

## **Publications**

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 Nuclear Engineering

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

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### Journals

T. Morlat, F. Giuliani, T.A. Girard, A.R. Ramos, M. Felizardo, J.G. Marques, Response study of a CF3I superheated droplet detector for dark matter applications, *Nucl. Instr. & Meth., A* **580** (2007) 274-277.

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F. Giuliani, T. Morlat, A.R. Ramos, T.A. Girard, M. Felizardo da Costa, J.G. Marques, R.C. Martins, H.S. Miley, D. Limagne, G. Waysand, SIMPLE-icity in Direct Dark Matter Searches, *7th UCLA Symp. on Sources and Detection of Dark Matter and Dark Energy in the Universe*, Feb. 22-24, 2006, *Nucl. Phys. B* (Proc. Suppl.) **173** (2007) 129-132.

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J.G. Marques, A.R. Ramos, A. Kocher, Core conversion of the Portuguese Research Reactor to LEU fuel, *Proc. Int. Meeting on Reduced Enrichment for Research and Test Reactors, Prague, 2007*, Argonne National Laboratory.

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Analyses of the Core Conversion of the Portuguese Research Reactor, coordinated by J.E. Matos (RERTR Program, Argonne Nat. Lab.) and J.G. Marques (ITN), Contributors: J.G. Matos, N.P. Barradas, A. Kling, A.R. Ramos, J.G. Stevens, J.A. Stillman, E.E. Feldman, F.E. Dunn, P. Pfeiffer, M. Kalimullah (Dec. 2006, revisto Maio 2007).

J.G. Marques, A.R. Ramos, A. Kling, J. Santos, Commissioning Data for the LEU core of the Portuguese Research Reactor – 1<sup>st</sup> part, Out. 2007.

J.G. Marques, A.R. Ramos, A. Kling, J. Santos, Commissioning Data for the LEU core of the Portuguese Research Reactor – 2<sup>nd</sup> part, Out. 2007.

A.R. Ramos, Relatório de Manutenção Anual das Instalações do RPI, Nov. 2007.

A. Kling, Radiological Control at the Portuguese Research Reactor (RPI): Report Jan. 1 – Dec. 31, 2006, ITN/RPI-R-07-95.

A.R. Ramos, J.G. Marques, Site Characteristics for the Safety Analysis Report of the Portuguese Research Reactor (RPI), July 2007, ITN/RPI-R-07/96.

A. Kling, Radiological Control at the Portuguese Research Reactor (RPI): Report Jan. 1– Jun. 30, 2006, ITN/RPI-R-07-97.

J.G. Marques, N.P. Barradas, A. Kling, A.R. Ramos, J.G. Matos, F.E. Dunn, E.E. Feldman, M. Kalimullah, P. Pfeiffer, J.G. Stevens, J.A. Stillman, Operating limits and conditions of the Portuguese Research reactor (RPI) ITN/RPI-R-07-98.

# Applied Dynamics

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J. Antunes, O. Inácio, L. Henrique, Overview of nonlinear effects in impact and friction-excited musical instruments., *EUROMECH Colloquium 483, Geometrically Non-linear Vibrations of Structures*, FEUP, Porto, Portugal, 9-11 Jul. 2007.

G. Bennett, J. Antunes, J. Fitzpatrick, V. Debut, A method for optimal reconstruction of velocity response using experimental displacement and acceleration signals, *14<sup>th</sup> Int. Congress on Sound and Vibration (ICSV)*, Cairns, Australia, 9-12 July 2007.

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O. Inácio, J. Antunes, A linearized modal analysis of the bowed string, *19<sup>th</sup> Int. Congress on Acoustics (ICA)*, Madrid, Spain, 2-7 Sept. 2007.

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V. Debut, J. Antunes, M. Moreira, A phenomenological model for sound generation in corrugated pipes, *Int. Symp. on Musical Acoustics (ISMA)*, Barcelona, Spain, 9-12 Sept. 2007.

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# Radiological Protection and Nuclear Safety

## Environmental Radioactivity

### Books and Book Chapters

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F.P. Carvalho, J. M. Oliveira, I. Lopes, A. Batista. Radionuclides from Past Uranium Mining in Rivers of Portugal. *J. Environ. Rad.*, 98, 298-314.

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F.P. Carvalho, Exposição ocupacional às radiações ionizantes de materiais radioactivos de origem natural (NORMs), *Int. Workshop SHO2007, Safety and Occupational Health*, Univ. Minho, Guimarães, Portugal, 8-9 Feb.2007, pp 41-44, P. Arezes et al. (Eds.), SPSHO Publ. (ISBN 978-972-99504-3-8).

F.P. Carvalho, Radioactividade de origem natural e radiações ionizantes em indústrias não-nucleares, *Int. Congress on Occupational Safety and Health*, 30May-1 Jun.2007, Porto, pp.137-143. Publ. Ordem dos Engenheiros - Região Norte, Dep. Legal 260259/07.

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M.J. Madruga, M.M. Sequeira, I. Lopes, A.R. Gomes, F. Rodrigues. Radiocésio, Radioestrônio e Trítio em águas de superfície nos rios Tejo e Zêzere. *9<sup>a</sup> Conf. Nac. do Ambiente*, Vol.2 (2007) pp.624-630, C. Borrego et al. (Eds), Publ. Univ. Aveiro, Portugal, ISBN: 978-972-789-230-3.

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I. Lopes, M.J. Madruga, Aplicação da Técnica de Extracção Cromatográfica à Determinação de <sup>90</sup>Sr em Leites, *5º Encontro Nac. de Cromatografia*, 10-12 Dec.2007, Book of Abstracts, pp. 57-58, Univ. Aveiro, Portugal, ISBN: 978-972-789-252-5.

M.J. Madruga, Environmental radioactivity monitoring in Portugal. *Int. Conf. Environmental Radioactivity - From Measurements and Assessments to Regulation*, 23-27 Apr.2007, Vienna, Austria, IAEA-CN-145.

M.J. Madruga, Portugal activities for the routine environmental measurements, *4<sup>th</sup> IAEA/ALMERA Coordination Meeting*, 5-7 Nov. 2007, Trieste, Italy.

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M. Malta, F.P. Carvalho, S. Rabiais, J.M. Falcão, Determinação de <sup>210</sup>Po e <sup>210</sup>Pb em cabelos humanos como indicadores de exposição – Caso da população da região da Urgeiriça, Portugal, *13<sup>a</sup> Jornadas Portuguesas de Protecção Contra Radiações*, 21-23 Nov. 2007, IST, Lisboa.

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## Other publications

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F.P. Carvalho. O ciclo hidrológico e os radionuclídos da série do Urânio. *Tecnologia da Água* nº 48 (Jan/Mar 2007) 20-25.

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## Measurement Unit

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*Environment at High Performance*, Bucarest, 6-9 Oct., oral and AIP

### Internal Reports

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J. Abrantes, N. Pinhão, Expert comment on the document *Calibration Procedures for the Merlin-Gerin IM201S Iodine Monitor at the RPI*.

## Metrology Laboratory of Ionising Radiation

### Communications

J. Cardoso, L. Santos, C. Oliveira, Air Kerma Primary Standard: Experimental and Simulation Studies on Cs-137, *Workshop on Absorbed Dose and Air Kerma Primary Standards*, Paris, May 2007, Invited talk.

J. Cardoso, C. Oliveira, Photon Irradiation Facility, *Workshop on Uncertainty Assessment in Computational Dosimetry, An Intercomparison of Approaches*, Bologna, Sept. 2007, poster.

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C. Oliveira, A.N. Falcão, M.C. Lopes, Recent Developments of the Education and Training in RP framework in Portugal, *Iº EUTERP Workshop*, 22-25 May, poster.

## Radiological Protection and Radioactive Waste Management

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C. Carrapico, L. Portugal, I.F. Gonçalves, I. Paiva, R. Trindade, P. Vaz, A methodology for the determination of the radionuclide contents and activity of samples, *Nucl. Instr. & Meth. A* **580**, 201-205.

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R. Trindade: Radioprotecção e terrorismo radiológico, *XX Jornadas de Engenharia Química*, IST, 11 May 2007, Oral

I. Paiva, Membrane Processes for the Treatment of UMM Radwaste, *IAEA Meeting on Uranium Exploration, Mining, Production, Mine Remediation and Environmental Issues*, Swakopmund, Namibia, 1-5 Oct. 2007, Oral

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P. Ferreira, M. Ramalho, L. Portugal, L. Brás, A. Baptista, M. Lemos, C. Souto, J. Carvalho, R. Trindade, M. Roldão, Desmantelamento das salas de

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R.Trindade, I.Paiva, L. Portugal, Estudo sobre efluentes radioactivos das instalações hospitalares, *Workshop sobre Aplicações médicas das radiações ionizantes em Portugal – investigação científica e prestação de serviços*, Sacavém, 29 Nov. 2007.

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# New Materials and Compounds

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### Oral

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- giant magnetic moment in  $\text{SrTiO}_3$ , *31<sup>st</sup> Int. Symp. on the Dynamic Properties of Solids*, Porto, 29 Sep 2007
- N.P. Barradas, A.R. Ramos, E. Alves, Determination of non-Rutherford cross sections from simple RBS spectra using Bayesian inference data analysis, *18<sup>th</sup> Int. Conf. on Ion Beam Analysis*, Hyderabad, India 23-28 Sep 2007.
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- S. Magalhães, N. Sobolev, E. Alves, Study of SiGe alloys with different germanium concentrations implanted with Mn and As ions, *XIII Portuguese Materials Society Meeting and IV Int. Materials Symp.*, Porto, Portugal, 1-4 Apr 2007.

### Theses

#### Ph.D.

Maria Alexandra Fonseca, *Estudo de Estruturas quânticas de Silício Germânio*, Univ. Aveiro, 14 Mai. 2007. Co-supervisor: E. Alves.

#### M.Sc.

Sérgio Nuno Canteiro de Magalhães, *Estudo de estruturas quânticas semicondutoras*, Instituto Superior Técnico, 20 Dec. 2007. Co-supervisor: E. Alves.

## Materials Characterization with Radioactive Nuclear Techniques

### Communications

L. Pereira, J.P. Araújo, U. Wahl, A.C. Marques, Doping ZnO and  $\text{SrTiO}_3$  by ion implantation: magnetism and impurity lattice site location, *XIX<sup>th</sup> Int. Summer School on Physics and Chemistry of Condensed Matter: Physics and Chemistry of Magnetic Materials*, Bialystok Univ., Bialowiesa, Poland, 7-14 Jul 2007, Oral.

L. Pereira, J.P. Araújo, U. Wahl, Diluted magnetic semiconductors, *Instituut voor Kern- en Stralingsfysica (IKS)*, Leuven, Belgium, 4 Jun 2007. Invited talk.

L. Pereira, J.P. Araújo, U. Wahl, Spintronica de semicondutores magnéticos, *III Jornadas do IFIMUP*, Universidade do Porto, Porto, Portugal, 9 May 2007.

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# Cultural Heritage and Sciences

## Cultural Heritage and Sciences

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