

Publications

Operation and Exploitation of the Reactor, Dosimetry (RPI) and Reactor Calculations

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M. Felizardo, R.C. Martins, T. A. Girard, A.R. Ramos, T. Morlat, F. Giuliani, J.G. Marques, New acoustic instrumentation for the simple superheated droplet detector, *Nucl. Instr. & Meth., A* 589 (2008) 72-84.

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T.A. Girard, Fleshing out the Search for WIMPs, *Physics Today* 61 (2008) 12-13.

K. Lorenz, J.G. Marques, N. Franco, E. Alves, M. Peres, M.R. Correia, T. Monteiro, Defect studies on fast and thermal neutron irradiated GaN, *Nuclear Instruments and Methods in Physics Research B* 266 (2008) 2780-2783.

J.G. Marques, Core Conversion of the Portuguese Research Reactor, Proc. 48th Annual Meeting of the Institute of Nuclear Materials Management, Tucson (AZ), July 2007 (Curran Associates, Inc., Red Hook, NY, 2008, ISBN: 9781605601021).

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J.G. Marques, A.J.G. Ramalho, Return of Research Reactor Spent Fuel to the Country of Origin: Requirements for technical and administrative preparations and national experiences, Portuguese experience on return of spent fuel to the United States of America, *IAEA-TECDOC* 1593 (2008)

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Commissioning of the New LEU Core of the Portuguese Research Reactor, J.G. Marques, A.R. Ramos, J.P. Santos, J.G. Stevens and J.E. Matos, 12th

International Topical Meeting on Research Reactor Fuel Management, Hamburg, March 2008 (invited)

Return of HEU Fuel from the Portuguese Research Reactor, J.G. Marques, N.P. Barradas, A. Kling, A.R. Ramos, C. Anne and V. Garcia, 25th International Meeting on Reduced Enrichment for Research and Test Reactors, Washington, October 2008 (invited)

RBS analysis of InGaN/GaN quantum wells for hybrid structures with efficient Förster coupling, N. P. Barradas, *Workshop on New Trends and Applications of Ion Beams, 1-3 de Abril de 2008*, Sacavém, invited.

IBA software and data analysis, N. P. Barradas, *IBAF2008 - 2e Rencontres Analyse par Faisceaux d'Ions Rapides, 13-15 Outubro 2007*, Cascans-Maubuisson, França, invited.

As Novas Gerações de Centrais de Cisão Nuclear – Vantagens e Inconvenientes, J.G. Marques, I Debate *Conferência “Produção, Consumo e Eficiência Energética Para a Próxima Década em Portugal”*, Lisboa, 20 de Setembro de 2008, invited.

Energia Nuclear, J.G. Marques, *XXI Jornadas de Engenharia Química, Instituto Superior Técnico*, 12 de Maio de 2008, invited.

J.G. Marques, Participação em programa da série “Geração High-Tech”, subordinado ao tema “Energia Nuclear”, no canal MOV da ZON TV Cabo, emitido em Setembro e Outubro de 2008.

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Marie Lubrano-Lavadera, Caractérisation d'un faisceau de mesure du réacteur RPI pour adapter les conditions d'irradiation de cartes électroniques à celles du réacteur RJH 2008 ITN/RPI-R-08-103.

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J. Antunes, X. Delaune, P. Piteau, L. Borsoi, A simple consistent method for the time-domain simulation of turbulence excitations applied to tube/support dynamical analysis under non-uniform flows, *9th International Conference on Flow Induced Vibrations (FIV-2008)*, Zolotarev & Horacek eds, 30 June-3 July 2008, Prague, Czech Republic.

V. Debut, J. Antunes, M. Moreira, Flow-acoustic interaction in corrugated pipes: Time-domain simulation of experimental phenomena, *9th International Conference on Flow Induced Vibrations (FIV-2008)*, Zolotarev & Horacek eds, 30 June-3 July 2008, Prague, Czech Republic.

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Vincent Debut, José Antunes, The “two-phase sound” of cheering champagne glasses, *XXII International Congress of Theoretical and Applied Mechanics (ICTAM)*, 25-29 August 2008, Adelaide, Australia.

Octávio Inácio, José Antunes, Wolf killing: the subtle problem of controlling cello string/body coupled resonances, *XXII International Congress of Theoretical and Applied Mechanics (ICTAM)*, 25-29 August 2008, Adelaide, Australia.

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J. Antunes, Vitamine 3 : Modelisation temporelle des champs d’excitation turbulents partiellement corrélés, *Report ITN/ADL-Dec08-01*.

Dosimetry and Radiobiology Group

Books and Book Chapters

A.D. Oliveira e J.J. Pedroso de Lima, Dosimetria e efeitos biológicos das radiações, in *Física em Medicina Nuclear, Temas e Aplicações*, Cap. 8, pg. 479-561, ed. Imprensa da Universidade de Coimbra, Portugal, ISBN 978-989-8074-26-3.

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M. Neves, L. Gano, F.C. Teixeira, I. Antunes, A. C. Santos, A. Majkowska, A. Bilewicz. New indazolebosphosphonates for bone targeted radiotherapy: synthesis, radiolabeling, in vitro and in vivo studies. *European Journal of Nuclear Medicine & Molecular Imaging*, Vol. 35, *Suppl* 2, S-323, 2008.

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L. Fuks, K. Kothari, M. Neves. Complexes Containing the $[\text{}^{99\text{m}}\text{Tc}(\text{CO})_3]^+$ Core for the Targeted Radiotherapy. *9th European Biological Inorganic Chemistry Conference*, pg 175, Wroclaw, Poland, 2-6, September 2008.

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C. Kharoua R. Rocca, O. Alyakrisky, M. Ashrafi-Nik, M. Barbui, J. Freibergs, F. Groeschel, M. Gross, A.

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A. Geão, V. Jerónimo, P. Colarinha, J.G.Alves, M. Neves, C. Oliveira. *Assessment and optimisation of personal dose equivalent of Nuclear Medicine Technologist*. I Congresso Português de Protecção contra Radiações, 25-27 November, 2008, Lisboa, Portugal, oral.

A.D. Oliveira. The physical meaning of low dose and their importance in radiobiology, *LOWRAD 2008*, Lisbon, oral.

E. Fernandes and A.D. Oliveira. Internal dosimetric aspects related with the incorporation of Iodine-131, 1^o Congress of SPPCR, Lisbon, 2008, oral.

P. Nogueira, E. Fernandes, L. Silva, P. Teles, C. Carrapiço, P. Vaz, and A.D. Oliveira. Monte Carlo simulation of a whole body counter, 1^o Congress of SPPCR, Lisbon, 2008, oral.

M. Goulart, "Low Dose Rate Exposure to Ionizing Radiation: Accumulated Damage or Long Term Protection?" 6th International Conference on Isotopes, Seoul, South Korea, May 2008, oral.

M. Goulart, "New Frontiers in Biomarkers for Ionizing Radiation" 6th International Conference on Isotopes, Seoul, South Korea, May 2008, oral.

Y. Romanets, H. Ait Abderrahim, D. De Bruyn, R. Dagan, I. Gonçalves, W. Maschek, G. Rimpault, D. Struwe, G. Van den Eynde, P. Vaz, C. Vicente, XT-ADS core design: Neutronics, shielding and radiation damage calculations, 11th International Conference on Radiation Shielding (ICRS-11), USA 2008, oral.

Y. Romanets, I. Goncalves, A. Herrera-Martinez, Y. Kadi, C. Kharoua, J. Lettry, M. Lindroos, P. Vaz EURISOL Multi-MW Target, Neutron flux and fission rate calculations for the MAFF configuration, 15th Topical Meeting of the Radiation Protection and Shielding Division (RPSD-2008), USA 2008, oral.

G. Van den Eynde, E. Malambu, H. Ait Abderrahim, D. De Bruyn, G. Rimpault, D. Struwe, R. Dagan, M.-C. Badea, Y. Romanets, P. Vaz, M.-C. Vicente, Neutronic Design of The XT-ADS Core, International

Conference PHYSOR 2008, in Interlaken (Switzerland), September 2008, oral.

P. Vaz, invited lecture, Neutronic Design of ADS – Nuclear Subcritical Core", EUROTRANS Training Course ITC-6, Madrid, 2nd April 2008, oral.

P. Vaz, invited talk at a Plenary session, Monte Carlo methods and techniques - status and prospects for future evolution", of the 7th International Topical Meeting on Industrial Radiation and Radioisotope Measurement Application (IRRMA-7), Prague, Czech Republic, 22-27 June 2008, oral.

B.C. Gomes, S.N. Silva, A.P. Azevedo, I. Manita, O.M. Gil, J. Esperança Pina, V. Teixeira, T.C. Ferreira, E. Limbert, J. Rueff, J.F. Gaspar. Polymorphisms in genes of the Non-Homologous End-Joining DNA repair pathway and thyroid cancer risk. *AACR Conference - Candidate Pathways, Whole Genome Scans: Reconciling Results, Looking into the Future*, May 2008, Carefree, Arizona, E U A, poster.

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D. Ruivo, F.V.M. Silva, J. Justino, A. Martins, I. Branco, A.P. Rauter and M. Goulart, Cell Proliferative and Radioprotective Properties of Bioactive Salvia sclareoides Extracts, *Lowrad 2008*, November 2008. Lisbon, poster.

P. Teles, P. Vaz, A. Lafuente, A. Abanades, J.-M. Martinez-Val, P. Baeten, B. Arien, Monte-Carlo Simulations of thermally induced reactivity variations in the GUINEVERE facility, *10th Information Exchange Meeting on Actinide and Fission Product Partitioning and Transmutation*, 6-10 October 2008, Mito, Japan, poster.

A Lafuente, A Abanades, F Sordo, J-M Martinez-Val, M Piera, P Teles, P Vaz, A Boudoin, P Baeten, Reactivity accidents in the GUINEVERE facility. *10th Information Exchange Meeting on Actinide and Fission Product Partitioning and Transmutation*, 6-10 October 2008, Mito, Japan, poster.

Lectures in courses

M. Neves, *Segurança em Laboratórios Radioquímicos*. Licenciatura/Mestrado integrado em Engenharia Biomédica da FCTUC/FMUC, Coimbra. 7 April 2008.

M. Neves, *Radiofarmacos terapêuticos*. Licenciatura/Mestrado integrado em Engenharia Biomédica da FCTUC/FMUC, Coimbra. 7 April de 2008.

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Theses

M.Sc.

Paulo Emanuel Luzio de Melo, *Avaliação de doses de radiação cósmica para tripulações militares de aeronaves de transporte*. UNL-FCT, 25 Jul 08. Supervisor: J.G. Alves

Luís Manuel Carvalho Freire, *Evaluation of thermoluminescence dosimeters for extremity monitoring*. IST, 11 Dec. 2008. Supervisors: J.G. Alves and C. Oliveira.

Ana Cristina de Oliveira Resende Geão Paulo Freire *Avaliação e Optimização da Dose de Radiação dos Técnicos de Medicina Nuclear* (Masters in Physics and Technological Engineering) Instituto Superior Técnico, 22 October 2008. Supervisors: M. A. Neves and C. Oliveira.

Nelson Marquez, *Parâmetros de imagem e dosimétricos de sistemas de obtenção de imagem para Radioterapia*. (Masters in Physics Engineering). Instituto Superior Técnico, November 2008. Supervisor: P.Vaz

Raul F Luís, *Monte Carlo simulations of the Targets system of the EURISOL facility*. (Masters in Physics Engineering), Faculty of Sciences of the University of Lisbon, November 2008. Supervisor: P.Vaz

Paula Madeira, *Dose in Computed Tomography (CT)-Diagnostic Reference Levels*, (Masters in Biophysics), Faculty of Sciences of the University of Lisbon, December 2008. Supervisor P. Vaz

Ph.D.

Octávia Gabriela da Silva Viegas Nené Monteiro Gil, *Carcinoma da tiróide: caracterização genética e citogenética de uma população de doentes*. Faculdade de Ciências, of the University of Lisbon, 28 October 2008. Supervisors: José Rueff and Maria da Graça Fialho

Environmental Radioactivity Group

Books and Book Chapters

F. P. Carvalho, J. M. Oliveira. Radioactivity in soils and horticulture products near uranium mining sites. In: *Uranium Mining and Hydrogeology*, Broder J. Merkel and A. Hasche-Berger (Ed.), pp 381-387. Springer-Verlag, Berlin.

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F.P. Carvalho. Antigas explorações mineiras e segurança ambiental. *Segurança* Nº185: 13-15.

F.P. Carvalho. Planeamento de laboratórios de rádio-isótopos. *Tecno-Hospital* Nº 28: 36-40.

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F. P. Carvalho. A rede Europeia ALARA e a harmonização e optimização da protecção radiológica. In: *Proceedings of the International Symposium on Occupational Safety and Hygiene "SHO 2008"*, pp. 79-81, held on 7-8 February 2008, University of Minho, Guimarães, Portugal (ISBN978-972-99504-4-5), oral.

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F. P. Carvalho. Radioactividade nas Águas de Superfície. 9º Congresso Nacional da Água, Cascais, 2-4 Abril 2008. Resumos das Comunicações pp147-148. Full Proceedings on CD, 7 pp. Associação Portuguesa dos Recursos Hídricos, LNEC, Lisboa (ISBN 978-97299991-5-4), oral.

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- F. P. Carvalho, J. M. Oliveira. Bioassay of ^{210}Po in human urine and internal contamination of man. *Second International Nuclear Chemistry Congress*, 13-18 April 2008, Cancun, Mexico. Book of Abstracts p 123. Faculty of Chemistry, UNAM, Mexico, oral.
- F. P. Carvalho, J. M. Oliveira, M. Malta. Agriculture and soil-to-plant radionuclide transfer in the surroundings of an old uranium mine. In: *Proceedings of the International Conference on Radioecology and Environmental Radioactivity*, 15-20 June 2008, Bergen. P. Strand, J. Brown, T. Jolle (Eds.), Part 1: 326-329. Norwegian Radiation Protection Authority, Osteras, Norway (ISBN 978-82-90362-25-1), oral.
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