

CURRICULUM VITAE

Paulo Rodrigues Lima Vargas Moniz

November – 2002

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2. **Date of Birth** : 24–July–1962
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4. **Nationality** : Portuguese
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<http://www.dfis.ubi.pt/~pmoniz>
http://www2.uarte.mct.pt/netdays/difusao/prof_moniz.asp

7. Academic Career :

- *High School*, Lisbon, 1974-1980: 17/20
- *B.Sc. in Physics*, Faculty of Sciences, Lisbon, 1981-1983: 14/20
- *Licence Degree in Physics* (5-year course), Faculty of Sciences, Lisbon, 1981-1985: 14/20
- *M.Sc. in Physics* (Particles and Cosmology), Faculty of Sciences, Lisbon, 1988-1990: A

Advanced Quantum Mechanics	A
Nuclear Structure	A
Weak Interactions	A
Field Theory I	A
Field Theory II	B
Lie Groups & Geometrical Methods in Field Theory	A
Seminars	A

- *Ph.D. in Physics* (General Relativity and Cosmology), Faculty of Sciences, Lisbon, 1990-1993: **Suma cum Laude**
- *Post-Doctoral Fellow*, DAMTP, University of Cambridge, 1993–1998
(Research Studies: Quantum Cosmology; Supersymmetry and Supergravity)
1993/94- Scientific Officer: Dr. P.D. D’Eath
1994/98- Scientific Officer: Prof. S.W. Hawking

¹Website cited in Advanced Physics; see <http://www.suite101.com/links.cfm/1736>

8. Teaching :

- *Assistant-trainee*, Mathematics Department, University of Minho, 15 September - 1986 — 1 December - 1989
 - Mechanics (supervisions)
 - Complex Analysis (supervisions)
 - Probability and Statistics (supervisions)
 - Analysis - Differential Equations (supervisions)
- *Assistant-trainee*, Mathematics Department, Technical University of Lisbon-IST, 1 December - 1989 — 1 October - 1990
 - Linear Algebra and Analytical Geometry (supervisions)
 - Analysis (supervisions)
- *Tutorials – Supervisions*, DAMTP, University of Cambridge, (Easter term) 1994
 - Part III - “M.Sc”: Quantum Cosmology
- *Auxiliar Professor* in the Physics Department, Universidade da Beira Interior (since 2 February 1998)
- *Associate Professor*² in the Physics Department, Universidade da Beira Interior (since 19 May 2000).
 - Astrophysics (Lectures and supervisions/tutorials) – 1998, 1999, 2000, 2001, 2002 – 4h/week (4th year, 2nd semester) [Degree: Teaching of Physics]
 - Modern Physics (Lectures and tutorials) – 1998, 1999, 2000, 2001, 2002, 2003 – 3h/week (2nd year, 2nd semester) [Degree: Teaching of Physics, Applied Physics, Industrial Chemistry]
 - History and Philosophy of Sciences (Lectures and supervisions/tutorials) – 1998, 1999, 2000, 2001, 2002, 2003 – 6h/week (1st year, 1st semester) [Degree: Teaching of Physics, Teaching of Philosophy]
 - Foundations of Physics (Lectures and supervisions/tutorials) – 1999, 2000, 2001 – 4h/week (1st year, 1st semester) [Degree: Informatics Teaching]
 - General Physics-I (Lectures and Supervisions/tutorials) - 2000, 2001, 2002 – 3h/week (1st year, 1st Semester) [Degree: Biochemistry]
 - Topics in Relativity and Cosmology - (Lectures and Supervisions/tutorials) - 2002 – 5h/week (4th year, 1st Semester) [Degree: Teaching in Physics]
 - Classical Mechanics - (Lectures and Supervisions/tutorials) - 2003 – 5h/week (2nd year, 2nd Semester) [Degree: Teaching in Physics]

²Professor Associado

9. Scientific Supervisions :

- Supervisor of Monography (Degree in Physics – UBI) in 1997/1998: "Gravitational Waves in Binary Pulsars" – 19/20.
- Supervisor of Monography (Degree in Physics – UBI) in 1999/2000: "Black Hole Thermodynamics and Superstring Theory" – 16/20
- Supervisor of Monography (Degree in Physics – UBI) in 2001/2002: "Quantum Computation and Criptography" - 16/20
- Supervisor of Monography (Degree in Physics – UBI) in 2002/2003: "Brown Dwarfs"
- Supervisor of Monography (Degree in Physics – UBI) in 2002/2003: "Multimedia teaching in Astronomy"
- MSc in Physics – UBI: "The Superposition Principle in the study of Cosmological Models" (2002/2003)
- Scientific Officer of Post Doctoral Fellowship – UBI: "Superstrings, Black Holes, Branes and Cosmology" — - Ref: PRAXIS XX1/BPD/20166/99]³
- Scientific Officer of Senior Research Fellowship – UBI: "Non-Linear Multidimensional Cosmologies with p -Form Fields" — - Ref: CENTRA/IST/2002]⁴

10. Research Interests :

- Quantum Cosmology and Gravity
- Supersymmetry and Supergravity
- Superstrings, M-Theory, ...
- Early Universe
- Quantum Fields in Curved Space-times
- Inflation
- Black Holes
- Dynamical Systems and Chaos
- Interpretation of Quantum Mechanics
- Science popularization / Public Understanding of Science
- Financial Markets
- Astrophysics (Stars and Galaxy formation, Comets)
- History and Philosophy of Science/Physics

³See also Research Projects **11.** item 8

⁴See also Research Projects **11.** item 14

11. Research Projects :

1. Some aspects of classical and quantum gravity, [**Approved** – Project JNICT PBIC/C/-MAT/2150/95 [1996 - 1999]]
2. Developing a Research Center in Astrophysics and Cosmology (Original proposer and Leading Researcher), [**Approved** – Project *ESO/INF/1260/98*]
3. Observational Consequences of Modern Theories of Structure Formation: Inflation versus Topological Defects (Original co - proposer and participant), [**Approved** – Project *ESO/PRO/1258/98*].
4. Duality Transformations and Supersymmetry in Quantum Cosmology, (Co-proponent and co-Principal Researcher; in cooperation with Dr. J. Lidsey Sussex/QMW UK), [**Approved** -*CRUP* and *British Council*- project No. *B/73/99*]
5. Quantum Aspects of Open Inflationary Models, [**Approved** – FCT-ESO/1999 (section III.1)]
6. Black Holes and Cosmological Models in Quantum Gravity Theories (Original proposer and Leading Researcher; in cooperation with Dr. C. Kiefer, Freiburg e Prof. R. Graham, Essen), [**Approved** - *ICCTI-DAAD* (Germany)- Project No. *427/98*]
7. Superstring, Black Holes, Branes and Cosmology (Original proposer and Leading Researcher), [**Approved** – Project CERN/P/FIS/15190/1999]
8. Post Doctoral Fellowship: Superstrings, Black Holes, Branes and Cosmology — [**Approved** by **FCT** - Ref: PRAXIS XX1/BPD/20166/99]
9. Developing an Educational Centre on Earth and Space Sciences (Original proposer and Principal Researcher) [**Approved** by **FCT** – project CViva No. *P-IV-451*]
10. Astrophysical and Cosmological Implications of Extra Spatial Dimensions, [**Approved** [**Approved** – FCT-ESO/2000 (section III.1)]
11. Quantum Cosmological Implications of Superstring Theory (Original proposer and Principal Researcher), [**Approved** – Project POCTI/P/FIS/32327/2000]
12. Searching for Extra Dimensions in Cosmology (Participant) [**Approved** – Project CERN/P/FIS/43737/2002]
13. Non Perturbative Aspects of Fields and Strings (Participant) [**Approved** – Project CERN/P/FIS/43717/2002]
14. Research Fellowship – UBI: "Non-Linear Multidimensional Cosmologies with p -Form Fields" — - **Approved** – CENTRA/IST-FCT – 2002]

12. Scholarships/Fellowships :

- JNICT/Programme Ciencia
Ph.D. scholarship BD/138/90-RM (1/10/1990-1/10/1993)
- Post-Doctoral Fellowship - ERBCHBICT930781
E.U. Human Capital and Mobility Programme (1/10/1993-31/7/1995)
- Visiting Scholar Fellowship
Universidad de Guanajuato, Mexico (November - December 1994)
- Visiting Scholar Fellowship (L386 00000 — L386A0649) – Australia
School of Mathematics and Statistics, University of Sydney (15/8 – 15/9/95)
- Post-Doctoral Fellowship BPD/6095/95 – JNICT/PRAXIS XXI
(1/12/1995 – 2/2/1998)
- Visiting Fellowships for International Conference participation – Calouste Gulbenkian Foundation – August 1999 and August 2001

13. Research Awards :⁵

- Hounorable Mention
Essay: “*Is there a Problem with Quantum Wormholes in N=1 Supergravity?*” (author: P.V. Moniz),
1995 Gravity Research Foundation Awards for Essays in Gravitation
- Third Prize
Poster competition at the 46-SUSSP NATO ASI – General Relativity – Aberdeen University, July 16-29 1995,
“*Why Two makes it more Exciting than One*” (authors: A.D.Y. Cheng and P. Moniz),
- Hounorable Mention
Essay: “*Origin of Structure in a Supersymmetric Quantum Cosmology*”, (author: P. Moniz)
1997 Gravity Research Awards for Essays in Gravitation

⁵See also List of Publications **15.** (items 16, 17, 26)

14. Research Work :

Reports - in preparation/submitted

1. FRW Quantum Cosmology from D-p-Branes, (authors: A. Yu. Kamenshchik and P. Moniz)
2. FRW quantum cosmology with a scalar supermultiplet and superpotential from N=1 Supergravity, (author: P. Vargas Moniz)

Projects/Work in progress

3. Quantum Cosmology of Open Universes with a Complex Scalar Field, (autores: A. Yu. Kamenshchik and P. Moniz)
4. Non-Linear Multidimensional Cosmologies with p -forms, (authors: U. Guenther, P. Moniz and A. Zhuk)
5. α -varying cosmologies in the Born-Infeld Theory, (author: P. Vargas Moniz)
6. Quantum Gravity, Extra dimensions and B-Physics, (authors: P. Moniz, P. Parada)
7. Supergravity Constraints and Feynman Diagrams, (authors: C. Kiefer and P. Moniz)
8. Can Spontaneous Symmetry Breaking in Supersymmetric Quantum Cosmology induce classical space-times, (author: E. Donnets and P. Moniz),
9. Supersymmetric Gowdy model, (author:
10. No-Boundary wave function for a Bianchi-IX model with a Cosmological constant and a Maxwell field, (author: P.V. Moniz)
11. Validity of minisuperspace approximation in N=1 supergravity, (author: P. Moniz)

15. List of Publications :

Scientific Journals (Peer reviewed)

1. Spontaneous Symmetry Breaking in Curved Space-Time, *Classical and Quantum Gravity*, **7**, (1990) L143-L147, (authors: A. Barroso, P. Crawford and P.V. Moniz)
2. Homogeneous and Isotropic Closed Cosmologies with a Gauge Sector, *Classical and Quantum Gravity*, **8**, (1991) 1815-1831, (authors: J. Mourão and P.V. Moniz)
3. Quantum Cosmology: A Basic Introduction, *Gazeta da Fisica - Physics Gazette*, **14** (1991) 132-141 (*in Portuguese*), (author: P.V. Moniz)
4. Inflation in the Presence of a Non-Minimal Coupling, *Physics Letters* **B275** (1992) 264-272, (authors: A. Barroso, J. Casasayas, P. Crawford, P. Moniz and A. Nunes)
5. A Bianchi type III foliation of the De Sitter Space, *International Journal of Theoretical Physics* **32** (1993) 841-848 (authors: P. Crawford and P.V. Moniz)
6. On the Cosmology of Massive Vector Fields with SO(3) Global Symmetries, *Classical and Quantum Gravity*, **10** (1993) 285-298 (authors: M.C. Bento, O. Bertolami, J. Mourão, P.V. Moniz and P. Sá) , [gr-qc/9302034]
7. The Dynamics of a Flat Friedmann-Robertson-Walker Inflationary Model in the Presence of Gauge Fields, *Classical and Quantum Gravity* **10** (1993) 517-534 (authors: P.V. Moniz, J. Mourão and P. Sá)
8. Kantowski-Sachs Universes and the Cosmic No-Hair Conjecture, *Physical Review* **D47** (1993) 4315-4321 (author: P.V. Moniz)
9. Quantization of the Bianchi type - IX model in Supergravity with a Cosmological Constant, [gr-qc/9404008] *Physical Review* **D49** (1994) 5246, (authors: A. Cheng, P. D'Eath, P. Moniz)
10. Quantization of a Locally Supersymmetric Friedmann Model in the presence of Supermatter, *International Journal of Modern Physics* **D4** (1995) 189 (authors: A. Cheng and P. Moniz),
11. Quantization of Bianchi Models in N=1 Supergravity with a Cosmological Constant, [gr-qc/9406047] , *Gravitation and Cosmology*, **1** (1995) 11-21 (authors: A. Cheng, P. D'Eath and P. Moniz)
12. Canonical Quantization of N=1 Supergravity with Supermatter: The General Case and a FRW Model, [gr-qc/9606048] , *Gravitation and Cosmology*, **1** (1995) 1-11 (authors: A. Cheng, P. D'Eath and P. Moniz)
13. Decoherence of Friedmann-Robertson-Walker Geometries in the Presence of Massive Vector Fields, [gr-qc/9507025] *Nuclear Physics* **B439** (1995) 259 (authors: O. Bertolami and P.V. Moniz)
14. Quantization of a FRW model in N=1 Supergravity with Gauged Supermatter, (authors: A. Cheng, P.D. D'Eath and P. Moniz) *Classical and Quantum Gravity*, **12** (1995) 1343-1353
15. Quantization of the Bianchi type-IX model in N=1 Supergravity in the presence of Supermatter, [gr-qc/9505048], *International Journal of Modern Physics*–**A11** (1996) 1763–1795. (authors: P. Moniz),
16. Is there a problem with quantum wormholes in N=1 supergravity?, Awarded Essay, [gr-qc/9510024], *General Relativity and Gravitation*, **28** (1996) 97. (author: P.V. Moniz),

17. Canonical Quantization of Bianchi class A models in N=2 Supergravity, *Modern Physics Letters – A11* (1996) 227-245, (authors: A.D.Y. Cheng and P. Moniz)
18. Supersymmetric Quantum Cosmology — Shaken, not Stirred, [gr-qc/9604025], *International Journal of Modern Physics–A11* No. 24 (1996) 4321 – 4382 (author: P. Moniz),
19. FRW model with vector fields in N=1 supergravity, *Acta Physica Helvetica* 69 (1996) 293 (author: P. Moniz),
20. Wave function of supersymmetric FRW model with vector fields [gr-qc/9606045], *Int. J. Mod. Phys. D6* (1997) 465, (author: P. Moniz),
21. Why two is more attractive than one ... or: Bianchi class-A models and Reissner-Nordstrom black holes in quantum N=2 Supergravity, *Nuc. Phys. B57* Proc. Suppl. (1997) 307, (author: P.V. Moniz)
22. Conserved Currents in supersymmetric quantum cosmology?, [gr-qc/9605034], *Int. J. Mod. Phys. D6* (1997) 625, (author:P.V. Moniz),
23. Quantum Cosmological Multidimensional Einstein-Yang-Mills Model in a $\mathbf{R} \times S^3 \times S^d$ topology , [gr-qc/9707015], *Physical Review D56* (1997) 4530 (authors: O. Bertolami, P.D. Fonseca and P.V. Moniz).
24. Wave function for the Reissner-Nordström black-hole,[gr-qc/9709080], *Mod. Phys. Lett. A12* (1997) 1491, (authors: P. Moniz),
25. Comment on: “Euclidian Quantum Gravity in Manifolds with Boundary” by G. Esposito et al”, *Foundations of Physics* 28 (1997) 691, (author: P. Moniz)
26. Origin of Structure in Supersymmetric Quantum Cosmology — Awarded Essay, *Physical Review D57* (1998) R7071 (author: P. Moniz)
27. Origin of Structure in SQC, *Astrophysics and Space Science* 261 (1999) 295, (author: P. Moniz),
28. Supersymmetric Quantization of Anisotropic Scalar Tensor Cosmologies [gr-qc/0010073] *Classical Quantum Gravity* 17 (2000) 4823-4840, (authors: J. Lidsey and P. Moniz),
29. A Tale of Two Symmetries – The Observed Universe from Duality and Supersymmetry, *Nuc. Phys. B88* Proc.Suppl. (2000) 57, (author: P.V. Moniz)
30. Canonical and Quantum FRW Cosmological solutions in M-Theory, [hep-th/0010280] *Classical Quantum Gravity* 18 (2001) 95-120, (authors: P. Moniz e M. Cavaglia)
31. Comment on: “Lucifer’s Legacy - The Meaning of Asymmetry” by F. Close”, *Euro-Physics News* 32/4 (2001) 151, (author: P. Moniz)
32. de Broglie-Bohm FRW Universes in Quantum String Cosmology, *Physical Review D65* (2002) 023516-1 (authors: J. Marto e P. Vargas Moniz)
33. Spherically Symmetric Gravitational Fields: Black Holes and Midisuperspace quantization near the Apparent Horizon, *Int. J. Mod. Phys. A17* (2002) 2459 (author: P. Vargas Moniz)
34. Asymptotical AdS space from nonlinear gravitational models with stabilized extra dimensions, *Physical Review D66* (2002) 044014 (authors: A. Zhuk, P. Vargas Moniz and U. Guenther)
35. FRW Quantum Cosmology in the Non-Abelian Born-Infeld Theory, *Classical Quantum Gravity* 19 (2002) L127 (author: P. Vargas Moniz)

36. FRW Wormhole Instanton solutions in the non-Abelian Born-Infeld Theory, *Physical Review D* **66** (2002) 064012 (author: P. Vargas Moniz)
37. Quintessence and non-Abelian Born-Infeld theory, *Physical Review D* **66** (2002), to appear (author: P. Vargas Moniz)
38. Multidimensional Cosmology and Asymptotical AdS Space, *Astrophysics and Space Science Journal* . (2003) to appear (authors: A. Zhuk, P. Vargas Moniz and U. Guenther)

Number of Citations for some of the Published Articles – see 15.⁶

Artigo	Número de Citações
[18]	$25 \oplus 6$
[9]	23
[2]	19
[6]	17
[13]	$11 \oplus 4$
[11]	$10 \oplus 2$
[15]	$8 \oplus 4$
[4]	11
[7]	10
[14]	8
[12]	7
[16]	$6 \oplus 1$
[10]	6
[23]	6
[1]	5
[30]	$4 \oplus 1$
[8]	4
[17]	4
[22]	3
[19]	$1 \oplus 2$
[21]	2
[24]	2
[26]	2
[28]	2
[34]	1

⁶Information retrieved from the SLAC database and cross-checked with Archives at xxx.lanl.gov; the number mentioned in between [...] identifies the article in the above list; the value after \oplus denotes citations for associated texts in Proceedings.

16. List of Publications :

Proceedings

1. Event Horizons and Canonical Quantization - A Sufficient but not Necessary Condition for Particle Production, in: Proceedings of XII Iberian Meeting in Mathematics, University of Minho, Portugal (authors: P.V. Moniz and R. Severino)
2. An Approach to a de Broglie-Bohm Quantum Field Theory, in: Problem in Quantum Physics-Gdansk'87 - Recent and Future experiments and interpretations; Editors: Ludwik Kostro, Andrzej Posiewnik, Jaroslaw Pykacz, Marek Zukowski, pp.628-639, World Scientific Publishing Co. Pte (author: P.V. Moniz).
3. Relativity, Thermodynamics and Particle Creation, in: Proceedings of "Physical Interpretations of Relativity Theory" ; Editor: M.C. Duffy; Sunderland Polythecnic, October 1988 (author: P.V. Moniz)
4. The Early Universe Behaviour in the Presence of Non-Minimal Coupling, in: The Physical Universe - The Interaction between Cosmology, Astrophysics and Particle Physics, Proceedings, Lisbon, Portugal 1990, eds. J.D. Barrow et al, Lecture Notes in Physics, vol.383, pp.227-236, Springer Verlag (Berlin, 1991), (authors: A. Barroso, P. Crawford and P.V. Moniz)
5. Anisotropic Foliations of the De Sitter Space, in: *Proceedings of the MG6 – Sixth Marcel Grossmann Meeting on General Relativity*, pp.1337-1339, editor H. Sato World Scientific Publishing Co. Pte., Singapore, 1992 (authors: P. Crawford and P.V. Moniz),
6. How General is Inflation in the Presence of a Non-Minimal Coupling?, in: *Proceedings of the MG6 – Sixth Marcel Grossmann Meeting on General Relativity*, pp. 617-621, editor H. Sato, World Scientific Publishing Co. Pte., Singapore, 1992 (authors: A. Barroso, J. Casasayas, P. Crawford, P.V. Moniz and A. Nunes)
7. Asymptotic Behaviour of Vacuum Kantowski-Sachs Universes in the Presence of a Cosmological Constant, in: *Proceedings of the 2nd National Meeting in Astronomy and Astrophysics*, pp. 200-207, Editors: F.D. Santos, P. Crawford, A. Arriaga and P.V. Moniz, Faculty of Sciences Publishing, 1993 (author: P.V. Moniz)
8. Qualitative Analysis of the Cosmic No-Hair Conjecture in Kantowski-Sachs Universes, in: *Classical and Quantum Gravity, Proceedings of the First Iberian Meeting on Gravity*, World Scientific Publishing Co. Pte., 1993, Eds. M.C. Bento, O. Bertolami, J.M. Mourão e R.F. Picken (author: P.V. Moniz)
9. Decoherence of Homogeneous and Isotropic Metrics in the Presence of Massive Vector Fields, in: Proceedings of the Third National Meeting of Astronomy and Astrophysics, July 1993, IST, Lisbon, Portugal, (authors: O. Bertolami and P.V. Moniz) [[gr-qc/ 9407025](#)]
10. Quantization of Bianchi Models with a Cosmological Constant in N=1 Supergravity, DAMTP Report, in: *Proceedings of the MG7 – Seventh Marcel Grossmann Meeting on General Relativity*, Stanford University, USA, 24 – 29 July 1994, (authors: A. Cheng , P. D'Eath and P. Moniz)
11. Decoherence of Homogeneous and Isotropic Metrics in the Presence of Massive Vector Fields, DAMTP Report, *gr-qc/9409042*, in: *Proceedings of the MG7 – Seventh Marcel Grossmann Meeting on General Relativity*, Stanford University, USA, 24 – 29 July 1994, (authors: O. Bertolami and P.V. Moniz)

12. Quantization of a Friedmann-Robertson-Walker model in N=1 Supergravity with Gauged Supermatter, [gr-qc/9503009], in: Proceedings of the 1st Mexican School in Gravitation, Guanajuato, Mexico December 12-16 1994, (authors: A.D.Y. Cheng, P.D. D'Eath and P.R.L.V. Moniz)
13. Decoherence due to massive vector fields with global symmetries, [gr-qc/9503008], in: Proceedings of the 1st Mexican School in Gravitation, Guanajuato, Mexico, December 12-16 1994 (authors: O. Bertolami and P.V. Moniz)
14. Back to Basics? or How can supersymmetry be used in a simple quantum cosmological model, in: Proceedings of the 1st Mexican School in Gravitation, Guanajuato, Mexico December 12-16 1994, DAMTP report R95/20, [gr-qc/9505002], (author: P. Moniz)
15. Quantum Bianchi Models in N=2 Supergravity with Global O(2) Internal Symmetry in: Proceedings of the VI Moskow International Quantum Gravity Seminar, Moskow, Russia, 12-19 June 1995, World Scientific, (authors: A.D.Y. Cheng and P. Moniz)
16. The Case of the Missing Wormhole State, in: Proceedings of the VI Moskow International Quantum Gravity Seminar, Moskow, Russia, 12-19 June 1995, World Scientific, [gr-qc/9506042], (author: P. Moniz)
17. Why two is more attractive than one ... or: Canonical Quantization of Bianchi class-A models and Reissner-Nordstrom black holes in quantum N=2 Supergravity, Nuc. Phys. **B** Proc. Supplements 57 (1997) 307 Quantum Gravity'96, Sta. Marguerita, Italy, 17-21 September 1996, (author: P.V. Moniz)
18. From Reissner-Nordström quantum states to charged black holes mass evaporation, [hep-th/9709208], in: Proceedings of Eight Marcel Grossmann Meeting – MG8 – Jerusalem, Israel, 22-27 June 1997, (author: P.V. Moniz)
19. Can spontaneous Supersymmetry Breaking in a Quantum Universe Induce the Emergence of Classical Space-Times?, [gr-qc/9710030] in: Proceedings MG8 – Jerusalem, 22-27 June 1997, (authors: O. Bertolami and P.V. Moniz)
20. Quantum Analysis of the compactification process in the multidimensional Einstein-Yang-Mills system, [gr-qc/9710036] in: Proceedings of MG8 – Israel, 22-27 June 1997, (authors: O. Bertolami and P.V. Moniz)
21. Can we obtain conserved currents in Supersymmetric Quantum Cosmology?, in: Proceedings of MG8 – Jerusalem, Israel, 22-27 June 1997, (author: P.V. Moniz)
22. Origin of structure in a supersymmetric quantum universe, [gr-qc/9710113] in: Proceedings of Eight Marcel Grossmann Meeting – MG8 – Jerusalem, Israel, 22-27 June 1997, (author: P.V. Moniz)
23. Can the imprint of an early supersymmetric quantum universe be present in our observations?, in: Proceedings of the International Workshop COSMO-97, Ambleside, England, 15–19 September 1997, (author: P.V. Moniz)
24. Origin of Structure in SQC, in: Astrophysics and Space Science **261** (1999) 295, The Sleeping Universe, November 1997, Porto, Portugal (autor: P. Moniz),
25. A Tale of Two Symmetries – The Observed Universe from Duality and Supersymmetry invited plenary talk⁷, in Nuc. Phys. **B88** Proc. Supplements (2000) 57, presented at the *III Quantum Gravity Meeting*, Sardinia, Italy, September 1999 (author: P.V. Moniz)

⁷Also presented at *Connecting Fundamental Physics and Cosmology* EC Summer School and Workshop, University of Cambridge, Isaac Newton Institute for Mathematical Sciences, 16 - 20 August and 22 - 27 August 1999.

26. Quantum states of Black Holes in: Proceedings of Ninth Marcel Grossmann Meeting – MG9 – Rome, Italy, July 2000, (author: P.V. Moniz)
27. Broglie Bohm FRW models in Quantum String Cosmology in: Proceedings of Ninth Marcel Grossmann Meeting – MG9 – Rome, Italy, July 2000, (authors: J. Marto and P.V. Moniz)
28. FRW cosmological solutions from M-theory, [gr-qc0011098] em: Proceedings of Ninth Marcel Grossmann Meeting – MG9 – Rome, Italy, July 2000, (author: M. Cavaglia and P.V. Moniz)
29. Quantum Anisotropic scalar-tensor cosmologies with N=2 SUSY in: Proceedings of Cosmology 2000 (ed. M. Bento, O. Bertolami e L Teodoro), IST, Lisbon, Portugal, July 2000, (authors: J Lidsey and P.V. Moniz)
30. FRW Cosmological models within M-theory to appear in: Actas do III Forum Internacional de Investigadores Portugueses, Faro, U. Algarve, 7–10 Julho 2001, ed. N Crato (Gradiva) (author: P.V. Moniz)
31. Quantum Cosmology from D-Branes, a aparecer em: Proceedings of the International Conference GR16 (*Session Report*), Durban, South Africa, 15-21 July 2001 (authors: A. Yu. Kamenshchik and P. Moniz)
32. Broglie Bohm quantum FRW cosmology, a aparecer em: Proceedings of the International Conference GR16 (*Session Report*), Durban, South Africa, 15-21 July 2001 (authors: J. Marto and P. Moniz)
33. FRW quantum cosmology in M-Theory, a aparecer em: Proceedings of the International Conference GR16 (*Session Report*), Durban, South Africa, 15-21 July 2001 (authors: M. Cavaglia and P. Moniz)
34. FRW quantum cosmology and Born-Infeld Theory, a aparecer em: Proceedings of the 1st International Conference on String Phenomenology, Oxford, UK, July 2002 (author: P. Moniz)
35. Asymptotical AdS space and Multidimensional Cosmology, "Varying Fundamental Constants" Workshop, JENAM 2002, Porto, Portugal, Setembro 2002, (authors: A. Zhuk, P. Vargas Moniz and U. Guenther)
36. Cosmological Aspects of the Born-Infeld Theory, a aparecer em: Proceedings da Ia International Workshop "Nuclear Astrophysics and the Evolution of the Universe", 13a Conferencia Nacional da SPF, Evora, Portugal, September 2002 (author: P. Moniz)

17. Theses :

- Licence Monography, Lisbon, 1986 – “Particle Creation in Curved Spacetimes”: 17/20 (circa 300 pages)
- M.Sc. Thesis, Lisbon, 1990 – “Homogeneous Cosmologies with Scalar Fields”: A (circa 200 pages)
- Ph.D. thesis, Lisbon, 1993 – “Homogeneous Cosmologies in the Presence of Scalar and Yang-Mills Fields: Symmetries and Solutions”: *Suma cum Laude* (circa 220 pages)

18. Books/Universitary Manuals :

- Special Relativity Theory in 20 Lectures — currently being revised⁸
(Preliminary version – Portuguese – available for inspection)
- History and Philosophy of Sciences: An Introductory Guide - (*manuscript*)
- The Shadows of the Universe⁹ — currently being reviewed
(Preliminary version – Portuguese – available for inspection)
- Modern Theories of Gravitation: From General Relativity to Superstring Theory — in preparation
- Lectures in Supersymmetric Quantum Cosmology — in preparation

19. Reports/Other Universitary Texts :

- Report for Associate Professor Candidature – “*An Universitary Approach to the Teaching of Modern Physics*”
[See <http://www.dfis.ubi.pt/~pmoniz>]
- “*A UBI e as Sombras de Platão – UBI and Plato shadows*” (Portuguese) – UBI On-line journal URBI et ORBI (28/Nov/2000)
[See http://urbi.ubi.pt/001128/edicao/op_moniz.html]
- “*Será que fazemos parte de um SuperUniverso?*” (Portuguese) – Public Understanding of Science (PUS) article
- *Supersymmetric Quantum Cosmology and Supersymmetric Quantum Mechanics* – contributions by invitation for SUSY 2000 Encyclopaedia
[See <http://gluon.physik.uni-kl.de/duplij/susy/susy2000.htm/>]

⁸Some chapters/lectures (yet to be reviewed) can be browsed at <http://www.dfis.ubi.pt/~pmoniz>

⁹Book aimed at a Public Understanding of Science programme

20. Seminars Presented :¹⁰

- The Isotropization of Homogenous Cosmological Models
- On the Generality of Inflationary Solutions in Cosmological Models with a Scalar Field
- Extended dynamics in Bianchi Cosmologies
- Dynamics of Closed FRW Cosmologies in the Presence of Gauge Sectors
- Gravitationally Induced particle creation
- Spontaneous Symmetry Breaking in Curved Spacetimes
- The Early Universe Behaviour with Non-Minimal Coupling
- Quantum Cosmology - An Introduction
- Wormholes and Global Symmetries
- Spectrum of Wormholes
- Quantum State of Wormholes
- Inflation in the presence of a Non-Minimal Coupling
- Wigner functions, Correlation and Decoherence in Quantum Cosmology
- Decoherence in Quantum Kaluza-Klein Cosmological Models
- FRW Cosmologies in the Presence of Vector Fields
- Canonical Quantization of Bianchi class A models in N=2 supergravity
- The case of the missing wormhole state
- The Essence of Supersymmetric Quantum Cosmology
- Duality and Supersymmetry in Quantum Cosmology
- A Blast from Another Past – The Observed Universe from Duality and Supersymmetry
- A Tale of two symmetries for the very early Universe
- Quantum states from Black Holes
- Hidden $N = 2$ SUSY cosmologies from string T-duality
- Broglie Bohm quantum string cosmology
- N=2 SUSY quantization of Anisotropic scalar tensor cosmologies
- Quantum FRW models in M-theory
- FRW quantum cosmological solutions in the non-Abelian Born-Infeld Theory
- Quintessence and non-Abelian Born-Infeld Theory
- Spherically symmetric midisuperspaces in a gravitational theory

¹⁰**Presented either at:** Physics Department – UBI; Physics Department–Faculty of Sciences, Lisbon; Physics Department–Faculty of Sciences, Porto; CAUP-Porto CENTRA-IST; DAMTP, University of Cambridge; School of Mathematics and Statistics, University of Sydney; Meudon-Observatoire de Paris; Université Paris VI; University of Tours; University of Brussels (ULB); University of Freiburg; ITH-Zürich; University of Essen; University of Vienna; Tufts University - Boston; Queen Mary College; CPT - University of Durham

21. Schools Attended/Communications Presented :

- NATO ASI: The Early Universe
Pearson College, 17-30 August 1986, Victoria, British Columbia, Canada
★ Communication: Comparison between the two-dimensional Rindler space-time and the Milne two-dimensional Cosmological model concerning the existence of a characteristic temperature”
- Quantization of Infinite Dimensional Mechanical Systems
University of Salamanca - University of Coimbra Meeting, Mangualde, 7-15 July 1987, Portugal
- XVII Internationale Universitätswochen für KernPhysik - Particle and Astrophysics - Current Viewpoints
Institut für Theoretische Physik der Karl-Franzens Universität
Schladming, 22 February - March 3, 1988, Austria
★ Communication: Quantum Cosmology - Some Problems, Topics and Hints
- Black Holes, Wormholes and the Cosmological Constant by Prof. G. Gibbons (Cambridge University – D.A.M.T.P.)
Complex II - I.N.I.C., 20-31 May 1989, Lisbon, Portugal
- NATO ASI: Quantum Mechanics in Curved Space-Time
Ettore Majorana Centre for Scientific Culture - International School of Cosmology and Gravitation - 11th Course
Erice, 2-12 May 1989, Italy
- Introduction to Modern Cosmology
Faculty of Sciences, May-June 1989, Lisbon, Portugal
- Spring School on String Theory and Quantum Gravity
I.C.T.P., 23 April - 1 May 1990, Trieste, Italy
- XII Autumn School - The Physical Universe
University of Lisbon, 1-5 October 1990, Lisbon, Portugal
★ Communication: The Early Universe Behaviour in the Presence of Non-Minimal Coupling
- A Course for the XXII GIFT International Meeting in Theoretical Physics”
I.N.T.A., 20-24 May 1991, Madrid, Spain
- XXII GIFT International Meeting in Theoretical Physics: Quantum Gravity and Cosmology
Saint Feliu de Guixols, 3-8 June 1991, Catalonia, Spain
- First Iberian Meeting on Gravity
University of Évora, 21-26 September 1992, Portugal
★ Communication: Qualitative Analysis of the Cosmic No-Hair Conjecture in Kantowski-Sachs Universes
- International School/Seminar “Multidimensional Gravity and Cosmology” Yaroslavl, June 20-26 1994, Russia,
★ Communication: Quantization of a Locally Supersymmetric Friedmann Model with Supermatter
★ Communication: Quantization of Bianchi Models in N=1 Supergravity with a Cosmological Constant

- First Mexican School in Gravitation and Mathematical Physics, Guanajuato, Mexico, 12-16 December 1995
 - ★ Communication: Quantization of a Friedmann-Robertson-Walker model in N=1 Supergravity with Gauged Supermatter,
 - ★ Communication: Decoherence due to massive vector fields with global symmetries,
 - ★ Communication: Back to Basics? or How can supersymmetry be used in a simple quantum cosmological model
- 46th Scottish Universities' Summer School in Physics – General Relativity, Department of Mathematical Sciences, University of Aberdeen, July 16 - 29, 1995
 - ★ Communication: *Why Two makes it more exciting than One* or Quantum Bianchi Models in N=2 Supergravity
- Gauge Theories, Applied Supersymmetry and Quantum Gravity, Imperial College, London, 5–10 July 1996
- XVII UK HEP Theory Institute, University of Durham, 25 August – 13 September 1996.
- CERN School in Strings, CERN, Geneva, Switzerland, December 1997
- Advanced School in Gravitational Physics: Black Holes, Como, 20-24 April 1998
 - ★ Communication: From Reissner-Nordström quantum states to charged black holes mass evaporation,
- Advanced Summer School in Particle Physics and Cosmology, Peníscola, Spain, June 22-28, 1998
- XIXth UK Theoretical Summer Institute, Oxford University, UK, 22 - 29 August 1998
 - ★ Communication: Wave functions of Supersymmetric Universes
- Lisbon School in Superstrings, IST, Lisbon, Portugal, 16-18 December 1998
 - ★ Communication: Scale Factor Duality and Supersymmetric Quantum Cosmology
- EC Summer School and Workshop – Connecting Fundamental Physics and Cosmology, University of Cambridge, Isaac Newton Institute for Mathematical Sciences, 16 - 20 August and 22 - 27 August 1999.
 - ★ Communication: A Tale of Two Symmetries – The Observed Universe from Duality and Supersymmetry
- Nato ASI – Particle Physics and Cosmology 2000, Cascais, June 26 - July 7 2000, Portugal
 - ★ Communication: FRW quantum cosmologies in M-theory
- International Workshop "String Theory", University of British Columbia, July 24th - August 4th 2000, Vancouver, Canada
 - ★ Communication: Quantum FRW models in M-theory
- 271st WE-Heraeus Seminar in Physics – Aspects of Quantum Gravity, Bad Honnef, Koln, Germany, February-March 2002

22. Conferences Attended/Communications Presented :

- Microphysical Reality and Quantum Formalism
University of Urbino, 25 September - 3 October, 1985, Urbino, Italy
- XII Iberian Meeting in Mathematics
Universidade do Minho, 4-8 May 1987, Braga, Portugal
★ Communication: Event Horizons and Particle Creation - A Sufficient but not Necessary Condition for Particle Production
- 7th General Conference of the European Physical Society
Helsinki University of Technology, 10-14 August 1987 Helsinki, Finland
★ Communication: Quantum Mechanics, Thermodynamics and the Milne Universe
- Problems in Quantum Physics: Gdansk' 87
University of Gdansk, 21-25 September 1987, Gdansk, Poland
★ Communication : An approach to a de Broglie-Bohm Quantum Field Theory
- Physical Interpretation of Relativity Theory
Imperial College, 16-19 September 1988, London, England
★ Communication: Relativity, Thermodynamics and Particle Creation
- 1990 Texas-ESO/CERN Symposium – Relativistic Astrophysics, Cosmology and Particle Physics
Conference Centre, 16-21 December 1990, Brighton, U.K.
★ Communication: Homogeneous Cosmologies with Scalar Fields
- MG6 – Sixth Marcel Grossmann Meeting on General Relativity
Kyoto, 23-29 June 1991, Japan
★ Communications:
 - Anisotropic Foliations of the De Sitter Space
 - How General is Inflation in the Presence of a Non-Minimal Coupling?
- Black Holes, White Holes and Wormholes - A Symposium in Honour of W. Israel
Banff, 20-25 May 1992, Alberta, Canada
- Second National Meeting in Astronomy and Astrophysics
Faculty of Sciences, 31 August - 1 September 1992, Lisbon, Portugal
★ Communication: Asymptotic Behaviour of Kantowski-Sachs Universes in the Presence of a Cosmological Constant
- First Algarve Workshop on Gravity & Quantum Field Theory
University of Algarve, 16 February 1993, Faro, Portugal
★ Communication: Decoherence in Radiation Dominated Models
★ Communication: Particle Creation in Kantowski-Sachs Models
- Third National Meeting of Astronomy and Astrophysics
29-30 July 1993, IST, Lisbon, Portugal
★ Communication: Decoherence of Homogeneous and Isotropic Geometries in the Presence of Massive Vector Fields,
- Classical and Quantum Gravity: A Survey Conference
March 28 – 31 1994, Isaac Newton Institute, University of Cambridge,

- The Nature of Space-Time: Series of Lectures by S.W. Hawking and R. Penrose
April 25 - May 9 1994, Isaac Newton Institute, University of Cambridge,
- LMS Symposium on Quantum Concepts in Space and Time
Durham University, Grey College, July 1 – 11 1994
- MG7 – Seventh Marcel Grossmann Meeting on General Relativity
Stanford University, USA, 24 – 29 July 1994,
 - * Communication: Canonical Quantization of N=1 Supergravity with Supermatter
 - * Communication: Quantization of N=1 Supersymmetric Bianchi Models with a Cosmological Constant
 - * Communication: Decoherence of Homogeneous and Isotropic Cosmologies in the Presence of Massive Vector Fields
- VI Moskow International Quantum Gravity Seminar, Moskow, Russia, 12-19 June 1995
 - * Communication: Quantum Bianchi Models in N=2 Supergravity with Global O(2) Internal Symmetry
 - * Communication: The Case of the Missing Wormhole State
- 14th General Relativity and Gravitation International Conference – GR14
4-12 August 1995, Florence, Italy
 - * Communication: Quantum Cosmological Multidimensional Einstein-Yang-Mills Model in a $\mathbf{R} \times S^3 \times S^d$ topology
 - * Communication: The case of the missing wormhole state
 - * Communication: Why two makes it more exciting than one
- Journées Relativistes 96, Ascona, May 25-30, 1996, Switzerland,
 - * Comunication: Where is Susy?
- Geometrical issues in Physical Sciences, St. John's College, University of Oxford, 25 – 29 June 1996
- Quantum Gravity'96, Sta. Marguerita, Italy, 17-21 September 1996
 - * Communication: Canonical Quantization in N=2 supergravity: Bianchi class-A models and Reissner-Nordström black holes.
- Chandrasekhar Symposium, University of Chicago, Chicago 13-15 December 1996, USA
- 18th Texas Symposium in Astrophysics, Chicago, 15-20 December 1996
 - * Communication: Why two makes it more important than just one, or, canonical quantization in N=2 supergravity
- Eight Marcel Grossmann Meeting – MG8, Jerusalem, Israel, 22-27 June 1997
 - * Communication: From Reissner-Nordström quantum states to charged black holes mass evaporation,
 - * Communication: Can spontaneous Supersymmetry Breaking in a Quantum Universe Induce the Emergence of Classical Space-Times?,
 - * Communication: Quantum Analysis of the compactification process in the multidimensional Einstein-Yang-Mills system,
 - * Communication: Can we obtain conserved currents in Supersymmetric Quantum Cosmology?,
 - * Communication Origin of structure in a supersymmetric quantum universe,

- International Workshop COSMO-97, Ambleside, England, 15–19 September 1997,
 - ★ Communication: Can the imprint of an early supersymmetric quantum universe be present in our observations?
- International Conference The Sleeping Universe, Novembro, 1997, Porto, Portugal
 - ★ Communication: Origin of Structure in SQC
- 1st National Meeting of the RPC, CAUP, Porto, Portugal, 11 September 1998
 - ★ Communication: Duality and Supersymmetry in Quantum Cosmology
- 2nd National Meeting of the RPC, Covilhã, UBI, Portugal, 22 December 1998
- 3rd National Meeting RPC, IST, Portugal, 11 April 1999
 - ★ Communication: Duality and Supersymmetry in Quantum Cosmology
- Constrained Dynamical Systems and Quantum Gravity'99, Sardegna, Italy, 13-17 September 1999
 - ★ Communication: A Tale of Two Symmetries – The Observed Universe from Duality and Supersymmetry
- 4th National Meeting RPC, CFNUL, Lisboa, Portugal, 17 December 1999
 - ★ Communication: Broglie-Bohm Quantization of Pre Big Bang Cosmologies
- 9th Marcel Grossmann Meeting in General Relativity – MG9, Rome, , Italy, 2 - 8th July 2000
 - ★ Communication: Quantization of cosmological models in M-Theory
 - ★ Communication: Broglie-Bohm Quantization of Pre Big Bang Cosmologies,
 - ★ Communication: Vacuum states from Quantum Black Holes,
- Cosmology 2000, IST 12-14th July 2000, Lisbon, Portugal
 - ★ Communication: Duality and Hidden Supersymmetry in Anisotropic Scalar Tensor Cosmologies
- 1st Meeting of the Strings@PT Network, 27 December 2000, IST, Lisboa, Portugal
 - ★ Communication: FRW Quantum Cosmology from M-theory
- III Internacional Forum of Portuguese Reseachers, Faro, U. Algarve, 7–10 July 2001,
 - ★ Communication: FRW Cosmological models within M-theory
- International Conference GR16, Durban, South Africa, 15-21 July 2001
 - ★ Communication: Quantum Cosmology from D-Branes
 - ★ Communication: de Broglie - Bohm Quantum FRW Cosmologies
 - ★ Communication: FRW quantum cosmology in M-theory
- M-Theory Cosmology Conference, University of Cambridge, August 21-25, 2001
 - ★ Communication: FRW quantum cosmologies in M-Theory
- 6th national RPC Meeting, CAUP, Porto, Portugal, 17 December 2001
 - ★ Communication: Quantum Cosmologies from D-branes
- 1st International Conference on String Phenomenology, Oxford, July 2002, UK
 - ★ Communication: FRW quantum cosmology in the Born-Infeld Theory
- "Varying Fundamental Constants" Workshop, JENAM 2002, Porto, September 2002, Portugal
 - ★ Communication: Asymptotic AdS states and multidimensional cosmology

- *Ist* International Workshop "Nuclear Astrophysics and the Evolution of the Universe", 13-National Meeting of the SPF, Evora, SEptember, 2002
★ Communication: Cosmological aspects of the Born-Infeld Theory

23. Invited Talks :

- Netdays1998 - November de 1998, FCT-UArte — (A Pedagogical Domain was created at <http://www.uarte.mct.pt/netdays98/difusao/>)
- Conference "*Beyond the Sky*" - UBI, 7 May 1999
- Conference "Energies in the Universe", Secondary School "Campos Melo", November 1999, Covilhã (Portugal)
- Upgrading Courses for Teachers at Secondary Schools, Belmonte (Portugal) April 2000
- Science and Technology Week (Subject: "*A Origem do Universo*"), November 2000, UBI, Covilhã, Portugal
- III National Meeting of Physics Students (Subject: "*Tempus Fugit*", UBI, Portugal, April 2001
- Upgrading Courses for Teachers at Secondary Schools, May 2002, Conference "Stelar Evolution", Secondary School "Frei Heitor Pinto", Covilhã (Portugal)
- A Tale of Two Symmetries – The Observed Universe from Duality and Supersymmetry invited plenary talk¹¹, presented at the *III Quantum Gravity Meeting*, Sardinia, Italy, September 1999 (author: P.V. Moniz)
- Upgrading Courses for Teachers at Secondary Schools, May 2002, Conference "Cosmological Evolution", Secondary School "Frei Heitor Pinto", Covilhã (Portugal)
- World Space Week - ESA (WSW 2002) (Talk: "*As Sombras do Universo*"), 10 October 2002, UBI, Covilhã, Portugal

24. Conferences/Seminars Organization :

- Member of the Organizing Committee and Co-editor of the Proceedings of the 2nd National Meeting in Astronomy and Astrophysics, Faculty of Sciences Publishing, 1993
- Responsible for the organization of the Lunch-Seminars of the Gravitation group, DAMTP, University of Cambridge 1995-1996
- Local Coordinator of UBI at the *Astrofest 1999*, 22 August
- Coordination of the Astronomy weeks at UBI – 1999, 2000
- Coordination of the UBI-Science Days 1999, 2000, 2001, 2002 at the LAG (Laboratory of Astrophysics and Geophysics) of UBI
- Organizer of the 2nd National Meeting of the RPC, Covilhã, UBI, 22 December 1999
- 1st GATC-UBI Mini-Course – Workshop in "Quantum Aspects of Open Inflationary Models", 20 - 24 September 1999, Covilhã, 20 -25 de Setembro, — FCT-ESO (section III.1) [Main Speaker: Prof. J. Garriga, U. Barcelona]

¹¹Também apresentada na *Connecting Fundamental Physics and Cosmology* EC Summer School and Workshop, University of Cambridge, Isaac Newton Institute for Mathematical Sciences, 16 - 20 August e 22 - 27 August 1999.

- Organization and Coordination of the GATC- Programa Ciência Viva P-IV-451 participation at the Science and Technology Week ("*O Universo das Estrelas na UBI*"), November 2000, UBI, Covilhã, Portugal
- 2nd GATC-UBI Mini-Course – Workshop "*Astrophysical and Cosmological Implications of Extra Spatial Dimensions*", Covilhã, 2001, — FCT- ESO (section III.1) [Main speaker: Prof. A. Zhuk, CSIC, Madrid]
- Organization and Coordination of the Seminar Programme "*String and Brane Cosmology*", 2000-2003, GATC/Physics - UBI, supported by the projects CERN/P/-FIS/15190/1999 and POCTI/P/FIS/32327/2000
[See <http://www.dfis.ubi.pt/~pmoniz>]
- Member of the Local Organizing and Scientific Committee of the CFIF/IST-UBI Workshop: "*CP violation, Fermion masses and Brane Worlds*", May 2002, UBI
- Member of the Scientific Committee of 2002 National Physics Meeting (SPF), Évora, September 2002, Portugal

25. Committees/Juries :

- Member of Selection Committees for Lecturers at UBI
- Juri member of University Monography, UBI, June 99, July 99, June 2000, July 2000, September 2000, June 2001, July 2001, September 2001, June 2002, July 2002, September 2002
- Member of the Assessment Committee of the Chemistry-Physics Degree, UBI (2002)
- Juri member of research works submitted to the III National Meeting of Physics Students, UBI, April 2001
- Juri member at M.Sc Examination, University of Porto, Faculty of Sciences, February 2001
- Juri member (external examiner) at M.Sc Examination, University of Porto, Faculty of Sciences, March 2001
- Juri member at M.Sc (PAPCC) Examination, UBI, March 2001
- Juri member at Ph.D. Equivalence Examination, University of Porto, Faculty of Sciences, May 2000
- External Referee of PhD thesis in Physics: "*Quantum Mechanical Models of Black Holes*", P. Repo, University of Jyväskylä, Finland, December 2001
- Juri member at Ph.D. Examination, University of Lisboa, Faculty of Sciences, 2002
- Juri member at Ph.D. Examination, University of Lisboa, Faculty of Sciences, 2003
- Referee for Assistant Professor positions (tenure-track) in Physics (Relativity and Cosmology) in the Universities of Washington, St Louis and California, Davis, USA
- Referee for Research Projects submitted to the European Union (section DG-XII - INTAS) – 1999, 2000, 2001

26. Referee of Scientific Journals :

- Classical and Quantum Gravity
- Journal of Physics A: Mathematics and General

- Mathematical Reviews
- Acta Physica Slovaca

27. Other Academic Duties :

- Tutor of the 2nd year Applied Physics Course: 1999-2003
- Administrative Tasks:
 - Head and Secretary of the Executive Commission of the Cosmology and Astrophysics Group (GATC), Universidade da Beira Interior (1998 - 2001):
 - Coordinator of the "Information Noteboard" of the GATC-UBI
 - Coordination and Implementation of LAG: *ESO/INF/1260/98* and *CViva-P-IV-451* - (see **11.** items 2 and 9):
 - Committee for the Development of an Astronomical Observatory (UBI) in Gouveia, Portugal
 - National Coordinator of the RPC (Portuguese Cosmology Network) and Representative of the Covilhã Node

28. Language, Computing and Pedagogical Skills :

- Languages Knowledge:

English	very good, fluent
French	very good, fluent
Spanish	good, fluent
Italian	good, fluent
German	weak
Russian	tourist

- Word processor familiarity:
 - TeX/LaTeX;
 - MS Word (6.0 and 97); Excel, Powerpoint
 - WWW-HTML
- Academic Staff Development Courses - University of Cambridge (1997/98):
 - *Introductory Symposium on Lecturing* - October 1997
 - *Workshop on Lecturing* - October 1997
 - *Undergraduate Supervision Symposium* - October 1997
 - *Getting Started as a Supervisor* - October 1997
 - *Preparing for Appraisal* - October 1997
 - *Giving more Effective Supervisions* - October 1997
 - *Students Selection Interview* - October 1997
 - *Determining pPriorities and Managing Time* - November 1997
 - *More Effective Committees and Meetings* - November 1997
 - *Preparing Grant Applications* - November 1997
 - *How to Teach Graduate Students* - November 1997
 - *Presentation Skills* - November 1997
 - *Managing and Development of Effective Teams* - December 1997
 - *Press your Point - Communicating with the Media* - December 1997

29. Memberships :

- Member of the Astrophysics Research Center (CENTRA-IST), Technical University of Lisbon, Portugal
- Portuguese Physical Society
- Member (MInstP; CPhys) of the Institute of Physics (UK)
- International Society for General Relativity and Gravitation
- European Physical Society (EPS)
- American Physical Society (APS)
- Member of the Senior Combination Room - Caius and Gonville College, Cambridge [1993-1998]
- Member and 1st Portuguese Representative (by appointment) at the ICC [International Coordinating Committee] of the Series of Internacional Conferences Marcel Grossmann (MG) - General Relativity and Astrophysics, since Rome, 2000
- Member (by appointment) in the list "*Who's Who 2000, 2001, 2002 - Personal Achievement*"
[See <http://www.marquiswhoswho.com/WOprodinfo.htm>]
- Member (by appointment) of the "*2000 Outstanding Intellectuals of the 21st Century*" - *International Biographical Centre (Cambridge)*
- Founding member and original proposer of the Cosmology and Astrophysics Group (GATC - CATG) of the Universidade da Beira Interior (UBI).
- Founding member and original co-proposer of the Portuguese Cosmology Network (RPC - PCN)
- Member of the Strings@pt Network
- Member of the Cats Protection League (UK) and APPAE (Portugal)

30 Other Activities/Interests :

- *Collaborations:*
 - Science club – (secondary school) [1974-76]
 - Reporter/Editor in neighbourhood youth newspaper (secondary school) [74-76];
 - Player/manager in neighbourhood football team (1980-1986) (we once got to the 1/2 finals!) [1980-86],
- *Interests:*
 - Meet different cultures and understand them (e.g., gastronomy!);
 - Cricket, mountain walking/trekking, ski; chess; soccer;
 - Classical music (piano: Bach, Beethoven, Chopin, Grieg, Mozart, Schumman, Schubert); jazz/blues; some pop music (eg. Beatles; photography; art
 - Read intelligent thrillers (e.g., J. Le Carré)
- *Travel* (work/tourism) – periods ranging from 1/2 month to 2 months:
Spain, Italy, France, Switzerland, Austria, UK, Finland, Belgium, Holland
Germany (East in 1988), Poland (1987), Soviet Union(1991)/Russia,
Japan, Australia, Hong Kong, Canada, USA, Mexico, Israel

31. Referees :

- Prof. S.W. Hawking (Scientific Officer - Post-Doctoral), DAMTP, University of Cambridge, Silver Street, Cambridge CB3 9EW, UK
- Prof. P. Crawford (Ph. D. Supervisor), Departamento de Fisica, Faculdade de Ciencias de Lisboa, Campo Grande, Ed. C1, piso 4, 1700 Lisboa, Portugal
- Prof. J. Mourão (PhD. D. supervisor), Departamento de Matematica, IST, Av. Rovisco Pais, 1000-Lisboa, Portugal
- Prof. A. Barroso, Departamento de Fisica, Faculdade de Ciencias de Lisboa, Campo Grande, Ed. C1, piso 4, 1700 Lisboa, Portugal
- Prof. A. Henriques, Departamento de Fisica, IST, Av. Rovisco Pais, 1000-Lisboa, Portugal
- Prof. J. Hartle, Department of Physics, University of California – Santa Barbara, California, USA
- Prof. A. Vilenkin, Tufts University, Medford, Boston, USA
- Prof. D. Page, Department of Physics, University of Alberta, Edmonton, Alberta, Canada
- Prof. R. Graham, Department of Physics, University of Essen, Essen, Germany – Germany
- Prof. O. Obregon, Department of Physics, Universidad de Guanajuato, Leon, Mexico
- Prof. J. Lidsey, Astronomy Unit, School of Mathematical Sciences, Queen Mary - Westfield College, University of London, UK