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segunda-feira, 20-09-2015 :: 00:49

Ana Maria Ribeiro Ferreira Nunes
[Terminar sessão](#)

Visão global

1. Dados pessoais

Nome completo

Ana Maria Ribeiro Ferreira Nunes

Nome sob o qual publica

Ana Maria Ribeiro Ferreira Nunes

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Data de nascimento

10-10-1958

País de nacionalidade

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Sexo

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2. Formação académica

Ano: 1989**Grau:** DOUTORAMENTO**Classificação:** Apto cum Laude**Instituição que conferiu o grau:** Universitat Autònoma de Barcelona**Faculdade:** n/a**Título da tese:** Separatrix Surfaces and Invariant Manifolds for a class of integrable Hamiltonians and their perturbations**Orientador:****Co-orientador:****Domínio científico:** Matemática

Designação do curso: Doctorado**Ano: 1981****Grau: LICENCIATURA****Classificação: 1(18)****Instituição que conferiu o grau: Universidade de Lisboa****Faculdade: Faculdade de Ciências****Título da tese: n/a****Orientador:****Co-orientador:****Domínio científico: Física****Anos curriculares: 5****Designação do curso: Licenciatura****Ano: 2001****Grau: AGREGAÇÃO****Classificação: não aplicável****Instituição que conferiu o grau: Universidade de Lisboa****Faculdade: Faculdade de Ciências****Título da tese: n/a****Orientador:****Co-orientador:****Domínio científico: Física****Designação do curso: n/a****3. Actividades anteriores e situação actual**

Período	Cargo, categoria ou actividade	Instituição
01-1-2008 a 01-1-2015	PI da linha de Física de Sistemas Biológicos	Centro de Física da Matéria Condensada
01-2-1999 a	Professor Associado	FCUL

4. Área de actividade científica

física de sistemas complexos, física de proteínas, sistemas dinâmicos, mecânica celeste e cosmologia.

5. Domínio de especialização**Domínio de especialização**

Sistemas dinâmicos e aplicações à Mecânica Celeste. Métodos Numéricos.

Actuais interesses de investigação

Dinâmica de populações e evolução (efeitos estocásticos na dinâmica de populações em redes, dinâmica de infecções e diversidade viral, evolução cultural).

Folding de proteínas, efeitos de nós topológicos na dinâmica de folding, mecanismos microscópicos de doenças conformacionais.

Estudo do problema restrito de três corpos em dimensão 3.

Outras competências/actividades

n/a

6. Experiência na orientação

Orientou 2 teses de doutoramento (Ganna Rozhnova, 2010, Stefan Wieland, 2013).

Co-orientou 1 tese de doutoramento (T. Charters, 2006).

Orientou 6 post-docs (X. Yuan, 2001, F Malige, 6 meses em 2001/02, D Bang, 2002, J. Benoit, 2004-2006, T. Nedelea, 2005-2006, e Ganna Rozhnova - em co-supervisão com Alan McKane - de 2010 a 2013).

Orientou 7 teses de mestrado (P. Faísca, 1997, N. Pereira, 2000, T. Charters, 2001, Célia Alves, 2008, Paulo Maurício, 2010, Tomás Aquino, 2011, José Barros, 2013).

Orientou 4 projectos de fim de curso de Física Computacional (M. Simões, 2005, C. Rosão e A. Antunes, 2006, J. Mendonça, 2007).

Orientou 1 BIC (N. Bernardino, 2003/04).

Orientou 1 estudante BII (Tomás Aquino, 2008-2009).

7. Participação em projectos

Participação em projectos de investigação (coordenador/membro de equipas)

- Sistemas Dinâmicos, projecto das Acções Integradas Luso-Espanholas E-22, 1993-1994 e E-17, 1994-1995 (investigadora responsável).
- Sistemas Hamiltonianos e Mecânica Celeste, projecto C/CEN/1081/92 do programa Base, 1993-1996 (investigadora responsável).
- Análise local e global das equações diferenciais. Fundamentos e aplicações, projecto Praxis 2/2.1/MAT/125/94.
- Fenómenos não-lineares em Mecânica Celeste, Astrofísica e Cosmologia, projecto PBIC/C/FIS/2215/95, 1996-1998.
- Relatividade, Cosmologia e Física de Partículas Teórica, projecto CERN/P/Fis/15183/99-2000, CERN/P/Fis/40131/2000-01, CERN/FNU/43652/2001-02.
- Control, Synchronization and Characterization of Spatially Extended Nonlinear Systems, EU Research Training Networks HPRN-CT-2000-00158, Prime Contractor: University of Potsdam, 2000 - 2004.
- Cosmology with interacting multicomponents, projecto PDCT/FP/FNU/50216/2003.
- Dynamics and Control of Infectious Diseases in Human Populations, FCT/SAPIENS(ALFA Program)/ESP/44511, 2003 - 2006.
- Quase-colisões no problema restrito de três corpos no espaço, projecto das Acções Integradas Luso-Espanholas E-18-05, 2005-2006 (investigadora responsável).
- Complex systems: from Physics to Biology and the Social Sciences, POCTI/FIS/55592/2004, 2005-2008.
- Modelling of complex evolutionary processes, PDTC/FIS/70973/2006.
- Insights into folding kinetics and designability of knotted proteins from lattice models, PTDC/QUI-QUI/112358/200, 2011-2013.
- Large scale parallel simulations of the spread of infectious diseases, PTDC/SAU-EPI/112179/2009, 2011-2014.

8. Prémios e Distinções

Ano	Prémio ou distinção	Entidade promotora
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9. Publications

Livros (autor)

J. Libre e A. Nunes, Separatrix surfaces and invariant manifolds for a class of integrable Hamiltonians and their perturbations, *Memoirs of the American Mathematical Society* 513, 1994.

Artigos em revistas de circulação internacional com arbitragem científica

— Stefan Wieland & Ana Nunes, Analytic description of adaptive network topologies in a steady state, *Phys. Rev. E* 91, 060801(R) (2015).

— Tomás Aquino, Diogo Bolster D & Ana Nunes, Characterization of the Endemic Equilibrium and Response to Mutant Injection in a Multi-strain Disease Model, *J. Theor. Biol.* 368, 27-36 (2015).

— Miguel A. Soler, Ana Nunes & Patrícia F. N. Faísca, Effects of knot type in the folding of topologically complex lattice proteins, *J. Chem. Phys.* 141, 025101 (2014).

— Ganna Rozhnova, Ana Nunes & Alan J McKane,, Impact of commuting on disease persistence in heterogeneous metapopulations, *Ecological Complexity* 19: 124-129 (2014).

— Stefan Wieland & Ana Nunes, Asymmetric coevolutionary voter dynamics, *Phys. Rev. E* 88, 062809 (2013).

— A. Parisi, J. S. Lopes, A. Nunes & G. Gomes, Heterogeneity in antibody range and the antigenic drift of influenza A viruses, *Ecological Complexity* 4, 157-165 (2013).

— Stefan Wieland, Andrea Parisi & Ana Nunes, Detecting and describing dynamic equilibria in adaptive networks, *European Physical Journal Special Topics* 212, 99-113(2012).

— Ganna Rozhnova & Ana Nunes, Modeling the long term dynamics of pre-vaccination pertussis, *J. R. Soc. Interface* 9, 2959-2970 (2012).

— Tomás Aquino, Elsa Abranches & Ana Nunes, Stochastic single-gene auto-regulation , *Phys. Rev. E* 85, 061913, (2012)

— Ganna Rozhnova, Ana Nunes & Alan J McKane, Phase lag in epidemics on a network of cities, *Phys. Rev. E* 85, 051912 (2012) & *Virtual Journal of Biological Physics Research* 23 (11), June-1 (2012).

— João A. Moreira, Flávio L. Pinheiro, Ana Nunes & Jorge M. Pacheco, Evolutionary dynamics of collective action when individual fitness derives from group decisions taken in the past, *J. Theor. Biol.* 298, 8-15 (2012)

— Stefan Wieland, Tomás Aquino & Ana Nunes, The structure of coevolving infection networks, *Europhysics Letters* 97, 18003 (2012)

— Ganna Rozhnova Ana Nunes & Alan J. McKane, Stochastic oscillations in models of epidemics on a network of cities, *Phys. Rev. E* 84, 051919 (2011) & *Virtual Journal of Biological Physics Research* 22 (11), December-1 (2011).

- Ganna Rozhnova & Ana Nunes, Stochastic effects in a seasonally forced epidemic model, *Phys. Rev. E* 82, 041906 (2010) & *Virtual Journal of Biological Physics Research* 20 (8), October-15 (2010).
- Patrícia F. N. Faísca, Ana Nunes, Rui D.M. Travasso & E.I. Shakhnovich, Non-native interactions play an effective role in protein folding dynamics, *Protein Sci.* 19, 2196-2209 (2010)
- Ganna Rozhnova & Ana Nunes, Population dynamics on random networks: simulations and analytical models, *European Physical Journal B* 74, 235-242 (2010)
- Patrícia F. N. Faísca, Rui D. M. Travasso, Tiago Charters, Ana Nunes & Marek Cieplak, Folding of knotted proteins: Insights from lattice simulations, *Physical Biology* 7, 016009 (2010).
- Ganna Rozhnova & Ana Nunes, Cluster approximations for infection dynamics on random networks, *Phys. Rev. E* 80, 051915 (2009).
- Andrew J. Black, Alan J. McKane, Ana Nunes & Andrea Parisi, Stochastic fluctuations in the susceptible-infective-recovered model with distributed infectious periods, *Phys. Rev. E* 80, 02192 (2009) & *Virtual Journal of Biological Physics Research* 18 (4), September-1 (2009).
- Ganna Rozhnova & Ana Nunes, Fluctuations and oscillations in a simple epidemic model, *Phys. Rev. E* 79, 041922 (2009) & *Virtual Journal of Biological Physics Research* 17 (9), May-1 (2009).
- J. Font, A. Nunes e C. Simó, A numerical study of the orbits of second species of the planar circular RTBP, *Celestial Mechanics and Dynamical Astronomy* 103, 143-162 (2009).
- T. Charters, A. Nunes, J. P. Mimoso Reheating induced by competing decay modes, *Physical Review D* 78, 083539 (2008).
- J. M. Tavares, M. M. Telo da Gama and A. Nunes, Coherence thresholds in models of language change and evolution: The effects of noise, dynamics, and network of interactions, *Physical Review E* 77, 046108 (2008), also published in the April 15, 2008 issue of *Virtual Journal of Biological Physics Research*.
- M. Simões, M. M. Telo da Gama and A. Nunes, Stochastic fluctuations in epidemics on networks, *Journal of the Royal Society Interface* 5, 555-66 (2008).
- P.G. Lind, A. Nunes and J.A.C. Gallas, Impact of bistability in the synchronization of chaotic maps with delayed coupling, *Physica A* 371, 100-103 (2006).
- A. Nunes, M.M. Telo da Gama and M.G.M. Gomes, Localized contacts between hosts reduce pathogen diversity, *Journal of Theoretical Biology*, 241, 477-487 (2006).
- M. M. Telo da Gama and A. Nunes, Epidemics in small world networks, *European Physical Journal B - Condensed Matter* 50, 205-208 (2006).
- J. Benoit, A. Nunes and M. M. Telo da Gama, Pair approximation models for disease spread, *European Physical Journal B - Condensed Matter* 50, 177-181 (2006).
- J. P. Mimoso, A. Nunes and D. Pavón, Asymptotic behavior of the warm inflation scenario with viscous pressure, *Physical Review D* 73:023502 (2006).
- P.F.N. Faísca, M.M. Telo da Gama and A. Nunes, The Go model revisited: Native structure and the geometric coupling between local and long-range contacts, *Proteins: Structure Function and Bioinformatics*, 60, 712-722 (2005).
- T. C. Charters, A. Nunes and J. P. Mimoso, Phase dynamics and particle production in preheating, *Physical Review D* 71, 083515 (2005).
- Recurrent epidemics in small world networks, J. Verdasca, M.M. Telo da Gama, A. Nunes, N.R. Bernardino, J.M. Pacheco and M.C. Gomes, *Journal of Theoretical Biology*, 233, 553-561 (2005).
- J.P. Mimoso and A. Nunes, A Qualitative Analysis of the Attractor Mechanism of General Relativity, *Astrophysics & Space Science*, 283, 661-666 (2003)
- J. Casasayas, P. Faísca and A. Nunes, Melnikov method for parabolic orbits, *Nonlinear Differential Equations and Applications*, 10, 119-131 (2003)
- X. Yuan and A. Nunes, A Note on The Reducibility of Linear Differential Equations with Quasi Periodic Coefficients, *International Journal of Mathematics and Mathematical Sciences* 64, 4071-4083 (2003)
- J. P. Mimoso e Ana Nunes, A Qualitative Analysis of the Attractor Mechanism of General relativity, *Astrophysics and Space Science* 283(2003), pp. 661-666.
- J. Font, A. Nunes and C. Simó, Consecutive quasi-collisions in the planar circular RTBP, *Nonlinearity* 15, 115-142 (2002)
- T.C. Charters, A. Nunes and J.P. Mimoso, Stability analysis of cosmological models through Lyapunov's method, *Classical and Quantum Gravity* 18, 1703-1713 (2001)
- A. Nunes, J.P. Mimoso and T.C. Charters, Scaling Solutions from interacting fluids, *Physical Review D* 63, 083506 (2001)
- A. Nunes and J.P. Mimoso, On the potentials yielding cosmological scaling solutions, *Physics Letters B* 488, 423-427 (2000)
- T. C. Charters, J. P. Mimoso and A. Nunes, Slow-roll inflation without fine tuning, *Physics Letters B* 472, 21-26 (2000)
- A. M. Nunes and J. P. Silva, Tilted boxes on inclined planes, *American Journal of Physics* 68, 1042-1049 (2000)
- J. P. Mimoso and A. Nunes, General relativity as a cosmological attractor of scalar-tensor gravity theories, *Astrophysics and Space Science*, 261, 327-330 (1999)
- J. Llibre and A. Nunes, Minimum number of fixed points for maps of the figure eight space, *International Journal of Bifurcation and Chaos*, 9, 1795-1802 (1999)
- J. P. Mimoso and A. Nunes, General Relativity as a cosmological attractor of scalar-tensor gravity theories, *Physics Letters A* 248, 325-331 (1998)
- J. Casasayas, J. Martínez-Alfaro and A. Nunes, Knots and Links in Integrable Hamiltonians, *Journal of*

Knot Theory and its Ramifications 7, 123–153 (1998)

— J. Casasayas, E. Fontich and A. Nunes, Homoclinic orbits to parabolic points, *Nonlinear Differential Equations and Applications* 4, 201–216 (1997)

— A. Nunes, J. Casasayas and N. Tufillaro, Periodic orbits of the integrable Swinging Atwood's machine, *American Journal of Physics* 63, 121-126 (1995)

— J. Casasayas, J. Llibre and A. Nunes, Periodic orbits of transversal maps, *Mathematical Proceedings of the Cambridge Philosophical Society*, 118, 161-181 (1995)

— J. Casasayas, J. Llibre and A. Nunes, Periods and Lefschetz zeta functions, *Pacific Journal of Mathematics* 165, 51-66 (1994)

— J. Casasayas, J. Llibre and A. Nunes, Central configurations of the planar $1+n$ body problem, *Celestial Mechanics and Dynamical Astronomy*, 60, 273-288, (1994)

— J. Casasayas, J. Llibre and A. Nunes, Lefschetz zeta functions and forced sets of periods, *Contemporary Mathematics* 152, 23-32 (1993)

— J. Casasayas, J. Llibre and A. Nunes, Algebraic properties of the Lefschetz zeta function, periodic points and topological entropy, *Publicacions Matemàtiques UAB* 36, 467-472 (1992)

— A. Nunes e J. Casasayas, Global description of the solutions of a large class of non-integrable Hamiltonian systems, *Journal of Differential Equations* 100, 203-224 (1992)

— A. Barroso, J. Casasayas, P. Crawford, P. Moniz and A. Nunes, Inflation in the presence of a non-minimal coupling, *Physics Letters B* 275, 264-272 (1992)

— J. Casasayas, E. Fontich and A. Nunes, Invariant manifolds for a class of parabolic points, *Nonlinearity* 5, 1193-1202 (1992)

— J. Casasayas, A. Nunes and A. Ozório de Almeida, A general model for motion bound to an impurity in an anisotropic semiconductor, *Physica D* 48, 311-321 (1991)

— J. Casasayas and A. Nunes, A restricted charged four body problem, *Celestial Mechanics and Dynamical Astronomy*, 47, 245-266 (1990)

— J. Casasayas and A. Nunes, Genericity of non-periodic motion in the central-force problem, *Astrophysics and Space Science* 165, 95-99 (1990)

— J. Casasayas, A. Nunes and N. Tufillaro, Swinging Atwood's Machine: Integrability and Dynamics, *Journal de Physique* 51, 1693-1702 (1990)

— J. Casasayas, N. Tufillaro e A. Nunes, Infinity manifold of a Swinging Atwood Machine, *European Journal of Physics* 10, 173-177 (1989)

— J. Casasayas, A. Jorba and A. Nunes, Qualitative study of motion under the potentials $V(r) = -ar^{-\alpha}$, α in \mathbb{R}^+ , *Celestial Mechanics* 42, 129-139 (1988)

— N. Tufillaro, A. Nunes and J. Casasayas, Unbounded orbits of the Swinging Atwood Machine, *American Journal of Physics* 56, 1117-1120 (1988)

— A. Nunes and J. Vassalo Pereira, Phase-locking of two Andronov clocks with a general interaction, *Physics Letters* 107A, 362-366 (1985)

Publicações em actas de encontros científicos

— Tiago C. Charters, Ana Nunes & J. P. Mimoso, Post-Inflationary Scalar Field Phase Dynamics, in *Dynamics, Games and Science II: DYNA2008*, in Honour of Maurício Peixoto and David Rand (ed. M. Peixoto, A. Pinto and D. Rand), 243-246, Springer Proceedings in Mathematics, 2010.

— Joaquim Font, Ana Nunes & Carles Simó, The Set of Planar Orbits of Second Species in the RTBP, in *Dynamics, Games and Science I: DYNA2008*, in Honour of Maurício Peixoto and David Rand (ed. M. Peixoto, A. Pinto and D. Rand), 359-364, Springer Proceedings in Mathematics, 2010.

— J. P. Mimoso, T. Charters & A. Nunes, Parametric resonance with multi-frequencies in preheating, in *Physics and Mathematics of Gravitation: Proceedings of the Spanish Relativity Meeting 2008*, (ed. K. Kunze, M. Mars & M.-A. Vázquez-Mozo), AIP Conference Proceedings, Vol. 1122, pp. 348-351 (2009).

— Ganna Rozhnova & Ana Nunes, SIRS Dynamics on Random Networks: Simulations and Analytical Models, in *Complex Sciences: Complex 2009*, Part I, LNICST 4 (ed. Jie Zhou), 792-797, Springer, 2009.

— T. Charters, A. Nunes and J. P. Mimoso, Phase dynamics in the preheating stage after inflation, *Proceedings of the Marcel Grossman MG11 Conference*, World Scientific, 2008, pp. 1881.

— J. P. Mimoso, Ana Nunes e Diego Pavón, Bulk viscosity impact on the scenario of warm inflation, *Proceedings of the Marcel Grossman MG11 Conference*, World Scientific, 2008, pp. 1876.

— J. P. Mimoso, Ana Nunes e Diego Pavón, Scaling behaviour in warm inflation, *AIP Conference Proceedings 'Phi in the sky'*, (eds. C J A Martins et al), AIP, 2004, pp. 176-181.

— J. P. Mimoso, A. Nunes and T. C. Charters, The density parameter in cosmologies with interacting fluids, *'New Worlds in Astroparticle-physics 2000'*, eds. A. M. Mourão et al., pp. 208-212, World Scientific, Singapura, 2001.

— J. P. Mimoso and A. Nunes, The density parameter in scalar field cosmologies, *X-Encontro Nacional de Astronomia e Astrofísica*, eds. J. P. S. Lemos et al., pp. 51-56, World Scientific, Singapura, 2001.

— J. P. Mimoso and A. Nunes, The relaxation of generalized gravity theories, in *"New Worlds in Astroparticle Physics"* (A. Mourão et al. eds.), pp. 337-341, World Scientific, 1999.

— J. Casasayas and A. Nunes, Integrable Hamiltonians in simple, irreducible 3-manifolds, in *"New Trends in Hamiltonian Systems and Celestial Mechanics"* (E. A. Lacomba and J. Llibre eds.), *Advanced Series in Nonlinear Dynamics* vol. 8, pp.73-79, World Scientific, 1996.

— J. Casasayas, E. Fontich and A. Nunes, Poincaré- Melnikov method for parabolic points, in *"New Trends in Hamiltonian Systems and Celestial Mechanics"* (E. A. Lacomba and J. Llibre eds.), *Advanced Series in Nonlinear Dynamics* vol. 8, pp.61-72, World Scientific, 1996.

— J. Casasayas, J. Martínez Alfaro and A. Nunes, Knotted periodic orbits and integrability, in *"Hamiltonian Systems and Celestial Mechanics"* (E. A. Lacomba and J. Llibre eds.), *Advanced Series in Nonlinear*

Dynamics vol.4, pp.45-54, World Scientific, 1993.

— J. Casasayas, J. Martínez-Alfaro and A. Nunes, Knotted periodic orbits in Van der Pol type equations, in "Proceedings of the International Conference on Differential Equations Equadiff 91" (C. Perelló, C. Simó and J. Solá-Morales eds.), vol. 1, pp.368-374, World Scientific, 1993.

— J. Casasayas, E. Fontich and A. Nunes, Transversal homoclinic orbits for a class of Hamiltonians, in "Hamiltonian Systems and Celestial Mechanics" (E. A. Lacombe and J. Llibre eds.), Advanced Series in Nonlinear Dynamics vol. 4, pp.35-44, World Scientific, 1993.

— A. Barroso, J. Casasayas, P. Crawford, P. Moniz and A. Nunes, How general is inflation in the presence of a non-minimal coupling, in "Proceedings of the Sixth Marcel Grossman Meeting on General Relativity MG6" (ed. H. Sato), World Scientific, 1992.

— J. Casasayas, J. Llibre and A. Nunes, Periods for transversal maps of spheres, in "European Conference on Iteration Theory ECIT 91", pp. 52-55, World Scientific, 1992.

— J. Casasayas, J. Llibre and A. Nunes, Lefschetz zeta function and topological entropy, in "European Conference on Iteration Theory ECIT 91", pp. 56-58, World Scientific, 1992.

— J. Casasayas and A. Nunes, Chaos in a restricted charged four-body problem in "Proceedings of the NATO ASI on Predictability, Stability and Chaos in N-Body Dynamical Systems", A. Roy (ed.), pp. 3-10, Plenum P. C., 1991.

— J. Casasayas, J. Llibre and A. Nunes, A perturbation of the relativistic Kepler problem in "Proceedings of the NATO ASI on Predictability, Stability and Chaos in N-Body Dynamical Systems", A. Roy (ed.), pp. 547-554, Plenum P. C., 1991.

— E. Lacombe, J. Llibre and A. Nunes, Invariant tori and cylinders for a class of perturbed Hamiltonian systems, in "The geometry of Hamiltonian systems", (ed. T.Ratiu), Math. Sci. Research Inst. Publ. vol. 22, pp.373-385, Springer Verlag, 1991.

— J. Casasayas and A. Nunes, Classification of the solutions of a family of non integrable Hamiltonian systems in Actas del XI Congreso de ecuaciones diferenciales y aplicaciones, pp.179-182, Universidad de Málaga, 1990.

— J. Casasayas and A. Nunes, Periodic orbits of a restricted four body problem in Actas del XI Congreso de ecuaciones diferenciales y aplicaciones, pp.395-398, Universidad de Málaga, 1990.

— J. Casasayas and A. Nunes, Dynamics under anisotropic potentials, in "Workshop on Dynamical Systems", Z.Coelho, E. Shiels (eds.), Pitman Research Notes in Mathematics Series, pp. 97-98, Longman, 1990.

— J. Casasayas and A. Nunes, Qualitative behaviour of the solutions of the Hamiltonian systems $H = p^2_r/2 + p^2_{\theta}/2r^2 + V(r, \theta)$, $V(r, \theta) = -r^{-n} (\mu \cos^2 \theta + \sin^2 \theta)^{-n/2}$, $n \in \mathbb{R}$, $\mu \in (1, +\infty)$, in "Differential Equations", C. M.Dafermos, G.Ladas, G.Papanicolaou (eds.), Lecture Notes in Pure and Applied Mathematics, pp.515-532, M.Dekker, 1989.

Outras publicações

A. Nunes, "Caos e fractais", in '2000 Matemática Radical', Textos de Matemática, Departamento de Matemática FCUL, 2002, pp. 163-178.

A. Nunes, "Caos no sistema solar", "Fractais e a geometria da natureza" e "De que tamanho é o mundo: da internet às redes sociais", in "O Código Secreto: à descoberta dos padrões da natureza", coordenação de Margarida Telo da Gama, colecção Ciência Aberta, Gradiva, 2005, pp. 109-134, 169-191 e 329-354.

10. Comunicações

Comunicações orais por convite

- Coevolving networks in the 'red queen' regime, Stefan Wieland & Ana Nunes, STCAN 2013: NetSci 2013 Satellite Symposium, Copenhagen, Denmark, 2013.

- Stochastic effects in infection dynamics: simulations and analytical models, Ganna Rozhnova & Ana Nunes, SIAM Conference on Applications of Dynamical Systems, Snowbird, USA, 2011.

- Stochastic models of infection dynamics, Joint SIAM/RSME-SCM-SEMA Meeting Emerging Topics in Dynamical Systems and Partial Differential Equations DSPDEs'10, Barcelona, 2010.

- Stochastic effects in infection dynamics, Meeting on Stochastic Models in Physics, Biology, and Social Sciences, Sevilla, 2009.

- The set of planar orbits of second species, DYNA08 Dynamics and Applications, Universidade do Minho, Braga, 2008.

- Stochastic effects in infection dynamics, FPBC2008 - First Portuguese Forum on Computational Biology, Instituto Gulbenkian de Ciência, Oeiras, 2008.

- Minimum number of fixed points for maps of the figure eight space, Symposium on Discrete Dynamical Systems, Barcelona, 1997.

- Homoclinic orbits to parabolic points, "Second International Symposium on Hamiltonian Systems and Celestial Mechanics", Cocoyoc (México), 1994.

- Deterministic Chaos, Workshop on Brain Dynamics, Chaos, Fractals and Neural Networks, Lisboa, 1994.

- Lefschetz numbers for transversal maps, "Thirty Years After S'arkovskii's Theorem", Murcia (Espanha), 1994.

- Knotted periodic orbits in integrable Hamiltonians, "Nice-Barcelona Workshop on Dynamical Systems", Barcelona, 1993.

- Transversal homoclinic orbits for a class of Hamiltonians with periodic orbits of parabolic type, "International Symposium on Hamiltonian Systems and Celestial Mechanics", Guanajuato (México), 1991.

- Periods for a class of transversal maps, Workshop on Dynamical Systems, Barcelona, 1990.

Outras comunicações orais

- S. Wieland, A. Parisi, T. Aquino, and A. Nunes, Detecting and describing dynamic equilibria in adaptive networks, XXXII Dynamics Days Europe, Gothenburg, Sweden, 2012.

- S Wieland, T Aquino, A Parisi and A Nunes, Steady State topologies of adaptive networks, International Conference on Statistical Physics, Cyprus, 2011.
- S Wieland, T Aquino, A Parisi and A Nunes, Characterising Steady State Topologies of SIS Dynamics on Adaptive Networks, ECCS10 European Conference on Complex Systems 2010, Lisbon, 2010.
- G Rozhnova and A Nunes, Stochastic effects in epidemic models with permanent and long lasting immunity, Dynamics Days Europe 2010, Bristol, U.K., 2010.
- A Parisi, A Nunes and MGM Gomes, Age-dependent immune response and antigenic drift in influenza, CMPD 3 Conference on Computational and Mathematical Population Dynamics, Bordeaux, France, 2010
- G Rozhnova and A Nunes, Fluctuations and oscillations in epidemic models with spatial correlations First Workshop on Dynamical Systems Applied to Biology and Natural Sciences, Lisbon, 2010.
- S Wieland, T Aquino, A Parisi and A Nunes, Steady-state topologies of SIS dynamics on adaptive networks, First Workshop on Dynamical Systems Applied to Biology and Natural Sciences, Lisbon, 2010.
- A Parisi, G Gomes and A Nunes, Role of age-different immune response in the development of antigenic drifts, First Workshop on Dynamical Systems Applied to Biology and Natural Sciences, Lisbon, 2010.
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11. Línguas

Língua	Leitura	Escrita	Conversação
Catalão	Excelente	Excelente	Excelente
Inglês	Excelente	Excelente	Excelente
Francês	Bom	Bom	Bom
Português	Excelente	Excelente	Excelente