Brief Curriculum Vitae: Francisco S. N. Lobo

1 Personal Data

1. **Name:** Francisco Sabélio Nobrega Lobo

2. **Present situation:**

– – Category: **Professor (Assistant with Habilitation)** (14th Aug. 2020 –)
Departamento de Física, Faculdade de Ciências da Universidade de Lisboa

– **Thematic Line Leader**: "Unveiling the dynamics of the universe" (Cosmology Group leader) (1st October 2020–).
Instituto de Astrofísica e Ciências do Espaco da Universidade de Lisboa.

I was awarded a contract in the Individual Call to Scientific Employment Stimulus FCT 2018, as a Principal Researcher (one of the five awardees at this category).

– Category: **Principal Researcher** (1st Sep. 2019 –13th Aug. 2020)
I was awarded a contract in the Individual Call to Scientific Employment Stimulus FCT 2018, as a Principal Researcher (one of the five awardees at this category).

– Category: **Researcher**
Researcher (Sep. 2018–)
Instituto de Astrofísica e Ciências do Espaco da Universidade de Lisboa,
Campo Grande, Ed. C8 1749-016, Lisboa, Portugal

3. **History:**

– **Thematic Line Leader**: "Unveiling the dynamics of the universe" (July 2015–December 2018).
Instituto de Astrofísica e Ciências do Espaco da Universidade de Lisboa.

– Category: **Principal Researcher** (equivalent to an Associate Professor)
FCT Researcher (Sep. 2013–Aug. 2018)
Faculdade de Ciências da Universidade de Lisboa
Instituto de Astrofísica e Ciências do Espaco da Universidade de Lisboa,
Campo Grande, Ed. C8 1749-016, Lisboa, Portugal

– Associate Professor (permanent position declined) (February 2014)
Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile

– Researcher (Jan. 2010–Aug. 2013)
Centro de Astronomia e Astrofísica da Universidade de Lisboa,
Campo Grande, Ed. C8 1749-016, Lisboa, Portugal

– Researcher (March 2009–Dec. 2009)
Centro de Física Teórica e Computacional Universidade de Lisboa
Av. Prof. Gama Pinto 2, 1649-003 Lisboa Codex Portugal

– Researcher (Oct. 2008–Feb. 2009)
Centro de Astronomia e Astrofísica da Universidade de Lisboa,
Campo Grande, Ed. C8 1749-016, Lisboa, Portugal

– Post-Doctoral Researcher (Oct. 2006–Sep. 2008)
Institute of Cosmology and Gravitation,
Mercantile House, Portsmouth University,
Portsmouth PO1 2EG, Britain

– Post-Doctoral Researcher (Jul. 2005–Sep. 2006)
Centro de Astronomia e Astrofísica da Universidade de Lisboa,
Campo Grande, Ed. C8 1749-016, Lisboa, Portugal

– M.Sc (graduated with A, 1998) and PhD (graduated *summa cum laude*, Jul. 2005) degrees, Science Faculty, University of Lisbon, Portugal.

– Standard 8 (Form III), Pretoria Boys High School.

– High School teacher (1994-2013).

4. **E-mail:** fslobo@fc.ul.pt, flobo@cosmo.fis.fc.ul.pt

   Homepage:

   http://rana.oal.ul.pt/∼flobo/

5. **Ongoing/Recent Projects and Grants:**

6. – Modified Gravity impact on Cosmology and Astroparticles, FCT – Portugal, CERN/FIS-PAR/0037/2019, (15 000 euros, **PI: Francisco S.N. Lobo**).

   – Ministerio de Ciencia, Innovación y Universidades (Spain) project No. PID2019-108485GB-I00 (Portuguese member: Francisco S.N. Lobo; PI: Diego Rubiera-Garcia)

   – Gravitational Wave Cosmology, FCT – Portugal, PTDC/FIS-OUT/29048/2017, (240 000 euros, **PI: Francisco S.N. Lobo**).

   – "Gravitación y Campos Cuánticos. Reference: FIS2014-57387-C3-1-P (Portuguese member: Francisco S.N. Lobo; PI: Gonzalo Olmo)

   – "NITheP" (National Institute for Theoretical Physics, South Africa) short term visitor program 2016-2017, (Portuguese member: Francisco S.N. Lobo; Project Coordinators: Peter Dunsby and Alvaro de la Cruz-Dombriz)

   – "i-LINK1019 2015" grant of the Spanish Research Council (CSIC), (Portuguese member: Francisco S.N. Lobo; Project Coordinator: Emilio Elizalde)

   – Cosmological tests of gravitation, EXPL/FIS-AST/1608/2013 (PI: Nelson J. Nunes)

   – "i-LINK0780 2013" grant of the Spanish Research Council (CSIC), with the project "Limits of General Relativity" (Portuguese PI: Francisco S.N. Lobo; Project Coordinator: Gonzalo Olmo)

   – Late-time cosmic acceleration: Dark energy and modified gravity, CERN/FP/123615/2011 (PI: Francisco S.N. Lobo).

   – Cosmology with varying couplings, CERN/FP/123618/2011 (PI: José P. Mimoso).

   – Late-time cosmic acceleration: Dark energy and modified gravity, CERN/FP/109381/2009 (PI: Francisco S.N. Lobo).

   – Late-time cosmic acceleration: Dark energy and modified gravity, CERN/FP/116398/2010 (PI: Francisco S.N. Lobo).

– Cosmology with coupled components, PTDC/FIS/102742/2008 (PI: José P. Mimoso).

– The Primordial Universe and dark energy, Programa Pessoa 2010/2011 - Cooperação Portugal/França (Portuguese Coordinator: José P. Mimoso).

7. **Member of the EUCLID Theory Working Group**

8. **Member of the eLISA Consortium:**

   – Astrophysical Black Holes Working Group.

   – Test of Fundamental Laws Working Group.

9. **Research Interests:**

   Cosmology
   Modified theories of gravity
   Dark energy and dark matter models
   Brane Cosmology
   Exact Solutions to the Einstein Field Equations
   Mathematical aspects of General Relativity
   Averaged cosmologies, e.g., swiss-cheese model
   Relativistic stars: gravitational collapse
   Analogue models
   Quantum Inequalities and Quantum Field Theory

10. **Recent student/post-doctoral supervision:**

    – Supervising a PhD student, Francisco Cabral;

    – Co-supervised a PhD student, João Luís Rosa;

    – Co-supervising a PhD student, Ismael Ayuso Marazuela;

    – Supervised a post-doctoral researcher, Noemi Frusciante;

    – Supervised a post-doctoral researcher, Diego Rubiera-Garcia;

    – Supervised a post-doctoral researcher, Diego Saez-Gomez;

    – Co-supervised a Masters student, Daniel Rapouso;

    – Supervised a post-doctoral researcher, Nadiezdha Montelongo Garcia;

    – Supervised a Masters student, Miguel Oliveira.

11. **Recent conference organization:**

    – LOC of the "13th Iberian Cosmology Meeting (IberiCOS 2018)", 26-28th March 2018, Lisbon, Portugal;

    – SOC of the "IA-ON4" Institute of Astrophysics and Space Sciences, 4th internal workshop 30-31 October 2017, Lisboa, Portugal;

    – LOC of the "1st CANTATA Cost action workshop Cosmology and Astrophysics Network for Theoretical Advances and Training Actions", 11-12th November 2016, Lisbon, Portugal;

    – SOC of the "IA-ON3" Institute of Astrophysics and Space Sciences, 3rd internal workshop, 13-14th October 2016, Porto, Portugal;

– LOC and SOC of the "The Spanish-Portuguese Relativity Meeting 2016", 12th-15th September 2016, Lisbon, Portugal;

– LOC of the "EUCLID Consortium Meeting 2016: Mapping the geometry of the dark universe", 30th May-3rd June 2016, Lisbon, Portugal;

– Scientific Committee of the conference "GR 100 years in Lisbon", Instituto Superior Tecnico, 18-19 December 2015, Lisbon, Portugal;

– Chaired the AT3 parallel session "Alternative Theories" at the 14th Marcel Grossmann Meeting, at the University of Rome "La Sapienza" – Rome, July 12-18, 2015.

2 Coordenation of the Cosmology group (IA)

I was Leader of the Thematic Line (TL) "Unveiling the dynamics of the universe" of the Instituto de Astrofísica e Ciências do Espaco (IA), during the period of the 1st July 2015 to 31st December 2018. The TL has grown and matured, presently consisting of 28 researchers and students.

At the IA, we are focused on the following topics of research:

1. The theoretical modelling of early and late-time cosmological scenarios and the study of their potential impact on the observational properties of the Universe;
2. The development of high precision numerical tools to study the non-linear hydrodynamical evolution of galaxies and galaxy clusters and to compute the cosmological evolution of dynamical scalar fields, including topological defects such as cosmic strings and domain walls;
3. The application of modern statistical tools for cosmological parameter estimation and model selection, including Markov Chain Monte Carlo sampling, Fisher matrix and principal component analysis;
4. The assessment of the performance of competing cosmological paradigms using available and simulated data, including type Ia supernovae, quasar spectra, galaxy clustering, galaxy cluster abundances, cosmic microwave background and weak lensing observations.

The team has been actively involved in several international collaborations, including the Planck survey and the XMM-Newton Cluster Survey (XCS). In the forthcoming years it will continue to play a very active role in the development and scientific exploitation of a new generation of major ESA and ESO facilities, with particular emphasis on Euclid and ESPRESSO in which the IA has an institutional participation (IA is also exploiting possibilities for participation in major future projects such as the proposed ATHENA and eLISA missions).

The scientific preparation of these facilities is a main driver of the forefront research in cosmology, requiring a detailed characterisation of the degeneracies associated with dark energy dynamics, modified models of gravity, variation of fundamental couplings, feedback from small-scale non-linearities and non-gaussianity, as well as a careful modelling of the observational, astrophysical and numerical uncertainties. These are all main axes of research in which the IA team has a consolidated expertise and outstanding long-term contributions.

2.1 Knowledge Transfer/Science Divulgation

In this section, for the non-academic experience in Science, I believe I have an extended experience in delivering outreach lectures/seminars to schools, aiming at increasing the interest and awareness of the students to Science. I have also implemented several novel and pioneering projects in schools, in collaboration with the Núcleo Interactivo de Astronomia (NUCLIO), such as using the Faulkes Telescope, the Hands on Universe project and the Thinking Worlds software, etc, to awaken the students' interest in Science.

During the school year period 2008-2009, I implemented a novel project at the Escola Básica de Ferreira de Castro (Mem Martins), where very well-known scientists were invited to give public talks to cultivate the interest in Science in the students, and the public community, in general. The project was extremely successful and ran for a full three school year period.

I delivered over 40 talks at schools over the last few years and have participated actively in the Ignite IAstro tour, since its beginning (January 2016) and the ESA "Espaco vai a escola" project with Cienica Viva.

I delivered two public talks at the Calouste Gulbenkian Planetry (Lisbon) on the 29th October 2016, and the 28th October, respectively, where approximately 430 people attended in each session.

2.2 Prizes, scholarships and distinctions

I was placed in the top 2% of the publicly available database, published by the PLoS Biology journal, of 100 000 top-scientists that provides standardized information on citations, h-index, co-authorship adjusted hm-index, citations to papers in different authorship positions and a composite indicator. The list is the product of an analysis led by John Ioannidis, of Stanford University, in the United States. *I was featured as the top-ranked researcher of the Science Faculty of the University of Lisbon.*

I was awarded a contract in the Individual Call to Scientific Employment Stimulus FCT 2018, as a Principal Researcher (one of the five awardees).

I was an FCT Investigator funded by the Fundacão para a Ciência e Tecnologia (Portugal), with reference IF/00859/2012. I was a post-doctoral researcher at the Institute of Cosmology and Gravitation, University of Portsmouth, during the period of 1 October 2006 to 30 September 2008, funded by Fundacão para a Ciência e a Tecnologia through the grant SFRH/BPD/26269/2006.

Since July 2015, I am be the Thematic Line Leader of the Thematic Line "Unveiling the dynamics of the universe", of the Instituto de Astrofísica e Ciências do Espaco da Universidade de Lisboa.

I co-authored two research papers that received Honorable Mentions in the distinguished Gravity Research Foundation Essay Contest in 2012 and 2013.

I am referee for over 20 high-impact scientific journals, and serve as a Scientific Ad-

viser/Reviewer for the FONDECYT (Chile), the Academic Sciences of Romania, the "CONEX – CONnectingEXcellence to UC3M" program of the The Universidad Carlos III de Madrid (UC3M) and for the Estonian Research Council.

I have been invited to chair the AT3 parallel session "Alternative Theories" at the "The Fourtheenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 12-18, 2015.

I have delivered 5 plenary sessions and 12 invited talks in international conferences, and numerous invited seminars. I have also served as a PhD jury member, namely, as first vocal in the PhD defense of Dr. Aaron V. B. Arellano (Universidad Autónoma del Estado de México, 14th August 2008); second vocal in the PhD defense of Dr. Pedro Frazão (Instituto Superior Técnico, 18th December 2013), and in the PhD defense of Dr. Frederico André Branco dos Reis Francisco (Instituto Superior Tecnico, 22nd December 2014) (The latter thesis "Trajectory Anomalies in Interplanetary Spacecraft" defended by Dr. Frederico Francisco won the Springer Verlag award for the outstanding thesis); and first vocal in the MSc defense of Nuno Castel-Branco (Instituto Superior Técnico, 9th June 2014).

3 Recent Teaching

I view teaching as much more than a recitation of past work, but as an active, continuous exchange of information between the lecturer and the class. Thus, instructing the next generation of scientists is one of the most energizing, rewarding, and important experiences of an academic teaching career.

At the University level, in the Department of Physics of the Science Faculty of the University of Lisbon, I have taught the following:

1. Undergraduate (1st year Geology): "**Elementos de Física**" during the years 2019-2020 and 2020-2021.
2. Undergraduate (1st year Physics): "**Electromagnetismo (teórico-práticas)**" during the year 2020-2021.
3. Undergraduate (1st year Informática): "**Física Experimental I**" during the year 2020-2021.
4. Undergraduate (3rd year Mathematics): "Física (teórico-práticas)" during the year 2020-2021.
5. MSc course "**Early Universe: Inflation and the Large Scale Structure**" during the years 2015-2016 and 2016-2017.
6. PhD course "**Advanced Topics of the Early Universe: Inflation and the Large Scale Structure**" during the year 2016-2017.
7. Undergraduate (3rd year Physics): "Quantum Mechanics (teórico-práticas)" during the school years 2013-2014, 2014-2015, and 2015-2016.

I have an extensive teaching experience at the high school level, where I have exercised teaching duties since 1994 through to 2013, lecturing Physics and Chemistry from the 8th to the 12th grades, and Mathematics to the 6th, 8th and 9th grades over the years. Over this period, I have also implemented numerous successful outreach projects, aimed at increasing the interest and awareness of the students to Science.

I concluded a Teacher Training (Estágio Pedagógico, Profissionalizacão em Servico) in the 4ºA Group (Físico-Química) in the Escola Superior de Educacão de Lisboa, in the school year of 2000-2001, with a final classification of 18/20.

I have also served as a PhD jury member, namely, as first vocal in the PhD defense of Dr. Aaron V. B. Arellano (Universidad Autónoma del Estado de México, 14th August 2008); second vocal in the PhD defense of Dr. Pedro Frazão (Instituto Superior Técnico, 18th December 2013), and in the PhD defense of Dr. Frederico André Branco dos Reis Francisco (Instituto Superior Tecnico, 22nd December 2014) (The latter thesis "Trajectory Anomalies in Interplanetary Spacecraft" defended by Dr. Frederico Francisco won the Springer Verlag award for the outstanding thesis); and first vocal in the MSc defense of Nuno Castel-Branco (Instituto Superior Técnico, 9th June 2014).

I also have an extensive teaching experience at the high school level, where I've taught Physics, Chemistry and Mathematics to practically all the years for a period of 20 years, starting from 1994. I've implemented numerous projects over the years, in order to stimulate the students to Science, and I believe that I've been extremely successful in this endeavour.

4 Publications

Research-wise, I have been involved in many mainstream areas of great importance and topicality in modern physics. Several of my publications have received extensive news coverage in the following newspapers and journals: *New York Times*, *International Herald Tribune*, *Scientific American*, *National Geographic* and *New Scientist*.

My impact factor, h, is 59 (INSPIRES) [$h = 59$ (NASA ADS); $h = 62$, Google Scholar]. (m-index is presently 3,1).

My *tori* research impact factor is presently 90.
(The total research impact (tori) quantifies, for an individual, the total amount of scholarly work that others have devoted to his/her work, measured in the volume of research papers. It is extremely useful for interdisciplinary comparisons.)

4.1 Books

1. **Extensions of $f(R)$ gravity: Curvature-matter couplings and hybrid metric-Palatini theory**
   T. Harko and F. S. N. Lobo,
   Cambridge: Cambridge University Press (2018).
   (Cambridge Monographs on Mathematical Physics)
   https://doi.org/10.1017/9781108645683
   Online ISBN: 9781108645683

2. **Wormholes, Warp Drives and Energy Conditions**
   F. S. N. Lobo (Ed. & coauthor),
   Springer Int. Publishing (2017)
   doi:10.1007/978-3-319-55182-1.

4.2 Articles in Refereed Research Journals

164. **"Evolving traversable wormholes satisfying the energy conditions in the presence of pole dark energy"**
   M. Kord Zangeneh, F. S. N. Lobo and H. Moradpour.
   arXiv:2008.04013 [gr-qc]
   DOI:10.1016/j.dark.2021.100779
   Phys. Dark Univ. **31**, 100779 (2021)

163. **"Novel thick brane solutions with $U(1)$ symmetry breaking"**
   M. Peyravi, N. Riazi and F. S. N. Lobo.
   arXiv:2004.05121 [gr-qc]
   DOI:10.1140/epjc/s10052-021-08988-y
   Eur. Phys. J. C **81**, no. 3, 216 (2021)

162. **"Static spherically symmetric three-form stars"**
   B. J. Barros, Z. Haghani, T. Harko and F. S. N. Lobo.
   arXiv:2101.04445 [gr-qc]

DOI:10.1140/epjc/s10052-021-09105-9
Eur. Phys. J. C **81**, no. 4, 307 (2021)

161. **"Wormhole geometries induced by action-dependent Lagrangian theories"**
I. Ayuso, F. S. N. Lobo and J. P. Mimoso.
arXiv:2012.00047 [gr-qc]
DOI:10.1103/PhysRevD.103.044018
Phys. Rev. D **103**, no. 4, 044018 (2021)

160. **"Novel modified gravity braneworld configurations with a Lagrange multiplier"**
D. Bazeia, D. A. Ferreira, F. S. N. Lobo and J. Luís.
arXiv:2011.06240 [gr-qc]
DOI:10.1140/epjp/s13360-021-01304-3
Eur. Phys. J. Plus **136**, no. 3, 321 (2021)

159. **"Dynamic wormhole geometries in hybrid metric-Palatini gravity"**
M. Kord Zangeneh and F. S. N. Lobo.
arXiv:2011.01745 [gr-qc]
DOI:10.1140/epjc/s10052-021-09059-y
Eur. Phys. J. C **81**, no. 4, 285 (2021)

158. **"Thick brane structures in generalized hybrid metric-Palatini gravity"**
J. L. Rosa, D. A. Ferreira, D. Bazeia and F. S. N. Lobo.
arXiv:2010.10074 [gr-qc]
DOI:10.1140/epjc/s10052-021-08840-3
Eur. Phys. J. C **81**, no. 1, 20 (2021)

157. **"Shadow, deflection angle and quasinormal modes of Born-Infeld charged black holes"**
K. Jafarzade, M. Kord Zangeneh and F. S. N. Lobo.
arXiv:2010.05755 [gr-qc]
DOI:10.1088/1475-7516/2021/04/008
JCAP **2104**, 008 (2021)

156. **"Novel black-bounce spacetimes: wormholes, regularity, energy conditions, and causal structure"**
F. S. N. Lobo, M. E. Rodrigues, M. V. d. S. Silva, A. Simpson and M. Visser.
arXiv:2009.12057 [gr-qc]
DOI:10.1103/PhysRevD.103.084052
Phys. Rev. D **103**, 084052, [Phys. Rev. D **103**, 084052 (2021)]

155. **"Fundamental Symmetries and Spacetime Geometries in Gauge Theories of Gravity—Prospects for Unified Field Theories"**
F. Cabral, F. S. N. Lobo and D. Rubiera-Garcia.
arXiv:2012.06356 [gr-qc]
DOI:10.3390/universe6120238
Universe **6**, no. 12, 238 (2020)

154. **"Structure and stability of traversable thin-shell wormholes in Palatini $f(\mathcal{R})$ gravity"**

F. S. N. Lobo, G. J. Olmo, E. Orazi, D. Rubiera-Garcia and A. Rustam.
arXiv:2009.10997 [gr-qc]
DOI:10.1103/PhysRevD.102.104012
Phys. Rev. D **102**, no. 10, 104012 (2020)

153. **"Kinetic gravity braiding wormhole geometries"**
R. Korolev, F. S. N. Lobo and S. V. Sushkov.
arXiv:2009.04829 [gr-qc]
DOI:10.1103/PhysRevD.102.104016
Phys. Rev. D **102**, no. 10, 104016 (2020)

152. **"Thin-shell traversable wormhole crafted from a regular black hole with asymptotically Minkowski core"**
T. Berry, F. S. N. Lobo, A. Simpson and M. Visser.
arXiv:2008.07046 [gr-qc]
DOI:10.1103/PhysRevD.102.064054
Phys. Rev. D **102**, no. 6, 064054 (2020)

151. **"Beyond Einstein's General Relativity: Hybrid metric-Palatini gravity and curvature-matter couplings"**
T. Harko and F. S. N. Lobo.
arXiv:2007.15345 [gr-qc]
DOI:10.1142/S0218271820300086
Int. J. Mod. Phys. D **29**, no. 13, 2030008 (2020)

150. **"The cosmological principle in theories with torsion: The case of Einstein-Cartan-Dirac-Maxwell gravity"**
F. Cabral, F. S. N. Lobo and D. Rubiera-Garcia.
arXiv:2004.13693 [gr-qc]
DOI:10.1088/1475-7516/2020/10/057
JCAP **2010**, 057 (2020)

149. **"General constraints on Horndeski wormhole throats"**
R. Korolev, F. S. N. Lobo and S. V. Sushkov.
arXiv:2004.12382 [gr-qc]
DOI:10.1103/PhysRevD.101.124057
Phys. Rev. D **101**, no. 12, 124057 (2020)

148. **"Black hole and naked singularity geometries supported by three-form fields"**
B. J. Barros, B. Dănilă, T. Harko and F. S. N. Lobo.
arXiv:2004.06605 [gr-qc]
DOI:10.1140/epjc/s10052-020-8178-1
Eur. Phys. J. C **80**, 617 (2020)

147. **"Cosmic stringlike objects in hybrid metric-Palatini gravity"**
T. Harko, F. S. N. Lobo and H. M. R. da Silva.
arXiv:2003.09751 [gr-qc]
DOI:10.1103/PhysRevD.101.124050
Phys. Rev. D **101**, no. 12, 124050 (2020)

146. **"Dynamic thin-shell black-bounce traversable wormholes"**
F. S. N. Lobo, A. Simpson and M. Visser.
arXiv:2003.09419 [gr-qc]
DOI:10.1103/PhysRevD.101.124035
Phys. Rev. D **101**, no. 12, 124035 (2020)

145. **"Cosmological bounces, cyclic universes, and effective cosmological constant in Einstein-Cartan-Dirac-Maxwell theory"**
F. Cabral, F. S. N. Lobo and D. Rubiera-Garcia.
arXiv:2003.07463 [gr-qc]
DOI:10.1103/PhysRevD.102.083509
Phys. Rev. D **102**, no. 8, 083509 (2020)

144. **"Stability of Kerr black holes in generalized hybrid metric-Palatini gravity"**
J. L. Rosa, J. P. S. Lemos and F. S. N. Lobo.
arXiv:2003.00090 [gr-qc]
DOI:10.1103/PhysRevD.101.044055
Phys. Rev. D **101**, 044055 (2020)

143. **"Cosmographic analysis of redshift drift"**
F. S. N. Lobo, J. P. Mimoso and M. Visser.
arXiv:2001.11964 [gr-qc]
DOI:10.1088/1475-7516/2020/04/043
JCAP **2004**, 043 (2020)

142. **"Prospects for Fundamental Physics with LISA"**
E. Barausse *et al.*.
arXiv:2001.09793 [gr-qc]
DOI:10.1007/s10714-020-02691-1
Gen. Rel. Grav. **52**, no. 8, 81 (2020)

141. **"Observational constraints of $f(Q)$ gravity"**
R. Lazkoz, F. S. N. Lobo, M. Ortiz-Baños and V. Salzano.
arXiv:1907.13219 [gr-qc]
DOI:10.1103/PhysRevD.100.104027
Phys. Rev. D **100**, no. 10, 104027 (2019)

140. **"Einstein–Cartan–Dirac gravity with $U(1)$ symmetry breaking"**
F. Cabral, F. S. N. Lobo and D. Rubiera-Garcia.
arXiv:1902.02222 [gr-qc]
DOI:10.1140/epjc/s10052-019-7536-3
Eur. Phys. J. C **79**, no. 12, 1023 (2019)

139. **"Spherically symmetric static vacuum solutions in hybrid metric-Palatini gravity"**
B. Dănilă, T. Harko, F. S. N. Lobo and M. K. Mak.
arXiv:1811.02742 [gr-qc]
DOI:10.1103/PhysRevD.99.064028
Phys. Rev. D **99**, no. 6, 064028 (2019)

138. **"Wormholes in generalized hybrid metric-Palatini gravity obeying the matter null energy condition everywhere"**
J. L. Rosa, J. P. S. Lemos and F. S. N. Lobo.
arXiv:1808.08975 [gr-qc]
DOI:10.1103/PhysRevD.98.064054
Phys. Rev. D **98**, 064054 (2018)

137. **"Wormhole geometries supported by three-form fields"**
B. J. Barros and F. S. N. Lobo.
arXiv:1806.10488 [gr-qc]
DOI:10.1103/PhysRevD.98.044012
Phys. Rev. D **98**, no. 4, 044012 (2018)

136. **"Coupling matter in modified Q gravity"**
T. Harko, T. S. Koivisto, F. S. N. Lobo, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1806.10437 [gr-qc]
DOI:10.1103/PhysRevD.98.084043
Phys. Rev. D **98**, no. 8, 084043 (2018)

135. **"Metric-affine $f(R,T)$ theories of gravity and their applications"**
E. Barrientos, F. S. N. Lobo, S. Mendoza, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1803.05525 [gr-qc]
DOI:10.1103/PhysRevD.97.104041
Phys. Rev. D **97**, no. 10, 104041 (2018)

134. **"Gravitational waves in theories with a non-minimal curvature-matter coupling"**
O. Bertolami, C. Gomes and F. S. N. Lobo.
arXiv:1706.06826 [gr-qc]
DOI:10.1140/epjc/s10052-018-5781-5
Eur. Phys. J. C **78**, no. 4, 303 (2018)

133. **"Palatini wormholes and energy conditions from the prism of General Relativity"**
C. Bejarano, F. S. N. Lobo, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1607.01259 [gr-qc]
DOI:10.1140/epjc/s10052-017-5353-0
Eur. Phys. J. C **77**, no. 11, 776 (2017)

132. **"A Review on the Cosmology of the de Sitter Horndeski Models"**
N. J. Nunes, P. Martín-Moruno and F. S. N. Lobo.
arXiv:1704.05376 [gr-qc]
DOI:10.3390/universe3020033
Universe **3**, no. 2, 33 (2017)

131. **"Electrodynamics and spacetime geometry: Astrophysical applications"**
F. Cabral and F. S. N. Lobo.
arXiv:1603.08180 [gr-qc]
DOI:10.1140/epjp/i2017-11618-2
Eur. Phys. J. Plus **132**, no. 7, 304 (2017)

130. **"Cosmological Solutions in generalized hybrid metric-Palatini gravity"**
J. L. Rosa, S. Carloni, J. P. d. S. e. Lemos and F. S. N. Lobo.
arXiv:1703.03335 [gr-qc]
DOI:10.1103/PhysRevD.95.124035
Phys. Rev. D **95**, no. 12, 124035 (2017)

129. **"Crossing SNe Ia and BAO observational constraints with local ones in hybrid metric-Palatini gravity"**
I. Leanizbarrutia, F. S. N. Lobo and D. Saez-Gomez.
arXiv:1701.08980 [gr-qc]
DOI:10.1103/PhysRevD.95.084046
Phys. Rev. D **95**, no. 8, 084046 (2017)

128. **"Gravitational waves and electrodynamics: New perspectives"**
F. Cabral and F. S. N. Lobo.
arXiv:1603.08157 [gr-qc]
DOI 10.1140/epjc/s10052-017-4791-z
Eur. Phys. J. C **77**, 237 (2017)

127. **"Evolution of spherical domain walls in solitonic symmetron models"**
M. Peyravi, N. Riazi and F. S. N. Lobo.
arXiv:1606.05269 [gr-qc]
DOI:10.1103/PhysRevD.95.064047
Phys. Rev. D **95**, 064047 (2017)

126. **"Hybrid metric-Palatini stars"**
B. Danila, T. Harko, F. S. N. Lobo and M. K. Mak.
arXiv:1608.02783 [gr-qc]
DOI:10.1103/PhysRevD.95.044031
Phys. Rev. D **95**, 044031 (2017)

125. **"Cosmological models in modified gravity theories with extended nonminimal derivative couplings"**
T. Harko, F. S. N. Lobo, E. N. Saridakis and M. Tsoukalas.
arXiv:1609.01503 [gr-qc]
DOI:10.1103/PhysRevD.95.044019
Phys. Rev. D **95**, 044019 (2017)

124. **"Electrodynamics and spacetime geometry: Foundations"**
F. Cabral and F. S. N. Lobo.
arXiv:1602.01492 [gr-qc]
DOI:10.1007/s10701-016-0051-6
Found. Phys. **47**, 208 (2017)

123. **"Unveiling the Dynamics of the Universe"**
P. Avelino *et al.*.
arXiv:1607.02979 [astro-ph.CO]
DOI:10.3390/sym8080070
Symmetry **8**, 70 (2016)

122. **"Constraining $f(T, \mathcal{T})$ gravity models using type Ia supernovae"**
D. Saez-Gomez, C. S. Carvalho, F. S. N. Lobo and I. Tereno.
arXiv:1603.09670 [gr-qc]
DOI:10.1103/PhysRevD.94.024034
Phys. Rev. D **94**, 024034 (2016)

121. **"Cosmology with higher-derivative matter fields"**
T. Harko, F. S. N. Lobo and E. N. Saridakis.
arXiv:1405.7019 [gr-qc]
DOI:10.1142/S0219887816501024
Int. J. Geom. Meth. Mod. Phys. **13**, 1650102 (2016)

120. **"From the Flamm-Einstein-Rosen bridge to the modern renaissance of traversable wormholes"**
F. S. N. Lobo.
arXiv:1604.02082 [gr-qc]
10.1142/S0218271816300172
Int. J. Mod. Phys. D **25**, 1630017 (2016)

119. **"Novel third-order Lovelock wormhole solutions"**
M. R. Mehdizadeh and F. S. N. Lobo.
arXiv:1604.02913 [gr-qc]
10.1103/PhysRevD.93.124014
Phys. Rev. D **93**, 124014 (2016)

118. **"Soliton models for thick branes"**
M. Peyravi, N. Riazi and F. S. N. Lobo.
arXiv:1504.04603 [gr-qc]
10.1140/epjc/s10052-016-4094-9
Eur. Phys. J. C **76**, no. 5, 247 (2016)

117. **"Comment on "Searching for Topological Defect Dark Matter via Nongravitational Signatures" "**
P. P. Avelino, L. Sousa and F. S. N. Lobo.
arXiv:1506.06028 [astro-ph.CO]
10.1103/PhysRevLett.116.169001
Phys. Rev. Lett. **116**, 169001 (2016)

116. **"Dynamical system analysis for nonminimal torsion-matter coupled gravity"**
S. Carloni, F. S. N. Lobo, G. Otalora and E. N. Saridakis.
arXiv:1512.06996 [gr-qc]
10.1103/PhysRevD.93.024034
Phys. Rev. D **93**, 024034 (2016)

115. **"Traversable wormholes satisfying the weak energy condition in third-order Lovelock gravity"**
M. K. Zangeneh, F. S. N. Lobo and M. H. Dehghani.
arXiv:1510.07089 [gr-qc]
10.1103/PhysRevD.92.124049
Phys. Rev. D **92**, 124049 (2015)

114. **"Wormhole geometries in Eddington-inspired Born-Infeld gravity"**
T. Harko, F. S. N. Lobo, M. K. Mak and S. V. Sushkov.
arXiv:1307.1883 [gr-qc]
10.1142/S0217732315501904
Mod. Phys. Lett. A **30**, No. 35, 1550190 (2015)

113. **"A dynamical system analysis of hybrid metric-Palatini cosmologies"**
S. Carloni, T. Koivisto and F. S. N. Lobo.
arXiv:1507.04306 [gr-qc]
10.1103/PhysRevD.92.064035
Phys. Rev. D **92**, 064035 (2015)

112. **"Gravitational, lensing, and stability properties of Bose-Einstein condensate dark matter halos"**
T. Harko and F. S. N. Lobo.
arXiv:1505.00944 [gr-qc]
10.1103/PhysRevD.92.043011
Phys. Rev. D **92**, 043011 (2015)

111. **"Gravitational induced particle production through a nonminimal curvature-matter coupling"**
T. Harko, F. S. N. Lobo, J. P. Mimoso and D. Pavón.
arXiv:1508.02511 [gr-qc]
10.1140/epjc/s10052-015-3620-5
Eur. Phys. J. C **75**, no. 8, 386 (2015)

110. **"Hybrid metric-Palatini gravity"**
S. Capozziello, T. Harko, T. S. Koivisto, F. S. N. Lobo and G. J. Olmo.
arXiv:1508.04641 [gr-qc]
10.3390/universe1020199
Universe, 1 (2), 199-238 (2015)

109. **"Generalized $f(R, \phi, X)$ gravity and the late-time cosmic acceleration"**
S. B. Beltran, C. G. Boehmer, F. S. N. Lobo and D. Saez-Gomez.
arXiv:1506.07728 [gr-qc]
10.3390/universe1020186
Universe, 1 (2), 186-198 (2015)

108. **"Higher-dimensional thin-shell wormholes in third-order Lovelock gravity"**
M. R. Mehdizadeh, M. K. Zangeneh and F. S. N. Lobo.
arXiv:1506.03427 [gr-qc]
10.1103/PhysRevD.92.044022
Phys. Rev. D **92**, 044022 (2015)

107. **"Generalized energy conditions in Extended Theories of Gravity"**
S. Capozziello, F. S. N. Lobo and J. P. Mimoso.
arXiv:1407.7293 [gr-qc]
10.1103/PhysRevD.91.124019
Phys. Rev. D **91**, 124019 (2015)

106. **"Crystal clear lessons on the microstructure of spacetime and modified gravity"**
F. S. N. Lobo, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1412.4499 [hep-th]
10.1103/PhysRevD.91.124001
Phys. Rev. D **91**, no. 12, 124001 (2015)

105. **"Attracted to de Sitter: cosmology of the linear Horndeski models"**
P. Martin-Moruno, N. J. Nunes and F. S. N. Lobo.
arXiv:1502.05878 [gr-qc]
10.1088/1475-7516/2015/05/033
JCAP **1505**, no. 05, 033 (2015)

104. **"Horndeski theories self-tuning to a de Sitter vacuum"**
P. Martin-Moruno, N. J. Nunes and F. S. N. Lobo.
arXiv:1502.03236 [gr-qc]
10.1103/PhysRevD.91.084029
Phys. Rev. D **91**, 084029 (2015)

103. **"Einstein-Gauss-Bonnet traversable wormholes satisfying the weak energy condition"**
M. R. Mehdizadeh, M. K. Zangeneh and F. S. N. Lobo.
arXiv:1501.04773 [gr-qc]
10.1103/PhysRevD.91.084004
Phys. Rev. D **91**, 084004 (2015)

102. **"Invariant solutions and Noether symmetries in Hybrid Gravity"**
A. Borowiec, S. Capozziello, M. De Laurentis, F. S. N. Lobo, A. Paliathanasis, M. Paolella and A. Wojnar.
arXiv:1407.4313 [gr-qc]
10.1103/PhysRevD.91.023517
Phys. Rev. D **91**, 023517 (2015)

101. **"Wormhole geometries supported by quark matter at ultra-high densities"**
T. Harko, F. S. N. Lobo and M. K. Mak.
arXiv:1403.0771 [gr-qc]
10.1142/S0218271815500066
Int. J. Mod. Phys. D **24**, 1550006 (2015)

100. **"$f(T, \mathcal{T})$ gravity and cosmology"**
T. Harko, F. S. N. Lobo, G. Otalora and E. N. Saridakis.
arXiv:1405.0519 [gr-qc]
10.1088/1475-7516/2014/12/021
JCAP **12**, 021 (2014)

99. **"A class of exact solutions of the Liénard type ordinary non-linear differential equation"**
T. Harko, F. S. N. Lobo, M. K. Mak.
arXiv:1302.0836 [math-ph]
10.1007/s10665-014-9696-3
Journal of Engineering Mathematics 89:193-205 (2014)

98. **"Wormholes minimally violating the null energy condition"**
M. Bouhmadi-Lopez, F. S. N. Lobo and P. Martin-Moruno.
arXiv:1407.7758 [gr-qc]
10.1088/1475-7516/2014/11/007
JCAP **1411**, 007 (2014)

97. **"Bianchi type I cosmological models in Eddington-inspired Born-Infeld gravity"**
T. Harko, F. S. N. Lobo and M. K. Mak.
arXiv:1410.5213 [gr-qc]
10.3390/galaxies2040496
Galaxies 2 (2014) 4, 496-519

96. **"Higher-dimensional evolving wormholes satisfying the null energy condition"**
M. K. Zangeneh, F. S. N. Lobo and N. Riazi.
arXiv:1406.5703 [gr-qc]
10.1103/PhysRevD.90.024072
Phys. Rev. D **90**, 024072 (2014)

95. **"Generalized curvature-matter couplings in modified gravity"**
T. Harko and F. S. N. Lobo.
arXiv:1407.2013 [gr-qc]
10.3390/galaxies2030410
Galaxies 2 (2014) 3, 410-465

94. **"Dynamical generation of wormholes with charged fluids in quadratic Palatini gravity"**
F. S. N. Lobo, J. Martinez-Asencio, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1403.0105 [hep-th]
10.1103/PhysRevD.90.024033
Phys. Rev. D **90**, 024033 (2014)

93. **"Non-minimal torsion-matter coupling extension of $f(T)$ gravity"**
T. Harko, F. S. N. Lobo, G. Otalora and E. N. Saridakis.
10.1103/PhysRevD.89.124036
Physical Review D **89**, 124036 (2014)
arXiv:1404.6212 [gr-qc]

92. **"Microscopic wormholes and the geometry of entanglement"**
F. S. N. Lobo, G. J. Olmo and D. Rubiera-Garcia.
10.1140/epjc/s10052-014-2924-1
Eur. Phys. J. C **74**, 2924 (2014)
arXiv:1402.5099 [hep-th]

91. **"A Riccati equation based approach to isotropic scalar field cosmologies"**
T. Harko, F. S. N. Lobo and M. K. Mak.
10.1142/S0218271814500631
Int. J. Mod. Phys. D **23**, 1450063 (2014)
arXiv:1402.4363 [gr-qc]

90. **"Gravity's Rainbow induces Topology Change"**
R. Garattini and F. S. N. Lobo.
10.1140/epjc/s10052-014-2884-5
Eur. Phys. J. C **74**, 2884 (2014)
arXiv:1303.5566 [gr-qc]

89. **"Exact analytical solutions of the Susceptible-Infected-Recovered (SIR) epidemic model and of the SIR model with equal death and birth rates"**
T. Harko, F. S. N. Lobo and M. K. Mak.
arXiv:1403.2160 [q-bio.PE]
10.1016/j.amc.2014.03.030
Applied Mathematics and Computation **236**, 184-194 (2014)

88. **"Dark matter density profile and galactic metric in Eddington-inspired Born-Infeld gravity"**
T. Harko, F. S. N. Lobo, M. K. Mak and S. V. Sushkov.
arXiv:1305.0820 [gr-qc]
10.1142/S0217732314500497
Mod. Phys. Lett. A **29**, no. 9, 1450049 (2014)

87. **"Planck scale physics and topology change through an exactly solvable model"**
F. S. N. Lobo, J. Martinez-Asencio, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1311.5712 [hep-th]
10.1016/j.physletb.2014.02.038
Phys. Lett. B **731**, 163 (2014)

86. **"Arbitrary scalar field and quintessence cosmological models"**
T. Harko, F. S. N. Lobo and M. K. Mak.
arXiv:1310.7167 [gr-qc]
10.1140/epjc/s10052-014-2784-8
Eur. Phys. J. C **74**, 2784 (2014)

85. **"The Cauchy problem in hybrid metric-Palatini f(X)-gravity"**
S. Capozziello, T. Harko, F. S. N. Lobo, G. J. Olmo and S. Vignolo.
arXiv:1312.1320 [gr-qc]
10.1142/S021988781450042X
Int. J. Geom. Meth. Mod. Phys. **11**, 1450042 (2014)

84. **"Energy conditions in modified gravity"**
S. Capozziello, F. S. N. Lobo and J. P. Mimoso.
arXiv:1312.0784 [gr-qc]
10.1016/j.physletb.2014.01.066
Phys. Lett. B **730**, 280 (2014)

83. **"Analytical solutions of the Riccati equation with coefficients satisfying integral or differential conditions with arbitrary functions"**
T. Harko, F. S. N. Lobo and M. Mak.
arXiv:1311.1150 [math.CA]
Universal Journal of Applied Mathematics 2 (2014) 109-118

82. **"Linearized stability analysis of gravastars in noncommutative geometry"**
F. S. N. Lobo and R. Garattini.
arXiv:1004.2520 [gr-qc]
10.1007/JHEP12(2013)065
JHEP **1312**, 065 (2013)

81. **"Einstein static Universe in hybrid metric-Palatini gravity"**
C. G. Boehmer, F. S. N. Lobo and N. Tamanini.
arXiv:1305.0025 [gr-qc]
10.1103/PhysRevD.88.104019
Phys. Rev. D **88**, 104019 (2013),

80. **"Galactic rotation curves in hybrid metric-Palatini gravity"**
S. Capozziello, T. Harko, T. S. Koivisto, F. S. N. Lobo and G. J. Olmo.
arXiv:1307.0752 [gr-qc]
10.1016/j.astropartphys.2013.09.005
Astroparticle Physics **50-52C**, 65 (2013)

79. **"A Chiellini type integrability condition for the generalized first kind Abel differential equation"**
T. Harko, F. S. N. Lobo and M. Mak.
arXiv:1310.1508 [nlin.SI]
Universal Journal of Applied Mathematics 1 (2013) 101-104

78. **"Hybrid modified gravity unifying local tests, galactic dynamics and late-time cosmic acceleration"**
S. Capozziello, T. Harko, F. S. N. Lobo and G. J. Olmo.
arXiv:1305.3756 [gr-qc]
10.1142/S0218271813420066
Int. J. Mod. Phys. D **22**, 1342006 (2013)
Received an Honorable Mention in the Gravity Research Foundation Essay Contest 2013

77. **"Structure of neutron, quark and exotic stars in Eddington-inspired Born-Infeld gravity"**
T. Harko, F. S. N. Lobo, M. K. Mak and S. V. Sushkov.
arXiv:1305.6770 [gr-qc]
10.1103/PhysRevD.88.044032
Phys. Rev. D **88**, 044032 (2013)

76. **"Further matters in space-time geometry: $f(R,T,R_{\mu\nu}T^{\mu\nu})$ gravity"**
Z. Haghani, T. Harko, F. S. N. Lobo, H. R. Sepangi and S. Shahidi.
arXiv:1304.5957 [gr-qc]
10.1103/PhysRevD.88.044023
Phys. Rev. D **88**, 044023 (2013)

75. **"Integrability cases for the anharmonic oscillator equation"**
T. Harko, F. S. N. Lobo and M. Mak.
arXiv:1304.1468 [math-ph]
Journal of Pure and Applied Mathematics: Advances and Applications 10 (1) (2013) 115-129

74. **"Cosmological anisotropy from non-comoving dark matter and dark energy"**
T. Harko and F. S. N. Lobo.
arXiv:1304.0757 [gr-qc]
10.1088/1475-7516/2013/07/036
JCAP **1307**, 036 (2013)

73. **"The virial theorem and the dark matter problem in hybrid metric-Palatini gravity"**
S. Capozziello, T. Harko, T. S. Koivisto, F. S. N. Lobo and G. J. Olmo.
arXiv:1212.5817 [physics.gen-ph]
10.1088/1475-7516/2013/07/024
JCAP **07**, 024 (2013)

72. **"Semiclassical geons as solitonic black hole remnants"**
F. S. N. Lobo, G. J. Olmo and D. Rubiera-Garcia.
arXiv:1306.2504 [hep-th]
10.1088/1475-7516/2013/07/011
JCAP **1307**, 011 (2013)

71. **"New asymptotically flat phantom wormhole solutions"**
F. S. N. Lobo, F. Parsaei and N. Riazi.
arXiv:1212.5806 [gr-qc]
10.1103/PhysRevD.87.084030
Phys. Rev. D **87**, 084030 (2013)

70. **"Cosmology of hybrid metric-Palatini f(X)-gravity"**
S. Capozziello, T. Harko, T. S. Koivisto, F. S. N. Lobo and G. J. Olmo.
arXiv:1209.2895 [gr-qc]
10.1088/1475-7516/2013/04/011
JCAP **1304**, 011 (2013)

69. **"Gravitationally modified wormholes without exotic matter"**
T. Harko, F. S. N. Lobo, M. K. Mak and S. V. Sushkov.
arXiv:1301.6878 [gr-qc]
10.1103/PhysRevD.87.067504
Phys. Rev. D **87**, 067504 (2013)

68. **"Irreversible thermodynamic description of interacting dark energy-dark matter cosmological models"**
T. Harko and F. S. N. Lobo.
arXiv:1210.3617 [gr-qc]
10.1103/PhysRevD.87.044018
Phys. Rev. D **87**, 044018 (2013)

67. **"Extended $f(R, L_m)$ gravity with generalized scalar field and kinetic term dependences"**
T. Harko, F. S. N. Lobo and O. Minazzoli.
arXiv:1210.4218 [gr-qc]
10.1103/PhysRevD.87.047501
Phys. Rev. D **87**, 047501 (2013)

66. **"Geodesic deviation, Raychaudhuri equation, and tidal forces in modified gravity with an arbitrary curvature-matter coupling"**
T. Harko and F. S. N. Lobo.
arXiv:1210.8044 [gr-qc]
10.1103/PhysRevD.86.124034
Phys. Rev. D **86**, 124034 (2012)

65. **"Wormholes supported by hybrid metric-Palatini gravity"**
S. Capozziello, T. Harko, T. S. Koivisto, F. S. N. Lobo and G. J. Olmo.
arXiv:1209.5862 [gr-qc]
10.1103/PhysRevD.86.127504
Phys. Rev. D **86**, 127504 (2012)

64. **"Generalized dark gravity"**
T. Harko and F. S. N. Lobo.
arXiv:1205.3284 [gr-qc]
10.1142/S0218271812420199
Int. J. Mod. Phys. D **21**, 1242019 (2012)
Received an Honorable Mention in the Gravity Research Foundation Essay Contest 2012

63. **"Generic spherically symmetric dynamic thin-shell traversable wormholes in standard general relativity"**
N. M. Garcia, F. S. N. Lobo and M. Visser.
arXiv:1112.2057 [gr-qc]
10.1103/PhysRevD.86.044026
Phys. Rev. D **86**, 044026 (2012)

62. **"Solar System constraints on local dark matter density"**
G. De Risi, T. Harko and F. S. N. Lobo.
arXiv:1206.2747 [gr-qc]
10.1088/1475-7516/2012/07/047
JCAP **1207**, 047 (2012)

61. **"Metric-Palatini gravity unifying local constraints and late-time cosmic acceleration"**
T. Harko, T. S. Koivisto, F. S. N. Lobo and G. J. Olmo.
arXiv:1110.1049 [gr-qc]
10.1103/PhysRevD.85.084016
Phys. Rev. D **85**, 084016 (2012)

60. **"Generic thin-shell gravastars"**
P. Martin Moruno, N. Montelongo Garcia, F. S. N. Lobo and M. Visser.
arXiv:1112.5253 [gr-qc]
10.1088/1475-7516/2012/03/034
JCAP **1203**, 034 (2012)

59. **"Wormhole geometries in modified teleparralel gravity and the energy conditions"**
C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:1110.5756 [gr-qc]

10.1103/PhysRevD.85.044033
Phys. Rev. D **85**, 044033 (2012)

58. **"Could pressureless dark matter have pressure?"**
T. Harko and F. S. N. Lobo.
arXiv:1104.2674 [gr-qc]
10.1016/j.astropartphys.2012.01.001
Astropart. Phys. **35**, 547 (2012)

57. **"Self-sustained wormholes in modified dispersion relations"**
R. Garattini and F. S. N. Lobo.
arXiv:1111.5729 [gr-qc]
Phys. Rev. D **85**, 024043 (2012)

56. **"Exact solutions of Brans-Dicke wormholes in the presence of matter"**
N. Montelongo Garcia and F. S. N. Lobo.
arXiv:1106.3216 [gr-qc]
10.1142/S021773231103739X
Mod. Phys. Lett. A **40**, 3067 (2011)

55. **"Constraining Hořava-Lifshitz gravity by weak and strong gravitational lensing"**
Z. Horvath, L. A. Gergely, Z. Keresztes, T. Harko and F. S. N. Lobo.
arXiv:1105.0765 [gr-qc]
10.1103/PhysRevD.84.083006
Phys. Rev. D **84**, 083006 (2011)

54. **"$f(R,T)$ gravity"**
T. Harko, F. S. N. Lobo, S. 'i. Nojiri and S. D. Odintsov.
arXiv:1104.2669 [gr-qc]
10.1103/PhysRevD.84.024020
Phys. Rev. D **84**, 024020 (2011)

53. **"Palatini formulation of modified gravity with a nonminimal curvature-matter coupling"**
T. Harko, T. S. Koivisto and F. S. N. Lobo.
arXiv:1007.4415 [gr-qc]
10.1142/S0217732311035869
Mod. Phys. Lett. A **26**, 1467 (2011)

52. **"Thin accretion disk signatures of slowly rotating black holes in Hořava gravity"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:1009.1958 [gr-qc]
10.1088/0264-9381/28/16/165001
Class. Quant. Grav. **28**, 165001 (2011)

51. **"Two-fluid dark matter models"**
T. Harko and F. S. N. Lobo.
arXiv:1106.2642 [gr-qc]
10.1103/PhysRevD.83.124051
Phys. Rev. D **83**, 124051 (2011)

50. **"Nonminimal curvature-matter coupled wormholes with matter satisfying the null energy condition"**
N. Montelongo Garcia and F. S. N. Lobo.
arXiv:1012.2443 [gr-qc]
10.1088/0264-9381/28/8/085018
Class. Quant. Grav. **28**, 085018 (2011)

49. **"Energy conditions in modified Gauss-Bonnet gravity"**
N. M. Garcia, T. Harko, F. S. N. Lobo and J. P. Mimoso.
arXiv:1011.4159 [gr-qc]
10.1103/PhysRevD.83.104032
Phys. Rev. D **83**, 104032 (2011)

48. **"Solar system tests of Horava-Lifshitz gravity"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:0908.2874 [gr-qc]
10.1098/rspa.2010.0477
Proc. Roy. Soc. Lond. A Math. Phys. Eng. Sci. **467**, 1390 (2011)

47. **"Stability of the Einstein static universe in IR modified Horava gravity"**
C. G. Boehmer and F. S. N. Lobo.
arXiv:0909.3986 [gr-qc]
10.1140/epjc/s10052-010-1503-3
Eur. Phys. J. C **70**, 1111 (2010)

46. **"f(R,L_m) gravity"**
T. Harko and F. S. N. Lobo.
arXiv:1008.4193 [gr-qc]
10.1140/epjc/s10052-010-1467-3
Eur. Phys. J. C **70**, 373 (2010)

45. **"Wormhole geometries supported by a nonminimal curvature-matter coupling"**
N. M. Garcia and F. S. N. Lobo.
arXiv:1007.3040 [gr-qc]
10.1103/PhysRevD.82.104018
Phys. Rev. D **82**, 104018 (2010)

44. **"Possibility of hyperbolic tunneling"**
F. S. N. Lobo and J. P. Mimoso.
arXiv:0907.3811 [gr-qc]
10.1103/PhysRevD.82.044034
Phys. Rev. D **82**, 044034 (2010)

43. **"Classical tests of general relativity in brane world models"**
C. G. Boehmer, G. De Risi, T. Harko and F. S. N. Lobo.
arXiv:0910.3800 [gr-qc]
10.1088/0264-9381/27/18/185013
Class. Quant. Grav. **27**, 185013 (2010)

42. **"Thin accretion disk signatures in dynamical Chern-Simons modified gravity"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:0909.1267 [gr-qc]
10.1088/0264-9381/27/10/105010
Class. Quant. Grav. **27**, 105010 (2010)

41. **"General class of vacuum Brans-Dicke wormholes"**
F. S. N. Lobo and M. A. Oliveira.
arXiv:1001.0995 [gr-qc]
10.1103/PhysRevD.81.067501
Phys. Rev. D **81**, 067501 (2010)

40. **"Wormhole geometries in $f(R)$ modified theories of gravity"**
F. S. N. Lobo and M. A. Oliveira.
arXiv:0909.5539 [gr-qc]
10.1103/PhysRevD.80.104012
Phys. Rev. D **80**, 104012 (2009)

39. **"Can accretion disk properties distinguish gravastars from black holes?"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:0905.1355 [gr-qc]
10.1088/0264-9381/26/21/215006
Class. Quant. Grav. **26**, 215006 (2009)

38. **"Testing Horava-Lifshitz gravity using thin accretion disk properties"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:0907.1449 [gr-qc]
10.1103/PhysRevD.80.044021
Phys. Rev. D **80**, 044021 (2009)

37. **"Stability of the Einstein static universe in modified Gauss-Bonnet gravity"**
C. G. Boehmer and F. S. N. Lobo.
arXiv:0902.2982 [gr-qc]
10.1103/PhysRevD.79.067504
Phys. Rev. D **79**, 067504 (2009)

36. **"Time and Causation"**
O. Bertolami and F. S. N. Lobo.
arXiv:0902.0559 [gr-qc]
NeuroQuantol. **7**, 1 (2009)

35. **"Thin accretion disks in stationary axisymmetric wormhole spacetimes"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:0901.3926 [gr-qc]
10.1103/PhysRevD.79.064001
Phys. Rev. D **79**, 064001 (2009)

34. **"Self-sustained traversable wormholes in noncommutative geometry"**
R. Garattini and F. S. N. Lobo.
arXiv:0811.0919 [gr-qc]
10.1016/j.physletb.2008.11.064
Phys. Lett. B **671**, 146 (2009)

33. **"Exact solutions of f(R) gravity coupled to nonlinear electrodynamics"**
L. Hollenstein and F. S. N. Lobo.
arXiv:0807.2325 [gr-qc]
10.1103/PhysRevD.78.124007
Phys. Rev. D **78**, 124007 (2008)

32. **"Phantom stars and topology change"**
A. DeBenedictis, R. Garattini and F. S. N. Lobo.
arXiv:0808.0839 [gr-qc]
10.1103/PhysRevD.78.104003
Phys. Rev. D **78**, 104003 (2008)

31. **"Electromagnetic signatures of thin accretion disks in wormhole geometries"**
T. Harko, Z. Kovacs and F. S. N. Lobo.
arXiv:0808.3306 [gr-qc]
10.1103/PhysRevD.78.084005
Phys. Rev. D **78**, 084005 (2008)

30. **"Non-minimum coupling of perfect fluids to curvature"**
O. Bertolami, F. S. N. Lobo and J. Paramos.
arXiv:0806.4434 [gr-qc]
10.1103/PhysRevD.78.064036
Phys. Rev. D **78**, 064036 (2008)

29. **"Quark-Hadron Phase Transitions in Brane-World Cosmologies"**
G. De Risi, T. Harko, F. S. N. Lobo and C. S. J. Pun.
arXiv:0807.3066 [gr-qc]
10.1016/j.nuclphysb.2008.07.012
Nucl. Phys. B **805**, 190 (2008)

28. **"General class of wormhole geometries in conformal Weyl gravity"**
F. S. N. Lobo.
arXiv:0801.4401 [gr-qc]
10.1088/0264-9381/25/17/175006
Class. Quant. Grav. **25**, 175006 (2008)

27. **"Plane symmetric thin-shell wormholes: Solutions and stability"**
J. P. S. Lemos and F. S. N. Lobo.
arXiv:0806.4459 [gr-qc]
10.1103/PhysRevD.78.044030
Phys. Rev. D **78**, 044030 (2008)

26. **"Dark matter as a geometric effect in f(R) gravity"**
C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:0709.0046 [gr-qc]
10.1016/j.astropartphys.2008.04.003
Astropart. Phys. **29**, 386 (2008)

25. **"A New two-sphere singularity in general relativity"**
C. G. Boehmer and F. S. N. Lobo.
gr-qc/0703024

10.1142/S0218271808012565
Int. J. Mod. Phys. D **17**, 897 (2008)

24. **"Generalized virial theorem in f(R) gravity"**
C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:0710.0966 [gr-qc]
10.1088/1475-7516/2008/03/024
JCAP **0803**, 024 (2008)

23. **"Wormhole geometries with conformal motions"**
C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:0711.2424 [gr-qc]
10.1088/0264-9381/25/7/075016
Class. Quant. Grav. **25**, 075016 (2008)

22. **"Interior of a Schwarzschild black hole revisited"**
R. Doran, F. S. N. Lobo and P. Crawford.
gr-qc/0609042
10.1007/s10701-007-9197-6
Found. Phys. **38**, 160 (2008)

21. **"Solar system tests of brane world models"**
C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:0801.1375 [gr-qc]
10.1088/0264-9381/25/4/045015
Class. Quant. Grav. **25**, 045015 (2008)

20. **"Conformally symmetric traversable wormholes"**
C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:0708.1537 [gr-qc]
10.1103/PhysRevD.76.084014
Phys. Rev. D **76**, 084014 (2007)

19. **"Stability of the Einstein static universe in f(R) gravity"**
C. G. Boehmer, L. Hollenstein and F. S. N. Lobo.
arXiv:0706.1663 [gr-qc]
10.1103/PhysRevD.76.084005
Phys. Rev. D **76**, 084005 (2007)

18. **"Extra force in f(R) modified theories of gravity"**
O. Bertolami, C. G. Boehmer, T. Harko and F. S. N. Lobo.
arXiv:0704.1733 [gr-qc]
10.1103/PhysRevD.75.104016
Phys. Rev. D **75**, 104016 (2007)

17. **"Self sustained phantom wormholes in semi-classical gravity"**
R. Garattini and F. S. N. Lobo.
gr-qc/0701020
10.1088/0264-9381/24/9/016
Class. Quant. Grav. **24**, 2401 (2007)

16. **"A General class of braneworld wormholes"**
F. S. N. Lobo.
gr-qc/0701133 [GR-QC]
10.1103/PhysRevD.75.064027
Phys. Rev. D **75**, 064027 (2007)

15. **"Gravastars supported by nonlinear electrodynamics"**
F. S. N. Lobo and A. V. B. Arellano.
gr-qc/0611083
10.1088/0264-9381/24/5/004
Class. Quant. Grav. **24**, 1069 (2007)

14. **"Van der Waals quintessence stars"**
F. S. N. Lobo.
gr-qc/0610118
10.1103/PhysRevD.75.024023
Phys. Rev. D **75**, 024023 (2007)

13. **"Evolving wormhole geometries within nonlinear electrodynamics"**
A. V. B. Arellano and F. S. N. Lobo.
gr-qc/0608003
10.1088/0264-9381/23/20/004
Class. Quant. Grav. **23**, 5811 (2006)

12. **"Non-existence of static, spherically symmetric and stationary, axisymmetric traversable wormholes coupled to nonlinear electrodynamics"**
A. V. B. Arellano and F. S. N. Lobo.
gr-qc/0604095
10.1088/0264-9381/23/24/003
Class. Quant. Grav. **23**, 7229 (2006)

11. **"Chaplygin traversable wormholes"**
F. S. N. Lobo.
gr-qc/0511003
10.1103/PhysRevD.73.064028
Phys. Rev. D **73**, 064028 (2006)

10. **"Stable dark energy stars"**
F. S. N. Lobo.
gr-qc/0508115
10.1088/0264-9381/23/5/006
Class. Quant. Grav. **23**, 1525 (2006)

9. **"Stability analysis of dynamic thin shells"**
F. S. N. Lobo and P. Crawford.
gr-qc/0507063
10.1088/0264-9381/22/22/012
Class. Quant. Grav. **22**, 4869 (2005)

8. **"Stability of phantom wormholes"**
F. S. N. Lobo.

gr-qc/0506001
10.1103/PhysRevD.71.124022
Phys. Rev. D **71**, 124022 (2005)

7. **"Phantom energy traversable wormholes"**
F. S. N. Lobo.
gr-qc/0502099
10.1103/PhysRevD.71.084011
Phys. Rev. D **71**, 084011 (2005)

6. **"Energy conditions, traversable wormholes and dust shells"**
F. S. N. Lobo.
gr-qc/0410087
10.1007/s10714-005-0177-x
Gen. Rel. Grav. **37**, 2023 (2005)

5. **"Surface stresses on a thin shell surrounding a traversable wormhole"**
F. S. N. Lobo.
gr-qc/0409018
10.1088/0264-9381/21/21/005
Class. Quant. Grav. **21**, 4811 (2004)

4. **"Fundamental limitations on 'warp drive' spacetimes"**
F. S. N. Lobo and M. Visser.
gr-qc/0406083
10.1088/0264-9381/21/24/011
Class. Quant. Grav. **21**, 5871 (2004)

3. **"Plane symmetric traversable wormholes in an Anti-de Sitter background"**
J. P. S. Lemos and F. S. N. Lobo.
gr-qc/0402099
10.1103/PhysRevD.69.104007
Phys. Rev. D **69**, 104007 (2004)

2. **"Linearized stability analysis of thin shell wormholes with a cosmological constant"**
F. S. N. Lobo and P. Crawford.
gr-qc/0311002
10.1088/0264-9381/21/2/004
Class. Quant. Grav. **21**, 391 (2004)

1. **"Morris-Thorne wormholes with a cosmological constant"**
J. P. S. Lemos, F. S. N. Lobo and S. Quinet de Oliveira.
gr-qc/0302049
10.1103/PhysRevD.68.064004
Phys. Rev. D **68**, 064004 (2003)

4.3 Articles in Research Journals – Under Review

1. **"Cosmic strings in generalized hybrid metric-Palatini gravity"**

H. M. R. da Silva, T. Harko and F. S. N. Lobo.
arXiv:2104.12126 [gr-qc]

2. **"Effective $f(R)$ actions for modified Loop Quantum Cosmologies via order reduction"**
A. R. Ribeiro, D. Vernieri and F. S. N. Lobo.
arXiv:2104.12283 [gr-qc]

3. **"Weak-field regime of the generalized hybrid metric-Palatini gravity"**
J. L. Rosa, F. S. N. Lobo and G. J. Olmo.
arXiv:2104.10890 [gr-qc]

4. **"Sudden singularities in generalized hybrid metric-Palatini cosmologies"**
J. L. Rosa, F. S. N. Lobo and D. Rubiera-Garcia.
arXiv:2103.02580 [gr-qc]

5. **"Imprints from a Riemann-Cartan space-time on the energy levels of Dirac spinors"**
F. Cabral, F. S. N. Lobo and D. Rubiera-Garcia.
arXiv:2102.02048 [gr-qc]

4.4 Book Sections

1. **"Introduction: Wormholes, Warp Drives and Energy Conditions"**
F. S. N. Lobo.
DOI:10.1007/978-3-319-55182-1_1
Fundam. Theor. Phys. **189**, 1 (2017).

2. **"Warp Drive Basics"**
M. Alcubierre and F. S. N. Lobo.
DOI:10.1007/978-3-319-55182-1_11
Fundam. Theor. Phys. **189**, 257 (2017).

3. **"Self-Sustained Traversable Wormholes"**
R. Garattini and F. S. N. Lobo.
DOI:10.1007/978-3-319-55182-1_6
Fundam. Theor. Phys. **189**, 111 (2017).

4. **"Astrophysical Signatures of Thin Accretion Disks in Wormhole Spacetimes"**
T. Harko, Z. Kovács and F. S. N. Lobo.
DOI:10.1007/978-3-319-55182-1_4
Fundam. Theor. Phys. **189**, 63 (2017).

5. **"Wormhole Basics"**
F. S. N. Lobo.
DOI:10.1007/978-3-319-55182-1_2
Fundam. Theor. Phys. **189**, 11 (2017).

6. **"Closed timelike curves and causality violation"**
F. S. N. Lobo
arXiv:1008.1127 [gr-qc]

Invited chapter to appear in an edited collection "Classical and Quantum Gravity: Theory, Analysis and Applications"

7. **"Non-minimal curvature-matter couplings in modified gravity"**
   O. Bertolami, T. Harko, F. S. N. Lobo and J. Paramos
   Invited chapter to appear in an edited collection anniversary volume 'The Problems of Modern Cosmology' on occasion of the 50th birthday of Prof. S. D. Odintsov [arXiv:0811.2876 [gr-qc]]

8. **"The dark side of gravity: Modified theories of gravity"**
   F. S. N. Lobo
   Invited chapter to appear in an edited collection 'Dark Energy–Current Advances and Ideas', Research Signpost Publishers [arXiv:0807.1640 [gr-qc]]

9. **"Exotic solutions in General Relativity: Traversable wormholes and 'warp drive' spacetimes"**
   F. S. N. Lobo
   Invited chapter to appear in an edited collection 'Classical and Quantum Gravity Research Progress', Nova Science Publishers [arXiv:0710.4474 [gr-qc]]

10. **"Nature of time and causality in Physics"**
    F. S. N. Lobo
    To appear as a book chapter in 'Psychology of Time', Elsevier Publishers, ed. Simon Grondin [arXiv:0710.0428 [gr-qc]]

11. **"Time, closed timelike curves and causality"**
    F. Lobo and P. Crawford
    NATO Sci. Ser. II **95**, 289 (2003) [arXiv:gr-qc/0206078]

12. **"Weak energy condition violation and superluminal travel"**
    F. Lobo and P. Crawford
    Lect. Notes Phys. **617**, 277 (2003) [arXiv:gr-qc/0204038]

4.5 Selected Conference Proceedings

1. **"Novel couplings between nonmetricity and matter"**
   T. Harko, T. S. Koivisto, G. J. Olmo, F. S. N. Lobo and R. G. Diego.
   arXiv:1901.00805 [gr-qc]
   Contribution to the proceedings of the "The Fifteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July, 2018, based on an invited talk

2. **"A Review on the Cosmology of the de Sitter Horndeski Models"**
   N. J. Nunes, P. Martín-Moruno and F. S. N. Lobo.
   arXiv:1704.05376 [gr-qc]
   DOI:10.3390/universe3020033
   Universe **3**, no. 2, 33 (2017)
   Proceedings published in "Universe", Special Issue "Varying Constants and Fundamental Cosmology" for the VARCOSMOFUN16 meeting in Szczecin, Poland, 12-17 September, 2016

3. **"From the Flamm-Einstein-Rosen bridge to the modern renaissance of traversable wormholes"**
   F. S. N. Lobo.
   arXiv:1604.02082 [gr-qc]
   Int. J. Mod. Phys. D **25**, 1630017 (2016)
   Rapporteur contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015

4. **"A novel approach to thin-shell wormholes and applications"**
   F. S. N. Lobo, M. Bouhmadi-López, P. Martín-Moruno, N. Montelongo-García and M. Visser.
   arXiv:1512.08474 [gr-qc]
   Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015, based on an invited talk

5. **"Novel stability approach of thin-shell gravastars"**
   F. S. N. Lobo, P. Martín-Moruno, N. Montelongo-García and M. Visser.
   arXiv:1512.07659 [gr-qc]
   Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015, based on an invited talk

6. **"Gravity's Rainbow and Traversable Wormholes"**
   R. Garattini and F. S. N. Lobo.
   arXiv:1512.04470 [physics.gen-ph]
   Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015

7. **"Cosmology of the de Sitter Horndeski models"**
   N. J. Nunes, P. Martin-Moruno and F. S. N. Lobo.
   arXiv:1511.00655 [gr-qc]
   Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015

8. **"Accelerating Horndeski cosmologies screening the vacuum energy"**
   P. Martin-Moruno, N. J. Nunes and F. S. N. Lobo.
   arXiv:1509.06159 [gr-qc]
   Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015

9. **"Thick brane solitons breaking Z_2 symmetry"**
   M. Peyravi, N. Riazi and F. S. N. Lobo.
   arXiv:1509.04577 [gr-qc]
   Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015

10. **"Irreversible matter creation processes through a nonminimal curvature-matter coupling"**
    F. S. N. Lobo, T. Harko, J. P. Mimoso and D. Pavón.

arXiv:1508.03069 [gr-qc]
Contribution to the proceedings of the "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza", Rome, July 12-18, 2015, based on an invited talk

11. **"Extended Theories of Gravity with Generalized Energy Conditions"**
J. P. Mimoso, F. S. N. Lobo and S. Capozziello.
arXiv:1412.6670 [gr-qc]
10.1088/1742-6596/600/1/012047
J. Phys. Conf. Ser. **600**, no. 1, 012047 (2015)
Prepared for the proceedings of the Spanish Relativity meeting (ERE2014), "Spanish Relativity Meeting: Almost 100 years after Einstein Revolution". 1-5 Sep 2014, Valencia, Spain

12. **"Beyond Einstein's General Relativity"**
F. S. N. Lobo.
arXiv:1412.0867 [gr-qc]
10.1088/1742-6596/600/1/012006
J. Phys. Conf. Ser. **600**, no. 1, 012006 (2015)
Prepared for the proceedings of the Spanish Relativity meeting (ERE2014), "Spanish Relativity Meeting: Almost 100 years after Einstein Revolution". 1-5 Sep 2014, Valencia, Spain

13. **"Quadratic Palatini gravity and stable black hole remnants"**
D. Rubiera-Garcia, G. J. Olmo and F. S. N. Lobo.
arXiv:1311.6487 [hep-th]
10.1007/978-3-319-20046-0 34
Springer Proc. Phys. **170**, 283 (2016)

14. **"Time machines and traversable wormholes in modified theories of gravity"**
F. S. N. Lobo.
arXiv:1212.1006 [gr-qc]
10.1051/epjconf/20135801006
EPJ Web Conf. **58**, 01006 (2013)
Contribution to the proceedings of The Time Machine Factory, Turin, Italy, 14-20 October, 2012

15. **"Wormhole geometries in modified gravity"**
F. S. N. Lobo.
arXiv:1112.6333 [gr-qc]
10.1063/1.4734456
AIP Conf. Proc. **1458**, 447 (2011)
Prepared for the proceedings of the Spanish Relativity meeting (ERE2011), Madrid, Spain, 29Aug-2Sep 2011

16. **"The Variation of G in a negatively curved space-time"**
J. P. Mimoso and F. S. N. Lobo.
arXiv:1101.4405 [gr-qc]
10.1007/978-3-642-19397-2 4
Astrophys. Space Sci. Proc. , 25 (2011)

Contribution to the Joint European and National Astronomy Meeting (JENAM) 2010; based on a talk given by JPM in the "From Varying Couplings to Fundamental Physics" Symposium

17. **"f(G) modified gravity and the energy conditions"**
N. Montelongo Garcia, F. S. N. Lobo, J. P. Mimoso and T. Harko.
arXiv:1012.0953 [gr-qc]
10.1088/1742-6596/314/1/012056
J. Phys. Conf. Ser. **314**, 012056 (2011)
Prepared for the proceedings of the Spanish Relativity meeting (ERE2010), Granada, Spain, 6-10 Sep 2010

18. **"Late-time cosmic acceleration: Dark gravity"**
F. S. N. Lobo.
arXiv:1011.6176 [gr-qc]
10.1088/1742-6596/314/1/012060
J. Phys. Conf. Ser. **314**, 012060 (2011)
Prepared for the proceedings of the Spanish Relativity meeting (ERE2010), Granada, Spain, 6-10 Sep 2010

19. **"An anti-Schwarzshild solution: wormholes and scalar-tensor solutions"**
J. P. Mimoso and F. S. N. Lobo.
arXiv:1001.2643 [gr-qc]
10.1088/1742-6596/229/1/012078
J. Phys. Conf. Ser. **229**, 012078 (2010)

20. **"Stability of the Einstein static universe in modified theories of gravity"**
C. G. Boehmer, L. Hollenstein, F. S. N. Lobo and S. S. Seahra.
arXiv:1001.1266 [gr-qc]
10.1142/9789814374552 0379
In *Paris 2009, The Twelfth Marcel Grossmann Meeting* 1977-1979

21. **"Dynamic wormhole spacetimes coupled to nonlinear electrodynamics"**
A. V. B. Arellano and F. S. N. Lobo.
gr-qc/0612083
10.1142/9789812834300 0361
Contributed to 11th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation, and Relativistic Field Theories, Berlin, Germany, 23-29 Jul 2006

22. **"Stable dark energy stars: An alternative to black holes?"**
F. S. N. Lobo.
gr-qc/0612030
10.1142/9789812834300 0184
To appear in the proceedings of 11th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation, and Relativistic Field Theories, Berlin, Germany, 23-29 Jul 2006

23. **"Traversable wormholes supported by cosmic accelerated expanding equations of state"**
F. S. N. Lobo

arXiv:gr-qc/0611150
To appear in the proceedings of 11th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation, and Relativistic Field Theories, Berlin, Germany, 23-29 Jul 2006

24. **"Stable phantom energy traversable wormhole models"**
F. S. N. Lobo
AIP Conf. Proc. **861**, 936 (2006) [arXiv:gr-qc/0603091]
To appear in the proceedings of Albert Einstein's Century International Conference, Paris, France, 18-22 Jul 2005

25. **"Linearized warp drive and the energy conditions"**
F. S. N. Lobo and M. Visser
arXiv:gr-qc/0412065
To appear in the proceedings of 27th Spanish Relativity Meeting: Beyond General Relativity (ERES 2004), Madrid, Spain, 23-25 Sep 2004

26. **"Thin shells around traversable wormholes"**
F. S. N. Lobo
arXiv:gr-qc/0401083
Talk given at APCTP Winter School and Workshop on Quantum Gravity, Black Holes and Wormholes, Seoul, Korea, 11-14 Dec 2003

27. **"Constraints on wormhole geometries"**
F. Lobo and P. Crawford
Prepared for 9th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories (MG 9), Rome, Italy, 2-9 Jul 2000

4.6 Selected Presentations in International Conferences

1. **From the Flamm-Einstein-Rosen bridge to the modern renaissance of traversable wormholes**
Seminar delivered at Victoria University of Wellington, Wellington, New Zealand 17 December 2019

2. **Generalized curvature-matter couplings in modified gravity**
Talk delivered at the 10th Australasian Conference on General Relativity and Gravitation (ACGRG10) Victoria University of Wellington, Wellington, New Zealand 10-14 December 2019

3. **Black Holes: New Horizons**
Invited Public lecture delivered at Kazan Federal University, Russia 2 December 2019

4. **Extensions of $f(R)$ Gravity: Curvature-Matter Couplings and Hybrid Metric-Palatini Theory**
Invited talk delivered at Kazan Federal University, Russia 3 December 2019

5. **Wormholes, Warp Drives and Interstellar Travel**
Invited talk delivered at the Foundations of Interstellar Studies Workshop 2019 Charfield, Gloucestershire, United Kingdom, 27-30 June 2019.

6. **Wormholes, warp drives and energy conditions**
   Plenary talk delivered at the workshop, "Travelling through Pedro's universes: from Spectroscopy to Cosmology", in honour of Prof. Pedro Gonzalez-Diaz, Complutense University of Madrid – Madrid, December 3-5, 2018.

7. I chaired the AT3 parallel session "Alternative Theories" at the 14th Marcel Grossmann Meeting, at the University of Rome "La Sapienza" – Rome, July 1-7, 2018.

8. **Update on wormholes and energy conditions**
   Rapporteur talk delivered at the AT3 parallel session, "The 15th Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 1-7, 2018.

9. **Novel couplings between nonmetricity and matter**
   Invited talk delivered at the AT1 parallel session, "The 15th Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 1-7, 2018.

10. **Hybrid metric-Palatini gravity**
    Invited plenary lecture delivered at the 3rd International Winter School-Seminar on Gravity, Astrophysics and Cosmology "Petrov School 2017", "Institute of Physics of Kazan Federal University", Kazan, Russia, 27th November-2nd December 2017.

11. **Generalized curvature-matter couplings in modified gravity**
    Invited plenary lecture delivered at the 3rd International Winter School-Seminar on Gravity, Astrophysics and Cosmology "Petrov School 2017", "Institute of Physics of Kazan Federal University", Kazan, Russia, 27th November-2nd December 2017.

12. **Hybrid metric-Palatini gravity: astrophysical and cosmological phenomenology**
    Plenary talk delivered at the Connections in Astronomy, Astrophysics, Space and Planetary Sciences, "Babes-Bolyai University", Cluj-Napoca, Romania, 29-30th May 2017.

13. **Wormholes, warp drives and energy conditions**
    Talk delivered at the "12th Iberian Cosmology Meeting (IberiCOS 2017)", in Valencia, Spain, 10-12th April 2017.

14. **Wormholes, warp drives and energy conditions**
    Talk delivered at the "Cosmology and Gravitation at the University of Beira Interior" conference, in Covilhã, Portugal, 10-11th February 2017.

15. **Hybrid metric-Palatini gravity**
    Plenary talk delivered at the "Beyond Concordance Model II 2016" conference, in Cape Town, South Africa, 28th November–2nd December 2016.

16. **A hybrid gravitational Cantata: astrophysical and cosmological applications**
    Plenary talk delivered at the "1st CANTATA Cost action workshop Cosmology and Astrophysics Network for Theoretical Advances and Training Actions", in Lisbon, Portugal, 11-12th November 2016.

17. **The modern renaissance of traversable wormholes**
    Invited lecture delivered at the "Virtual Institute of Astroparticle Physics (VIA)", in Lisbon, Portugal, 21st October 2016.
    (http://viavca.in2p3.fr/site.html)

18. **Gravitational, lensing, and stability properties of Bose-Einstein condensate dark matter halos**
    Talk delivered at the Dark Matter 2016: From the smallest to the largest scales in Santander, Spain, June 27th-July 1st 2016.

19. **Beyond Einstein's General Relativity: 100 years-on**
    Invited talk delivered at the GR 100 years in Lisbon, Instituto Superior Tecnico, Lisbon, December 19-20, 2015.

20. **Beyond Einstein's General Relativity: 100 years-on**
    Invited talk delivered at the 100 years of General Relativity, Porto 2015, University of Porto, Porto, November 19-20, 2015.

21. **From the Einstein-Rosen bridge and geons to the modern renaissance of traversable wormholes**
    Invited plenary talk delivered at the "The Time Machine Factory: [Unspeakable, Speakable] on Time Travel", Palazzo del Rettorato, hosted by the Università di Torino, 25-28 of October, 2015.

22. I chaired the AT3 parallel session "Alternative Theories" at the 14th Marcel Grossmann Meeting, at the University of Rome "La Sapienza" – Rome, July 12-18, 2015.

23. **Novel stability approach of thin-shell gravastars**
    Invited talk delivered at the BS1-2–Boson stars parallel session, "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 12-18, 2015.

24. **A novel approach to thin-shell wormholes and applications**
    Invited talk delivered at the BH4–Black Holes: Theory parallel session, "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 12-18, 2015.

25. **Soliton models for thick branes**
    Talk delivered at the AT2–Alternative Theories parallel session, "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 12-18, 2015.

26. **From the Flamm-Einstein-Rosen bridge to the modern renaissance of traversable wormholes**
    Rapporteur talk delivered at the AT3–Alternative Theories parallel session, "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 12-18, 2015.

27. **Irreversible matter creation processes through a nonminimal curvature-matter coupling**
    Invited talk delivered at the AT1–Alternative Theories parallel session, "The Fourteenth Marcel Grossmann Meeting on General Relativity", University of Rome "La Sapienza" – Rome, July 12-18, 2015.

28. **Gravitational induced particle production through a nonminimal curvature-matter coupling**
    Invited talk delivered at the "First Meeting on Cosmology and Gravitation at Serra

da Estrela", held in Covilhã, Portugal, at the University of Beira Interior, 20th-21st of February 2015.

29. **Extending Einstein's General Relativity**
Talk delivered at the Dark Side of the Universe, held in Cape Town, South Africa, at the University of Cape Town, 17th-21st of November 2014.

30. **Phenomenological aspects of modified gravity**
Invited talk delivered at the "Multiple Messengers and Challenges in Astroparticle Physics" workshop, hosted by the Gran Sasso Science Institute (Center for Advanced Studies) of L'Aquila (Italy), 6th-17th October, 2014.

31. **Beyond Einstein's General Relativity**
Plenary talk delivered at "The Spanish Relativity Meeting 2014" (ERE2014), hosted by the University of Valência, 1st-5th of September, 2014.

32. **The equivalence principle and modified gravitation theory**
Talk delivered at the IX Iberian Cosmology Meeting, held in Aveiro, Portugal, at the Physics Department of the University of Aveiro, 28th-30th of April 2014.

33. **Meeting on the horizon-throat: From the Einstein-Rosen bridge and geons to the modern renaissance of space-time tunnels**
Plenary talk delivered at the 1st "Meeting on the Horizon", held at the Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile, 10th-14th March, 2014.

34. **Foundations of (modified) gravitation theory**
Talk delivered at the "Dark Side of the Universe 2013", IX International Workshop, 14th-17th October 2013, SISSA (Trieste, Italy).

35. **Extended Theories of Gravity II**
Invited lecture delivered (18th September) at the "Modified Gravity Theories: Beyond Einstein's Legacy" workshop, Science Faculty of the University of Lisbon, Portugal, 16-18 September, 2013.

36. **Extended theories of gravity and the late-time cosmic acceleration**
Invited lecture delivered (16th September) at the "Modified Gravity Theories: Beyond Einstein's Legacy" workshop, Science Faculty of the University of Lisbon, Portugal, 16-18 September, 2013.

37. **Extended theories of gravity and the late-time cosmic acceleration**
Keynote talk delivered at the "XXIII Encontro Nacional de Astronomia e Astrofísica 2013" (XXIII ENAA), Science Faculty of the University of Lisbon, Lisbon, Portugal, 18-19 July, 2013.

38. **Traversable wormholes in modified theories of gravity**
Talk delivered at "The Time Machine Factory", Turin, Italy, 14-20 October, 2012.

39. **Extended $f(R, L_m)$ theories of gravity**
Talk delivered at "The Thirteenth Marcel Grossmann Meeting on General Relativity", Stockholm University, Sweden, 1-7 July, 2012.

40. **Traversable wormholes supported by dark gravity**
Talk delivered at "The Thirteenth Marcel Grossmann Meeting on General Relativity", Stockholm University, Sweden, 1-7 July, 2012.

41. **Linearized stability analysis of generic thin-shells**
Invited rapporteur talk delivered at "The Thirteenth Marcel Grossmann Meeting on General Relativity", Stockholm University, Sweden, 1-7 July, 2012.

42. **Self Sustained Traversable Wormholes in Modified Gravity Theories**
Talk delivered at "The Thirteenth Marcel Grossmann Meeting on General Relativity", Stockholm University, Sweden, 1-7 July, 2012.

43. **Wormhole geometries in modified gravity**
Talk delivered at the "Spanish Relativity Meeting 2011" (ERE 2011): Gravity as a Crossroad in Physics, Departamento de Física Teórica I at Complutense University of Madrid, Spain, 29 Aug-2 Sep 2011.

44. **Late-time cosmic acceleration: Dark gravity**
Talk delivered at the "Spanish Relativity Meeting 2010" (ERE 2010): Gravity as a Crossroad in Physics, Instituto de Astrofísica de Andalucía (IAA-CSIC), Granada, 6-10 Sep. 2010.

45. $f(G)$ **modified gravity and the energy conditions**
Talk delivered at the "Spanish Relativity Meeting 2010" (ERE 2010): Gravity as a Crossroad in Physics, Instituto de Astrofísica de Andalucía (IAA-CSIC), Granada, 6-10 Sep. 2010.

46. **Solar System tests of Horava-Lifshitz black holes**
II Workshop on Black Holes, Instituto Superior Tecnico, Lisbon, 21-22 December 2009

47. **Title: The dark side of gravity**
3rd Iberian Cosmology Meeting, Complexo Interdisciplinar da Universidade de Lisboa, Lisbon, Portugal, 6-7 March, 2008.

48. **Stable dark energy star models (poster)**
Origins of Dark Energy Conference, Origins Institute at McMaster University, Ontario, 14-17 May, 2007.

49. **Traversable wormholes supported by cosmic accelerated expanding equations of state**
Invited talk delivered at The Eleventh Marcel Grossmann Meeting on General Relativity, Freie University, Berlin, 23-29 July, 2006.

50. **Stable dark energy stars: An alternative to black holes?**
Invited talk delivered at The Eleventh Marcel Grossmann Meeting on General Relativity, Freie University, Berlin, 23-29 July, 2006.

51. **Linearized stability analysis of dynamic thin shells**
Física 2005, "Física para o Século XXI", Centro de Congressos e Exposicões da Alfândega do Porto, 1-3 Dezembro 2005.

52. **Stable phantom energy traversable wormhole models**
Albert Einstein Century International Conference, Paris, 18-22 July 2005.

53. **Linearized warp drive and the energy conditions**
Spanish Relativity Meeting 2004 (ERE 2004): Beyond General Relativity, Miraflores de la Sierra, Madrid, 23-25 Sep. 2004.

54. **Thin shells around traversable wormholes** APCTP Winter School and Workshop: Quantum Gravity, Black Holes and Wormholes, POSTECH, Pohang School of Environmental Engineering, South Korea, 11-14 Dec. 2003.

55. **Linearized stability in thin-shell wormholes**
XIV International Congress of Mathematical Physics, General Relativity Session, Universidade de Lisboa, 28 July–2 August 2003.

56. **Time, Closed Timelike Curves and Causality**
Invited talk delivered at the NATO Advanced Research Workshop. The Nature of Time: Geometry, Physics and Perception, Astronomic Institute, Slovak Academy of Sciences, Tatranska Lomnica, Slovak Republic, 21-24 May 2002.

57. **Weak Energy Condition Violation and Superluminal Travel**
Spanish Relativity Meeting 2001 (ERE 2001), Universidad Politécnica de Madrid e Universidad Complutense de Madrid, 18-21 Sep. 2001.

58. **Viagens Interstelares Hiper-rápidas em Relatividade Geral**
XI Encontro Nacional de Astronomia e Astrofísica, Universidade da Madeira, Funchal, 26/27 July 2001.

59. **Constraints on Wormhole geometries**
The Ninth Marcel Grossmann Meeting, University of Rome "La Sapienza", 2-8 July, 2000.

60. **Wormhole evolution in a Homogeneous Cosmological Model**
Relativistic Cosmology: A Symposium in Honour of George Ellis, University of Cape Town, 1-5 Feb. 1999.

5 Referee in Journals and Scientific Advisor

5.1 Referee in Journals

1. Advances in High Energy Physics
2. Annals of Physics
3. Applied Mathematics and Computation
4. Astrophysics and Space Science
5. Canadian Journal of Physics
6. Classical and Quantum Gravity
7. European Physical Journal A
8. European Physical Journal C
9. Europhysics Letters
10. Foundations of Physics
11. General Relativity and Gravitation
12. International Journal of Geometric Methods in Modern Physics
13. International Journal of Modern Physics A
14. International Journal of Modern Physics D
15. International Journal of Theoretical Physics
16. Journal of Cosmology and Astroparticle Physics (JCAP)
17. Journal of Physics A: Mathematical and Theoretical
18. Modern Physics Letters A
19. Monthly Notices of the Royal Astronomical Society
20. New Astronomy
21. Physical Review Letters
22. Physical Review D
23. Physics Letters A
24. Physics Letters B
25. Physics Scripta

5.2 Scientific Advisor and Reviewer

1. Scientific Reviewer of the Czech Science Foundation.

2. Scientific Adviser and Reviewer for The National Research Foundation (NRF), South Africa.

3. Scientific Adviser and Reviewer for the FONDECYT (Chile).

4. Scientific Reviewer of the Academic Sciences of Romania (The Executive Agency for Higher Education, Research, Development and Innovation Funding of Romania).

5. Scientific Reviewer of the "CONEX – CONnectingEXcellence to UC3M" program of the The Universidad Carlos III de Madrid (UC3M), Spain

6. Scientific Reviewer of the Estonian Research Council (The Executive Agency for Higher Education, Research, Development and Innovation Funding of Estonia).

6 Referees

1. **Professor Roy Maartens**
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   University of the Western Cape,
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2. **Professor Salvatore Capozziello**
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3. **Professor Sergei D. Odintsov**
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