

Alfredo Barbosa Henriques

Lista de trabalhos publicados

**A. Publicações científicas**

- “Análise do tempo de voo de neutrões lentos no analisador multicanal SA 40B” - LFEN, SRNI 8/70, Novembro de 1970.
  
- “Análise do tempo de voo de neutrões lentos com o analisador multicanal Didac 4000” - LFEN, SRNI 1/72, Março de 1972.
  
- “General three spinor wave functions and the relativistic quark model” - Ann. of Physics 93 (1975), 125 - col. com R. G. Moorhouse e B. Kellett.
  
- “Radiative transitions and the P-wave levels in charmonium” - Phys. Letters 64B (1976), 85 - col. com R. G. Moorhouse e B. Kellett.
  
- “A study of the charmonium, upsilon and strangeonium systems” - Zeit. f. Physik C2 (1979), 309.
  
- “The hyperfine splitting structure of charmonium” - pprint CFMC E1/79, Janeiro 1979, unpublished.
  
- “Relativistic equations and the structure of mesons” - Port. Physica 10 (1979), 135.
  
- “Quarkonia with a variational method” - Zeit. f. Physik C7 (1981), 157 - col com J. Dias de Deus e J. R. Pulido.
  
- “Spin forces in mesons made-up of quarks of different mass” - Zeit. f. Physik C11 (1981), 31.

- “Some features of the spectra and electric dipole transitions of  $(t, t)$  and  $(t, u)$  states” - Phys. Letters 115B (1982), 317.
- “Light-mesons with a non-relativistic potential model” - Zeit. f. Physik C18 (1983), 213.
- “P-wave baryons: is there any evidence for spin-orbit interactions?” - pprint CFMC - E4/83, unpublished.
- “An approximate method to calculate energy eigenvalues” - Port. Physica 16 (1985), 105 - col. com J. Dias de Deus.
- “16+16 intermediate multiplets in  $N=1$  supergravity” - Zeit. f. Physik C31 (1986), 245  
- col. com J. C. Romão.
- “Torsion in the low-energy limit of superstrings” - pprint Glasgow 86-0028, January 1986 - col. com B. Dolan and R. G. Moorhouse - unpublished.
- “ Torsion in an extended Chapline-Manton theory” - Phys. Letters 166B (1986), 392 - col. com R. G. Moorhouse e B. Dolan.
- “Torsion in modified ten-dimensional supergravity” - pprint-86-1376 (Glasgow), July 1986 (contributed to the 23<sup>rd</sup>. Int. Conf on HEP, Berkeley, CA, 16-23 July 1986) - col. com B. P. Dolan, D. Dunbar e R. G. Moorhouse.
- “Higher-dimensional cosmological solutions with generalized Einstein equations” - Nucl. Physics B277 (1986), 621.
- “Non-symmetric coset spaces with torsion - alternative compactifications of 10-d superstrings” - in “Super Field Theories”, NATO ASI Series B, Physics Vol. 160 (1987), Ed. H. C. Lee, V. Elias, G. Kunstatter, R. B. Mann and K. S. Visuamathan - col. com B. Dolan, D. C. Dunbar e R. G. Moorhouse

- "Oscillating solutions in higher dimensional cosmology" - Phys. Letters 194B (1987), 33 - col. com R. G. Moorhouse.
  
- "Compactifications on non-symmetric six dimensional coset spaces with torsion" - Zeit. f. Physik C40 (1988), 259 - col. B. P. Dolan e D. C. Dunbar.
  
- "Early cosmology and the dilaton and H-field of superstring theory" - Nucl. Physics B311 (1988), 719 - col. com R. G. Moorhouse e A. R. Liddle.
  
- "Can extra dimensions stop gravitational collapse?" - Intern. Journal of Modern Physics A4 (1989), 1125.
  
- "Order  $\alpha'^2$  terms in the gravitational sector of string effective actions with inclusion of the dilaton field" - Phys. Letters 218B (1989), 162 - col. com M. C. Bento, O. Bertolami, J. C. Romão.
  
- "Order  $\alpha'^2$  equivalence of the string equations of motion and the  $\sigma$ -model Weyl invariance conditons: dependence on the dilaton field" - Phys. Letters 220B (1989), 113 - col. com M. C. Bento, O. Bertolami, J. C. Romão.
  
- "Combined boson-fermion stars" - Phys. Letters 233B (1989), 99 - col. A. R. Liddle e R. G. Moorhouse.
  
- "Neutron stars and extra dimensions" - Class. and Quant. Grav. 7 (1990), 1009 - col. com A. R. Liddle e R. G. Moorhouse.
  
- "Combined boson-fermion stars: configurations and stability" - Nucl. Physics B337 (1990), 737 - col. com A. R. Liddle e R. G. Moorhouse.
  
- "The problem of the maximum mass of neutron stars" - Phys. Letters A147 (1990), 9.

- "Dynamical stability of Boson-Fermion stars" - GLA-TPA-90/4-1, Sussex-AST-90/4-2, April 1990 - col. com Andrew R. Liddle and R. G. Moorhouse - unpublished.
- "Stability of boson-fermion stars" - Phys. Letters 251B (1990), 511 -col com A. R. Liddle e R. G. Moorhouse.
- "Inflation in a simple Kantowski-Sachs model" - Phys. Letters 254B (1991), 44 - col. com Luis E. Mendes.
- "Inflation in a Bianchi-IX cosmological model. The roles of primordial shear and gauge fields" - Phys. Letters 256B (1991), 359 - col. com J. M. Mourão e Paulo M. Sá.
- "The dynamics of an inflationary Bianchi-IX model in the presence of a rotating fluid"- Phys. Letters 287B (1992), 61 - col. com Paulo M. Sá.
- "Boson-fermion stars: going to larger masses" - Phys. Letters 285B (1992), 80 -col. com Luis M. Lopes.
- "Neutron stars and scalar fields" - Int. Journal of Modern Physics D2 (1993), 295 - col. com G. J. Benson e R. G. Moorhouse.
- "An inflationary Bianchi-V model with shear and rotation" - Gen. Rel. and Grav. 26 (1994), 61 - col. com Luis E. Mendes.
- "Graviton creation in an inflationary universe" - Phys. Rev. D49 (1994), 1771.
- "Graviton creation in an expanding universe" - Phys. Rev. D50 (1994), 2600 - col. com R. G. Moorhouse e Luis E. Mendes.
- "An exact calculation of the energy density of cosmological gravitational waves" Phys. Rev. D52 (1995), 2083 - col. com Luis E. Mendes e R. G. Moorhouse.

- “The classical tests of cosmology with a simple Kantowski-Sachs model” - *Astroph. and Space Science* 235 (1996), 129.
- “Density and graviton perturbations in the cosmic microwave background” - *Phys. Rev* D55 (1997), 5908 - col. com R. G. Moorhouse e Luis E. Mendes.
- “Post-inflationary reheating and perturbations of the cosmic microwave background”- arXiv: astro-ph/9705016 - col. com R. G. Moorhouse e Luis E. Mendes - unpublished.
- “Post-inflationary reheating” - *Phys. Rev.* D62 (2000), 063512-1 - Erratum: *D65* (2002), 069901 - col. com R. G. Moorhouse.
- “Inflaton particles in reheating” - *Phys. Lett.* B492 (2000), 331 - Erratum: *B528* (2002), 306 - col. com R. G. Moorhouse.
- “Cosmic microwave background and parametric resonance in reheating” - *Phys. Rev.* D65 (2002), 103524 - col. com R. G. Moorhouse.
- “Boson-fermion stars: exploring different configurations” - *Astroph. and Sp. Science* 300 (2005), 367; arXiv: astro-ph/0301015 - col. com L. E. Mendes.
- “The Stochastic Gravitational-Wave Background and the Inflation to Radiation Transition in the Early Universe” - *Class. Quant. Grav.* 21 (2004), 3057; preprint arXiv: astro-ph/0309508, v.2.
- “Loop quantum cosmology and the Wheeler-De Witt equation” - *Gen. Rel. and Grav.* 38 (2006), 1645; preprint arXiv: gr-qc/0601134.
- “Parametric resonance and cosmological gravitational waves”, comunicação no “Sixth International Workshop on New Worlds in Astroparticle Physics”, Universidade do Algarve, Faro, 6 - 8 de Setembro de 2007 - com Paulo M. Sá - Proceedings of the workshop.

- “Parametric resonance and cosmological gravitational waves” - Phys. Rev. D77 (2008), 064002 – col. com Paulo M. Sá - preprint arXive: astro-ph/0712.2697.

- “Gravitational wave generation in power-law inflationary models” – Gen. Rel. and Grav. 41 (2009), 2345 – col. com Paulo M. Sá - preprint arXive: astro-ph/0804.3278.

- “Unification of inflation, dark energy and dark matter within the Salam-Sezgin cosmological model” – Phys. Rev. D79 (2009), 103522 - col. com Paulo M. Sá e Robertus Potting - preprint arXive: astro-ph/0903.2014.

- “Stochastic Gravitational Waves from a new type of modified Chaplygin Gas” – preprint arXive: astro-ph/0910.5134 - col. com Mariam Bouhmadi-López e Pedro Frazão.

- “Primordial gravitational waves in loop quantum cosmology” – preprint em preparação, em col. com Carlos M. Afonso e Paulo V. Moniz.

## **B. Publicações e contribuições de carácter geral.**

- “Espaço, Tempo e Matéria” - Revista Colóquio/Ciências (Fundação Calouste Gulbenkian), nº4 Janeiro/Abril de 1989.

- “Some of Shrodinger’s contributions to general relativity and cosmology” - Acta Cosmologica (Polónia) XX-2 (1994), 121 - col. com Michael Heller.

- “Sir Fred Hoyle, Cosmólogo” - Episteme, vol. 10-11-12, 2002, pág. 427.

- “Maxwell: dos Modelos Mecânicos à Teoria Dinâmica do Campo Electromagnético” - Episteme, vol. 15-16-17, 2005-2006, pág. 157.

## **C. Publicações pedagógicas.**

Livros:

- "Electromagnetismo", IST Press, 2006 - com J. C. Romão.

- "A Teoria da Relatividade Geral – Uma Introdução" – IST Press, 2009.