massive scalar fields by a higher-dimensional rotating black hole**, P. Kanti, N. Pappas, arXiv: 1003.5125 [hep-th], *Phys. Rev. D* 82 (2010) 024039.
- **Graviton emission in the bulk by a simply rotating black hole**, P. Kanti, H. Kodama, R.A. Konoplya, N. Pappas, A. Zhidenko, arXiv: 0906.3845 [hep-th], *Phys. Rev. D* 80 (2009) 084016.

Google Scholar page:

<https://scholar.google.com/citations?user=llpzTDQAAAAJ&hl=en&citsig=AMD79oqrHKIjDIUKnEZdNeV9xZzY7uhjTw>

Chapters in collective volumes

- **“Rethinking Cosmic Censorship Hypothesis on quantum mechanical grounds: critical overview”** (chapter title) in the collective volume under the general title **“New insights into Physical Science, vol. 1”**, Th. George (editor), Book Publisher International, London, 2020, **ISBN-13: 978-93-89816-66-2**
- **“The black hole challenge in the Randall-Sundrum II model”** (chapter title) in the collective volume under the general title **“Advances in Black Holes Research”**, Abraham Barton (editor), Nova Science Publishers, New York, 2014, **ISBN-13: 978-1634631686** and arXiv: 1409.0817 [gr-qc].

Presentations in conferences (as a speaker)

- **“de Sitter brane in scalar-tensor gravity supported by an anti-gravitating field”** (at “GWverse 2019 global meeting: gravitational waves, black holes and fundamental physics”, Athens, Greece, 21-24/1/2019)
- **“Trying to stabilize a black hole on the brane”** (at the “Prospects in Theoretical Physics – From Qubits to Spacetime” summer school, Princeton, USA, 16-27/7/2018)
- **“Scalar emission by a higher-dimensional Schwarzschild-dS black holes”** (at “HEP 2017: Recent Developments in High Energy Physics and Cosmology”, Ioannina, Greece, 6-9/4/2017)
- **“A little quantum help for Cosmic Censorship and a step beyond all that”** (at “PLANCK 2015 - From the Planck Scale to the Electroweak Scale”, Ioannina, Greece, 25-29/5/2015)
- **“Localisation of 4-Dimensional Brane-World Black Holes due to the presence of scalars in the bulk.”** (at “Developments in High Energy Physics and Cosmology – HEP 2015”, Athens, Greece, 15-18/4/2015)
- **“Unitary evolution of black holes and the possibility to extract information from their interior”** (at “Foundations of Quantum Mechanics and Relativistic Spacetime”, Athens, Greece, 25-26/9/2012)

- **“Emission of massive scalar fields by a higher-dimensional rotating black hole”** (at “Frontiers of Particle Cosmology”, Lecce, Italy, 13-18/9/2010)
- **“Bulk decay of (4+n)-dimensional simply rotating black holes: Tensor-type gravitons”** (at “Recent Developments in Gravity – NEB14”, Ioannina, Greece, 8-11/6/2010)

Participation in research programs

- 10/2020 - : “Quark – Gluon Plasma Thermalization and Plasma Instabilities in AdS/CFT”, funded by the Hellenic Foundation for Research & Innovation (post-doctoral researcher)
- 2/2019 – 2/2020: “Black hole and wormhole solutions in generalized gravity theories”, funded by the EU and the Ioannina University (post-doctoral researcher)
- 4/2017 – 4/2019: “Understanding the quantum behavior of black holes in higher-dimensional gravitational backgrounds”, funded by the Hellenic State Scholarship Foundation (post-doctoral researcher)
- 2/2013 – 5/2013: MARIE CURIE action “Black Holes in a Violent Universe” run by EU and the Ioannina University (doctoral researcher)
- 3/2012 – 6/2012: THALIS action “Beyond Standard Model: Theoretical Elementary Particle Physics and Cosmology under the light of LHC” run by EU and the Hellenic Ministry of Education (doctoral researcher)

Further Education

- 40-hour educational seminar titled **“Aristotelian ethical philosophy”** organized by the University of Crete E-Learning Center “Mathesis” (2020)
- 3-month long e-learning educational program on **“Ethics: Theory and Practice”** organized by the E-Learning Center of the National and Kapodistrian University of Athens (2019)
- 150-hour on-line seminar on **“Adult Education”** organized by the Continuous Learning Center of the National and Kapodistrian University of Athens and the Department of Pedagogical Studies of the same University (2016)
- 40-hour educational seminar titled **“Physics and Religion”** organized by the Hellenic Physicist Association (2016)
- 40-hour educational seminar titled **“Physics and Literature”** organized by the Hellenic Physicist Association (2016)
- 5-month long e-learning educational program on the **“Philosophy of Mathematics”** organized by the E-Learning Center of the National and Kapodistrian University of Athens (2016)
- 5-month long e-learning educational program on the **“Philosophy of Science and Bioethics”** organized by the E-Learning Center of the National and Kapodistrian University of Athens (2015)
- 5-month long e-learning type educational program on **“Educating children and teenagers”** organized by the E-Learning Center of the National and Kapodistrian University of Athens (2015)
- 3-month long educational seminar on the **“Didactic challenges concerning Fluid Mechanics”** organized by the Hellenic Physicist Association (2015)

Organization of International conferences

- Member of the organizing committee of the “Recent Developments in Gravity – NEB14” conference, Ioannina, Greece, 8-11/6/2010

Peer Reviewer for Scientific Journals

- **Advances in High Energy Physics**
- **Central European Journal of Physics**
- **Physical Science International Journal**

- **British Journal of Applied Science and Technology**
- **Journal of Applied Physical Science International**
- **European Physical Journal C**
- **Journal of Advances in Physics**
- **Universe**
- **Mathematical Reviews**

I have also conducted critical reviews for books by appointment of **MIT University Press**, USA.

Member of scientific societies

- International Society on General Relativity and Gravitation (ISGRG)
- Hellenic Society on Relativity, Gravitation and Cosmology (HSRGC)
- Hellenic Physicist Association (EEF)
- Hellenic Society for the Education of Natural Sciences and Technology (ENEPHET)
- American Association for Science and Technology (AASCIT)
- Hellenic Physics Society of Science and Education (EEFEE)

Working/teaching experience

10/2020 –	:	Instructor in charge for the courses “ Learning Technologies and the Teaching of Physics ” and “ History and Philosophy of Physical sciences ”, Lamia Physics Department, University of Thessaly, “Providing young PhD holders the opportunity to obtain academic pedagogical experience 2020-21” EU program
--------------	---	--

10/2020 –	:	Post-doctoral researcher. “ Quark – Gluon Plasma Thermalization and Plasma Instabilities in AdS/CFT ” program, Physics Department, University of Athens
--------------	---	--

10/2020 – 2/2021	:	Instructor in charge for the course “ General Physics I – Mechanics, Waves and Thermodynamics ”, Lamia Mathematics Department, University of Thessaly, as teaching fellow.
---------------------	---	---

10/2019 – 7/2020	:	Instructor in charge for the courses “ General Physics II – Electromagnetism and Optics ”, “ Learning Technologies and the Teaching of Physics ” and “ History and Philosophy of Physical sciences ”, Lamia Physics Department, University of Thessaly, “Providing young PhD holders the opportunity to obtain academic pedagogical experience 2019-20” EU program
---------------------	---	---

3/2020 – 6/2020	:	Instructor in charge for the course “ Physics ”, class of “Propedeuomenoi Officers”, Hellenic Army Officers Academy
--------------------	---	--

4/2019 – 2/2020	:	Post-doctoral researcher. “ Black hole and wormhole solutions in generalized gravity theories ” program, Physics Department, Ioannina University
--------------------	---	---

10/2018 – 6/2019	:	Instructor in charge for the courses “ Group Theory ”, “ Statistical Physics II ”, “ History of Physical sciences ”, Physics Department, Ioannina University, “Providing young PhD holders the opportunity to obtain academic pedagogical experience 2018-19” EU program
------------------	---	---

3/2019 – 6/2019	:	Instructor in charge for the course “ Physics ”, class of “Propedeuomenoi Officers”, Hellenic Army Officers Academy
-----------------	---	--

4/2017 – 4/2019	:	Post-doctoral researcher – Hellenic State Scholarship Foundation scholar. “ Understanding the quantum behavior of black holes in higher-dimensional gravitational backgrounds ” program, Physics Department, Athens University
-----------------	---	---

2/2018 – 6/2018	:	Instructor in charge for the course “ Statistical Physics II ”, Physics Department, Ioannina University, “Providing young PhD holders the opportunity to obtain academic pedagogical experience 2017-18” EU program
-----------------	---	--

2/2017 – 6/2017	:	Instructor in charge for the course “ Statistical Physics II ”, Physics Department, Ioannina University, “Providing young PhD holders the opportunity to obtain academic pedagogical experience 2016-17” EU program
-----------------	---	--

12/2016	:	Instructor in charge for the course “ Ballistics ”, class of Second – Lieutenants, Hellenic Artillery School of the Hellenic Armed Forces
---------	---	--

2017 – 2013	:	TA activities: I have assisted (giving lectures to students, solving problems in class etc) Prof. P. Kanti (Physics Department of the University of Ioannina) in her teaching duties regarding the courses “ Linear Algebra and Analytic Geometry ” (10/2007-2/2008, 10/2008-2/2009, 10/2010-2/2011), “ Calculus ” (10/2008-2/2009, 10/2010-2/2011, 10/2011-2/2012, 10/2012-2-2013), “ Cosmology ” (3/2008-6/2008) and “ Gravity and General Relativity ” (3/2011-6/2011, 3/2012-6/2012, 3/2013-6/2013)
-------------	---	---

3/3/2003 – 7/6/2004	:	Worked as medical doctor at the “Hatzikosta” general hospital of Ioannina and the Derviziana rural Health Center
---------------------	---	--

Other presentations made at various (non-conference) occasions (journal club, classroom, to general public etc.)

- “*The large D limit of gravity: implications and applications*”
- “*Intergalactic travels: discerning myths from truths, fears from expectations*”
- “*Angular profile of the Hawking emission by higher-dimensional black holes*”

- *"On the preservation of unitarity during black hole evolution"*
- *"Massive scalar emission by higher dimensional rotating black hole"*
- *"Emission of gravitons in the bulk by a rotating (4+n)-dimensional black hole"*
- *"The information loss problem for black holes"*
- *"Didactic of Natural Sciences: historical evolution of trends and a critic" (in greek)*
- *"Unparticles and Cosmology"*
- *"Physics in the 21st century" (in greek)*
- *"Dark matter" (in greek)*
- *"The scientific Universe" (in greek)*
- *"Irreversible thermodynamic processes" (in greek)*
- *"Cardiac function under the light of chaos theory" (in greek)*
- *"Pre-implantation diagnosis of aneuploidy in the case of patients of poor prognosis that undergo IVF" (in greek)*

Written essays

- *"Issues regarding the historic driven approach of the philosophy of Physics" (in greek)*
- *"Physics & Math: Certainly related thanks to the uncertain nature of them both"*
- *"Bessel functions" (in greek)*
- *"Understanding and explaining the Mpemba effect: a new idea proposed"*
- *"Quantum physics and reality" (in greek)*
- *"Sea salt as PM polluting agent" (in greek)*
- *"Industrial use of radio-isotopes" (in greek)*
- *"Single wall carbo-nano-tubes" (in greek)*
- *"Mechanisms of X-rays matter interaction" (in greek)*
- *"The gravitational lens phenomenon " (in greek)*
- *"Occasional infections of HIV-positive patients"(in greek)*
- *"Blood and anemias" (in french)*
- *"Cardio-vascular diseases" (in french)*
- *"Free radicals: a presentation" (in french)*

Pedagogical/outreach activities

- Participation at the national conference "Innovating STEM education" with the project "Creating awareness about cutting edge physics by exploiting the hype around The Big Bang Theory tv series", Athens, 16-18/12/2016
- Participation at the 2016 FAMELAB contest with the presentation "Black holes at WWI", Athens 15/3/2016.
- Talk at the Corfu Astronomical Society with title "Intergalactic travels: discerning myths from truths, fears from expectations" after invitation, 8/2/2016.
- Participation at the 2015 FQXi essay contest "Trick or Truth: the mysterious connection between Physics and Mathematics" with the essay *"Physics & Math: Certainly related thanks to the uncertain nature of them both"*.
- Participation at the 2012 contest on the "Mpemba effect" organized by the Royal Society of Chemistry with the essay *"Understanding and explaining the Mpemba effect: a new idea proposed"*.
- Presentation – talk to A grade senior high school pupils (15-16y) of the 4th General Senior High School of Ioannina, "Physics in the 21st century", 12/3/2007 (as part of an initiative of the University's Astrophysics sector for the popularization of science).
- Presentation – talk to C grade junior high school pupils (14-15y) of the 3th Junior High School of Ioannina, "The scientific Universe", 22/2/2006 (as part of an initiative of the University's Astrophysics sector for the popularization of science).

- Participation in round table conversation with the opening talk “Didactic of Natural Sciences: historical evolution of trends and a critic of them”, 5/5/2008.
 - During the 2006-2007 period in close collaboration with Prof. E. Manassis we worked towards the creation of a “Permanent Exhibition of Natural Sciences” in the premises of the Ioannina Physics Department, especially regarding its planning, content, structure, best way to be understood by the general public and students, experiments to be displayed etc.
 - Member of the 3-member-undergraduate-student team that, under supervision of the Assoc. Prof. V. Tsikoudi (Astrophysics sector), organized an open-to-general-public one-day astronomy festival on the occasion of the transit of Venus across the Sun, 8/6/2004.
- Member of the **Science View** community for the promotion of Natural Sciences, the popularization of the scientific knowledge and the spread of good practices regarding the teaching of STEM (science, technology, engineering, mathematics).
- Active supporter and participant of actions by the EU-supported **SCIENTIX** and **INSPIRING SCIENCE** initiatives for the enhancement of the interest of the general public and especially of the pupils on Natural Sciences and the dissemination of good practices regarding the STEM teaching.

Language skills

- **English** (Certificate of Proficiency in English, University of Cambridge and University of Michigan, license to teach English at professional level by the Hellenic Ministry of Education – C2 knowledge level*)
- **French** (Diplome d' etudes francaises 2e degre, Universite de Paris – Sorbonne Paris IV, license to teach French at professional level by the Hellenic Ministry of Education – C2 knowledge level*)
- **German** (Zeugnis Zentrale Mittelstufenprufung, Goethe Institut – C1 knowledge level*)
- **Spanish** (A2 knowledge level*)
- **Italian** (A1 knowledge level*)

*According to the Common European Framework guidelines

Computer skills

Vellum certificate for IT skills-proficiency level by Cambridge University, experience in the use of *Mathematica*, *Multisim*, *Latex*

Prizes – achievements

- First prize at the innovation contest organized by Kleemann Hellas co for the proposal “Magnetic Propulsion Elevators” - 2008
- First among the students that followed the postgraduate cycle in Theoretical Physics of the Physics Department of Ioannina University during the academic year 2005-2006
- First among the students of the Physics Department that graduated in 2006
- First among the third-year students of the Physics Department (2004 - 2005)
- First among the second-year students of the Physics Department (2003-2004)
- First among the first-year students of the Physics Department (2002 - 2003)
- Honorary diploma from the Greek Chemistry Association, 1996
- Honorary diploma from the Greek Mathematics Association, 1992 and 1993
- Prize for excellent grades as pupil for the periods 1990-91, 1991-92, 1992-93, 1993-94, 1994-95, 1995-96