

Radiological Protection and Safety Unit

Dosimetry and Radiobiology

Books and books chapters

A.D. Oliveira and J.J. Pedroso de Lima, (2010): Dosimetry and biological effects of radiation (Chap 8). In: Nuclear Medicine Physics (Ed: J.J. Pedroso de Lima, ISBN: 978-1-58488-795-9; CRC Press, Taylor & Francis, UK.

International Journals

B.C. Gomes, S.N. Silva, A.P. Azevedo, I. Manita, O.M. Gil, T.C. Ferreira, E. Limbert, J. Rueff, J.F. Gaspar. The role of common variants of non-homologous end-joining repair genes *XRCC4*, *LIG4* and *Ku80* in thyroid cancer risk. *Oncol Rep*, 24(4), (2010) 1079-1085.

J.R. Zeevaart, J.M. Wagener, M. Neves, M.C. Costa, C. Rodrigues, M. Dithébe, E. Kilian, I. Cukrowski. ^{99m}Tc-labelled biguanide derivatives: chemical speciation modelling thereof and evaluation in vervets. *J. Radioanal. Nucl. Chem.*, 283, (2010) 123-131.

J. Bento, P. Teles, L. Silva, P. Nogueira, M. Neves, P. Vaz. Performance Parameters of a Whole Body Counter. *Radiation Measurements*, 45, (2010) 190-195.

V. Kamenopoulou, J.G. Alves, P. Ambrosi, D.T. Bartlett, L. Curri van, J.W.E. van Dijk and E. Fantuzzi. The new European Commission technical recommendations for monitoring individuals occupationally exposed to external radiation. *Hospital Imaging and Radiology Europe*, 5 (2), Summer (2010).

A. Belchior, L. Peralta, P. Almeida, P. Vaz. Calibration of an alpha particle irradiator for in vitro cells irradiation. *Int. J. Low Radiation*, 7 (6), (2010) 500-510.

P. Nogueira *et al.* Monte Carlo simulation of the full energy peak efficiency of a WBC. *Applied Radiation and Isotopes*, 68, (2010) 184-189.

P. Vaz. Monte Carlo methods and techniques - Status and prospects for future evolution. *Applied Radiation and Isotopes*, 68, (2010) 536-541.

R. Luís *et al.* Parameter optimization of a planar BEGe detector using Monte Carlo simulations. *Nuclear Instruments and Methods in Physics Research A*, 623, (2010) 1014-1019.

Y. Romanets, J. Bermudez, J.C. David, D. Ene, I.F. Gonçalves, Y. Kadi, C. Kharoua, R. Luis, F. Negoita, R. Rocca, L. Techio, P. Vaz. EURISOL-DS multi-MW target unit: Neutronics performance and shielding assessment, dose rate and material activation

calculations for the MAFF configuration. *Radiation Measurements*. 45, (2010) 1350-1354.

L. Mercatali, A. Serikov, P. Baeten, W. Uyttenhove, A. Lafuente, P. Teles. Design study of a fast spectrum zero-power reactor dedicated to source driven sub-critical experiments. *Energy Conversion & Management* 51, (9), (2010)1818-1825.

International Conference Proceedings

A.C. Santos, C.M. Matos, M.A. Silva, S.L. Perestrelo, F.J. Borges, T. Almeida, N. Ferreira. L. Gano, M. Neves, B. Oliveiros. A new technique to evaluate experimental acute oedema induced by two different drugs using giant unilamellar liposomes. *Technetium and Other Radiometals in Chemistry and Medicine*, ed. U. Mazzi, W. C. Eckerman, W. A. Volker. SGEEditoriali, Padova, Italy, (2010) 541-542.

A.C. Santos, C.M. Matos, M.A. Silva, S.L. Perestrelo, F.J. Borges, B. Oliveiros, T. Almeida, L. Gano, M. Neves, N. Ferreira. Experimental non-cardiogenic acute pulmonary edema - evaluation using a new technique using giant unilamellar liposomes. In: Proceedings of The 37th Annual Meeting and Exposition of the Controlled Release Society, CRS2010, July 10-14, 2010.

A.C. Santos, C.M. Matos, M.A. Silva, S.L. Perestrelo, F.J. Borges, B. Oliveiros, T. Almeida, L. Gano, M. Neves, N. Ferreira. Thermolabile giant unilamellar liposomes in the evaluation of experimental non-cardiogenic acute pulmonary oedema. In: Proceedings of the Annual Congress of the European Association of Nuclear Medicine, EANM2010, October, 9-13, Viena, Áustria, 2010.

M.B. Martins, T. Antunes, J.G. Alves. Portugal-Country Report. In: Proceedings of ESOREX Symposium, June, Prague, Czech Republic, 2010.

A. Belchior, P. Teles, L. Peralta, P. Almeida, P. Vaz. Monte-Carlo simulation and microdosimetry analysis of an α -particle source for cell irradiation. In: Proceedings of Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA+MC2010), October 17-21 Hitotsubashi Memorial Hall, Tokyo, Japan, 2010.

Y. Romanets, R. Luís *et al.* "The EURISOL Multi-MW Target Unit: Radiological protection and radiation safety issues". In: OECD Workshop Proceedings of the Tenth Workshop on "Shielding Aspects of Accelerators, Targets and Irradiation Facilities" (SATIF-10) at CERN (ISBN: 9789264096509), June 2-4 Geneva, Switzerland, 2010.

- Y. Romanets, R. Luis, J. Bermudez, J.C. David, D. Ene, I.F. Gonçalves, Y. Kadi, C. Kharoua, F. Negoita, R. Rocca, L. Tecchio, P. Vaz. The EURISOL Multi-MW Target Unit: Neutronics, Dose Rate, Shielding and Activation Calculations. In: Proceedings of the Eight Latin-American Symposium on Nuclear Physics and Applications, SLAFNA-8, 15-19 December 2009, Santiago, Chile, AIP Proceedings 1265, 2010 493-496.
- Y. Romanets, J. Bermudez, J.C. David, D. Ene, I.F. Gonçalves, Y. Kadi, C. Kharoua, R. Luis, F. Negoita, R. Rocca, L. Tecchio, P. Vaz. EURISOL-DS multi-MW target unit: Neutronics performance and shielding assessment, dose rate and material activation calculations for the MAFF configuration. In: Proceedings of 11th Neutron and Ion Dosimetry Symposium (NEUDOS-11), 12-16 October 2009, Cape Town, South Africa, 2010.
- P.M. Milazzo *et al.* Study of neutron-induced fission cross sections of U, Am and Cm at n-TOF. In: Proceedings of the Eight Latin-American Symposium on Nuclear Physics and Applications, SLAFNA-8, 15-19 December 2009, Santiago, Chile, AIP Proceedings 1265, (2010) 477-482.
- R. Luís *et al.* Calibration of a Broad Energy Germanium Detection System using Monte Carlo Simulations. In: Proceedings of the Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA+MC2010), 17-21 October 2010, Hitotsubashi Memorial Hall, Tokyo, Japan.
- M. Coeck, P. Livolsi, S. Möbius, A. Schmitt-Hannig, E. Fantuzzi, F. Draaisma, M. Marco, J. Stewart; P. De Regge, P. Vaz, P. Zagayvay, M. Ceclan. ENETRAP-II: development of European training schemes for RPE's and RPO's. In: Proceedings of Third European IRPA Congress 14-18 June 2010 Helsinki.
- S. Möbius, B. Breustedt, P. Livolski, F. Draaisma, M. Marko, J. Stewart, P. De Regge, P. Vaz, P. Zagayvai, M. Coeck. Organisation of Pilot Sessions of the European Radiation Protection Training Scheme ERPTS (ENETRAP-II WP8). In: Proceedings of Third European IRPA Congress 14-18 June 2010 Helsinki.
- F.S. Draaisma, I.H. Van Elsäcker-Degenaar, B.R.W. Haverkate, M. Suttmüller, J. Stewart, P. Livolsi, E. Fantuzzi, S. Möbius, P.P. de Regge, P. Vaz, M. Ceclan. ENETRAP II: WP5 Develop and apply mechanisms for the evaluation of training material, events and providers. In: Proceedings of Third European IRPA Congress, 14-18 June 2010 Helsinki.
- P. Teles, A. Lafuente, A. Boudoin, P. Baeten, J-M Martinez-Val, Y. Romanets, P. Vaz. Monte-Carlo simulations of thermally induced reactivity variations in the GUINEVERE facility. In: Proceedings of IEMPT 10, 6-10 October, 2008 Mito, Japan.
- 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. In: Proceedings of IEMPT 10, 6-10 October, 2008 Mito, Japan.
- International Communications**
- Oral*
- V. Kamenopoulou, J.G. Alves, P. Ambrosi, D.T. Bartlett, L. Currivan, J.W.E. van Dijk and E. Fantuzzi. *The new European Commission technical recommendations for monitoring individuals occupationally exposed to external radiation.* The European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece, invited talk.
- M.F. Pereira, J.G. Alves, S. Sarmiento, J.A.M. Santos, M.J. Sousa, M. Gouvêa, A.D. Oliveira, J.V. Cardoso, L.M. Santos. *Preliminary assessment of the dose to the interventional radiologist in fluoro-CT guided procedures.* European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.
- J.G. Alves, P. Ambrosi, D.T. Bartlett, L. Currivan, J.W.E. van Dijk, E. Fantuzzi and V. Kamenopoulou. *Radiation Protection 160. European Study on Occupational Radiation Exposure, ESOREX-2010,* June 2010, Prague, Czech Rep, invited talk.
- M.B. Martins, T. Antunes, J.G. Alves. *Portugal-Country Report.*, ESOREX-2010, June 2010, Prague, Czech Rep.
- A. Belchior, P. Teles, L. Peralta, P. Almeida, P. Vaz. *Monte-Carlo simulation and microdosimetry analysis of an α -particle source for cell irradiation.* Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA+MC2010), 17-21 October 2010, Hitotsubashi Memorial Hall, Tokyo, Japan.
- R. Luís *et al.* *Calibration of a Broad Energy Germanium Detection System using Monte Carlo Simulations.* Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA+MC2010), 17-21 October 2010, Hitotsubashi Memorial Hall, Tokyo, Japan.
- P. Vaz. *MELODI - A European Research and Training(R&T) platform - SRA and roadmap.* during the Scientific Seminar organized by the Group of Experts referred to in the Article 31 of the EURATOM Treaty, 23rd November 2010, Luxemburg, invited talk.
- M. Coeck, P. Livolsi, S. Möbius, A. Schmitt-Hannig, E. Fantuzzi, F. Draaisma, M. Marco, J. Stewart; P. De Regge, P. Vaz, P. Zagayvai, M. Ceclan. ENETRAP-II: development of European training schemes for RPE's and RPO's. Third European IRPA Congress 14-18 June 2010 Helsinki.
- Poster*
- D.L. Ramos, J.F. Gaspar, M. Pingarilho, O.M. Gil, J. Rueff, N.G. Oliveira, *Modulation of doxorubicin genotoxicity in human lymphocytes by GSTs polymorphisms: possible role of GSTP1 ILE105 VAL*

PUBLICATIONS

- Polymorphism*. International Symposium on the pathophysiology of reactive oxygen and nitrogen species. 19-21 May 2010, Salamanca, Spain.
- B.C. Gomes, R. Gouveia, S.N. Silva, H.N. Bastos, S.C. Branco, M. Antão, A. P. Azevedo, O.M. Gil, I. Manita, L.S. Santos, T.C. Ferreira, E. Limbert, J. Rueff, J.F. Gaspar, *Polymorphisms in DNA repair genes and non-familial thyroid cancer risk*. The future of molecular epidemiology: new tools, biomarkers, and opportunities- American Association for Cancer Research. 6-9 June 2010, Miami, USA.
- S. Bandarra, J.F. Gaspar, M. Pingarilho, O.M. Gil, A.S. Fernandes, J. Miranda, C.M. Castro, J. Rueff, N.G. Oliveira, *Glycidamide induced cytotoxic and genotoxic effects in human mammary MCF10A cells*. The European Environmental Mutagen Society-Environmental Mutagenesis in the North and Society for Free Radicals Research –Free radicals and the Environment. 12-18 September 2010, Oslo, Norway.
- A. Louro, S. Soares, L. Peralta, A. Pereira, G. Cunha, A. Belchior, O. Gil, P. Teles, M.J. Silva, H. Louro, S. Rodrigues, *Environmental Radon Exposure and Human Health Risk*. 6th Conference on Protection Against Radon at Home and at Work, 13-17 September 2010, Prague, Czech Rep.
- V. Martins, A.C. Antunes, J. Cardoso, L. Santos, O. M. Gil, *Implementation of a dose-response curve of γ -radiation for Portuguese population using chromosomal aberrations assay*. EPRBioDose 2010-International Conference, 10-14 October 2010, Mandelieu-La-Napoule, France.
- A.C. Antunes, V. Martins, J. Cardoso, L. Santos, O. M. Gil, *Cytokinesis-blocked micronucleus assay for a rapid screening in case of an accidental exposure scenario*. EPRBioDose 2010- International Conference, 10-14 October 2010, Mandelieu-La-Napoule, France.
- A.C. Santos, C.M. Matos, M.A. Silva, S.L. Perestrelo, F.J. Borges, B. Oliveiros, T. Almeida, L. Gano, M. Neves, N. Ferreira, *Experimental non-cardiogenic acute pulmonary edema - evaluation using a new technique using giant unilamellar liposomes*. 37th Annual Meeting and Exposition of the Controlled Release Society: Personalized Medicines and Products for the Next Generation. CRS2010, 10-14 July 2010, Oregon, Portland, U.S.A.
- A.C. Santos, C.M. Matos, S.L. Perestrelo, M.A. Silva, F.J. Borges, L. Gano, M. Neves, B. Oliveiros, *Evaluation of acute non-cardiogenic experimental pulmonary oedema using giant unilamellar liposomes*. International Symposium on Technetium and Other Radiometals in Chemistry and Medicine, 8-11 September 2010, Bressanone, Italy.
- A.C. Santos, C.M. Matos, M.A. Silva, S.L. Perestrelo, F.J. Borges, T. Almeida, N. Ferreira, L. Gano, M. Neves, B. Oliveiros, *A new technique to evaluate experimental acute oedema induced by two different drugs using giant unilamellar liposomes*. International Symposium on Technetium and Other Radiometals in Chemistry and Medicine, 8-11 September 2010, Bressanone, Italy.
- A.C.A. Santos, C.M.P. Matos, M.A. Silva, S.L. Perestrelo, F.J. Borges, B. Oliveiros, T. Almeida, L. Gano, M.A. Neves, N. Ferreira, *Thermolabile giant unilamellar liposomes in the evaluation of experimental non-cardiogenic acute pulmonary oedema*. EANM10, Annual Congress of the European Association of Nuclear Medicine, 9-12 October 2010, Vienna, Austria.
- L.C. Freire, M.F. Pereira, A.M. Calado, L.M. Santos, J.V. Cardoso, J.G. Alves, *Evaluation of the performance of two LiF:Mg,Ti and LiF:Mg,Cu,P dosimeters for extremity monitoring*. European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.
- S. Sarmento, M.F. Carrasco, M.J. Sousa, J.A.M. Santos, J. Lencart, M. Gouvêa, M.F. Pereira and J.G. Alves, *The importance of hand monitoring in interventional radiology: a case study*. European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.
- M.F. Pereira, A.M. Calado, L.C. Freire, J.V. Cardoso, L.M. Santos, J.G. Alves, *Uncertainty assessment of $H_p(d)$ for the TLD system in use at ITN-UPSR*. European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.
- J.G. Alves, M.F. Pereira, A.M. Calado, M.R. Martins, M.M. Saraiva, S.S. Rangel, *Individual Monitoring Service of ITN-UPSR*. European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.
- A.D. Oliveira, J. Bento, *BioKinModels. A computational tool to solve and to analyze models of compartments*. European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.
- A. Belchior, O. M. Gil, P. Almeida, P. Vaz, *Evaluation of the cytotoxicity and genotoxicity induced by α radiation in A549 cell line*. EPRBioDose 2010- International Conference, 10-14 October 2010, Mandelieu-La-Napoule, France.
- S. Möbius, B. Breustedt, P. Livolski, F. Draaisma, M. Marko, J. Stewart, P. De Regge, P. Vaz, P. Zagyvai, M. Coeck. *Organisation of Pilot Sessions of the European Radiation Protection Training Scheme ERPTS (ENETRAP-II WP8)*. Third European IRPA Congress 14-18 June 2010 Helsinki.
- F.S. Draaisma, I.H. Van Elsäcker-Degenaar, B.R.W. Haverkate, M. Suttmüller, J. Stewart, P. Livolsi, E. Fantuzzi, S. Möbius, P.P. de Regge, P. Vaz, M. Ceclan. *ENETRAP II: WP5 Develop and apply mechanisms for the evaluation of training material, events and providers*. Third European IRPA Congress 14-18 June 2010 Helsinki.

National Communications**Oral**

A. Louro, L. Peralta, S. Soares, A.J.S.C. Pereira, G. Cunha, A. Belchior, P. Teles, O.M. Gil, M.J. Silva, A.S. Rodrigues. *Risco para a saúde humana da exposição ao radão habitacional: um caso de estudo na região da Guarda*. Décimas quartas Jornadas Portuguesas de Protecção contra Radiações, 17-19 November 2010, Lisboa, Portugal.

A.C. Santos, C.M. Matos, B. Oliveiros, T. Almeida, L. Gano, M. Neves, N. Ferreira. *Thermolabile giant unilamellar liposomes to evaluate acute pulmonary oedema – comparison with MRI studies*. II Annual Meeting of IBILI, 10-11 December, 2010, Coimbra, Portugal.

J.G. Alves. *Dosimetria Individual da Radiação Externa*. Instituto Português de Oncologia de Lisboa de Francisco Gentil, 25th March 2010, Lisboa, Portugal, invited talk.

J.G. Alves. *Novas recomendações na monitorização individual da radiação externa (EU-Trimer, EURADOS)*. XI Curso de Divulgação de Medicina Nuclear, Instituto Português de Oncologia de Lisboa de Francisco Gentil, 12-13 November 2010, Lisboa, Portugal, invited talk.

A.D. Oliveira. *BioKinModels (v2.0). Um software para resolver e analisar modelos de compartimentos*. VI Jornadas de Medicina Nuclear do Hospital Garcia de Orta, 2010, Sesimbra, Portugal.

P. Vaz. *Science and Values in Radiological Protection - A case study: Medical Exposures in Radiology*. Congresso Nacional de Radiologia, 14th May 2010, Vilamoura, Portugal, invited talk.

P. Vaz. *Segurança e Riscos Tecnológicos (Radiológicos e Nucleares)*. Conferência Internacional

de Protecção Civil – Risco Tecnológico e Nuclear, 2nd October 2010, Castelo Branco, Portugal, invited talk.

P. Vaz. *Protecção Radiológica (radiações ionizantes) - O Estado da Nação - Uma perspectiva*. Panel discussion during the Congresso da Sociedade Portuguesa de Protecção Contra Radiações, 17th November 2010, Lisbon, Portugal, invited talk.

Poster

A. Louro, A. Belchior, G. Cunha, O. Gil, L. Peralta, A. Pereira, S. Rodrigues, M.J. Silva, S. Soares, P. Teles, *Risco decorrente da exposição ao radão habitacional para a saúde humana*. Portuguese Physics for Health Summer School, 26-28 July 2010, Covilhã, Portugal.

Thesis**M.Sc.**

Catarina Duarte Sousa Figueira, *Medição e cálculo, utilizando simulações Monte Carlo, das doses em exames de Tomografia Computorizada*. Masters in Biomedical Engineering, Faculty of Sciences and Technology, New University of Lisbon. December 2010. Supervisor: P. Vaz and P. Madeira (Hospital S. José – CHLC).

Internal Reports

M.B. Martins, J.G. Alves. *Exposição Ocupacional em Portugal (2000 a 2006)*. Relatório UPSR Série A, n. 34/2010, ISBN 978-989-96542-2-8 (2010).

M.B. Martins, J.G. Alves. *Exposição Ocupacional em Portugal (Ano 2007)*. Relatório UPSR Série A, n. 35/2010, ISBN 978-989-96542-3-5 (2010).

M.B. Martins, J.G. Alves. *Exposição Ocupacional em Portugal (Ano 2008)*. Relatório UPSR Série A, n. 36/2010, ISBN 978-989-96542-4-2 (2010).

Metrology Laboratory of Ionizing radiation**International Journals**

C. Simões, M. Caldeira, C. Oliveira. Comparative study of Curiepoint ionizing chambers using Monte Carlo simulations, *Appl. Radiat. Isot.* 68, (2010) 1121-1127.

International Conference Proceedings

P. Limede, C. Oliveira, J. Cardoso, L. Santos. Characterization of Diagnostic Radiation Qualities according to the IEC 61267 at LMRI – ITN. In: Proceedings of IDOS – International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry. CN-182-128. IAEA-CN-182, 9-12 November 2010, Vienna, Áustria.

International Communications**Oral**

J. Cardoso, H. Silva, C. Oliveira. *Development of a new ionizing chamber for Hp(10) measurement using Monte Carlo simulation and experimental methods*. IM2010. European Conference on Individual Monitoring of Ionizing Radiation, IM2010, 8-12 March 2010, Athens, Greece.

Poster

C. Oliveira, H. Silva, J. Cardoso, *Comparative study of three ionizing chambers for measurement of Hp(10) and a methodology for its optimization*. IM2010. European Conference on Individual Monitoring of Ionizing Radiation, 8-12 March 2010, Athens, Greece.

L. Santos, *The accreditation process at the ITN-UPSR laboratories*. IM2010. European Conference on Individual Monitoring of Ionizing Radiation, 8-12 March 2010, Athens, Greece.

National Communications**Oral**

C. Oliveira, M. Rodrigues, J. Cardoso, L. Portugal. Estudos de Sensibilidade de fontes usadas em braquiterapia usando o método de Monte Carlo CONFMET2010, Medições na Ciência e na Tecnologia. 4-5 Nov. Lisboa.

Poster

C. Oliveira, J. Cardoso, L. Santos, *A metrologia das*

radiações ionizantes. CONFMET2010, Medições na Ciência e na Tecnologia. 4-5 November 2010, Lisbon, Portugal.

Thesis**M.Sc.**

Patrícia Isabel Medeiros Limeira, *Caracterização das qualidades de Radiação X de Diagnóstico, segundo a Norma Internacional IEC 61267*. Faculdade Ciências e Tecnologia da Universidade Nova de Lisboa. 2010. Supervisor: C. Oliveira and J. Cardoso.

Environmental Radioactivity**International Journals**

C. Gonçalves, C. Alves, M. Evtyugina, F. Mirante, C. Pio, A. Caseiro, C. Schmidl, H. Bauer, F.P. Carvalho. Characterization of PM10 emissions from woodstove combustion of common woods grown in Portugal. *Atmospheric Environment* 44 (35), (2010) 4474 – 4480.

E. Andrade, M.J. Madruga, I. Bobos, M.I. Paiva, F. Maia, A. Mateus, R. Trindade, M.C. Freitas, M.A. Gonçalves. Characterization of portuguese geomaterials, the clay component of ranãs, as potential liners for low and intermediate radioactive disposal sites. *J Radioanal Nucl Chem* 286, (2010) 777-783.

F.P. Carvalho. Environmental remediation and the legacy of uranium mining waste in Portugal and Europe-Lessons to retain. *Advanced Materials Research* 107, (2010) 157-161.

F.P. Carvalho, J.M. Oliveira. Uranium isotopes in the Balkan's environment and foods following the use of depleted uranium in the war. *Environment International* 36, (2010) 352-360.

F.P. Carvalho, J.M. Oliveira, M. Malta. Radiation Safety of Old Uranium Mining Waste Dumps in Portugal. *Advanced Materials Research* 107, (2010) 147-156.

F.P. Carvalho, J.P. Villeneuve, C. Cattini, C.M. Bajet, M. Navarro-Calingacion. Chlorinated hydrocarbons in sediments from Manila Bay, the Philippines. *International Journal of Environmental Studies*, 67 (4) (2010) 493-504.

I. Lopes, M.J. Madruga, A. Mourato, J. Abrantes, M. Reis. Determination of ^{90}Sr in portuguese foodstuffs. *J Radioanal Nucl Chem*, 286 (2010) 335-340.

National Journals

F.P. Carvalho. A água e os radionuclídeos das famílias radioactivas naturais. CAPTAR 2 (2) (2010) 17-25. (available on the Web: <http://captar.web.ua.pt/>).

International Conference Proceedings

F.P. Carvalho, J.M. Oliveira, M. Malta (2010). Polonium and lead in human hair as indicators of internal contamination. In: 12th Congress of the International Radiation Protection Association

(IRPA12): Strengthening Radiation Protection Worldwide — Highlights, Global Perspective, and Future Trends. Paper TS I.1.2, FP2581. IAEA STI/PUB/1460 (COMPANION CD). ISBN 978-92-0-105410-4. (2010) International Atomic Energy Agency, Vienna, Austria.

F.P. Carvalho, J.M. Oliveira, M. Malta. Radioecological surveillance around an old mining and milling site during environmental remediation works. In: 12th Congress of the International Radiation Protection Association (IRPA12): Strengthening Radiation Protection Worldwide—Highlights, Global Perspective, and Future Trends. Paper TS III 4.1 FP2580. IAEA STI/PUB/1460 (COMPANION CD). ISBN 978-92-0-105410-4. (2010) International Atomic Energy Agency, Vienna, Austria.

International Communications**Oral**

A.R. Gomes, J. Abrantes, A. Libânio, M.J. Madruga, M. Reis. *Improvement of the quality assurance in tritium analyses in waters by LSC*. International Conference on Advances in Liquid Scintillation Spectrometry, LSC 2010, Book of Abstracts p. 62, 6-10 September 2010, Paris, France.

E. Andrade, M. J. Madruga, I. Bobos, M. I. Paiva, F. Maia, A. Mateus, R. Trindade, M. C. Freitas, M. A. Gonçalves. *Characterization of portuguese geomaterials, the clay component of ranãs, as potential liners for low and intermediate radioactive disposal sites*. 16th Radiochemical Conference, Book of Abstracts, s103, ISSN 0009-2770. 18-23th April 2010, Mariánské Lázně, Czech Republic.

F.P. Carvalho. *Environmental radioactive impact associated to uranium mining and restoration of former mining and milling sites*. 1st International Conference on Environmental Pollution, Restoration and Management. Book of Abstracts p.40. 1-5 March 2010, Ho Chi Minh City, Vietnam.

F.P. Carvalho, J.M. Oliveira, M. Malta (2010). *Forest fires and resuspension of radionuclides into the atmosphere*. 1st International Conference on Environmental Pollution, Restoration and Management. Book of Abstracts p.25. 1-5 March 2010, Ho Chi Minh City, Vietnam.

PUBLICATIONS

F.P. Carvalho, J.M. Oliveira, L. Silva, M. Malta. *Radioactivity from anthropogenic origin in the Tejo Estuary and the need for improved management*. International Conference on Coastal Conservation and Management in the Atlantic and Mediterranean (ICCCM 2010). Book of Abstracts, p.1011-17. Universidade Nova de Lisboa e Câmara de Cascais. April 2010, Estoril, Cascais, Portugal.

H. Fonseca, M. Reis. *Multivariate statistics analysis applied to indoor radon data in Portugal*. 6th Conference on Protection Against Radon at Home and at Work, 13-17 September 2010, Prague, Czech Republic.

I. Lopes, J. Abrantes, J. Melo, M.J. Madruga, M. Reis. *LSC- Quality assurance on gross alpha/beta measurements in waters*. International Conference on Advances in Liquid Scintillation Spectrometry, LSC. Book of Abstracts p. 40. 6-10 September 2010, Paris, France.

Poster

I. Lopes, M.J. Madruga, A. Mourato, J. Abrantes, M. Reis, *Determination of Strontium-90 in foodstuff*. 16th Radiochemical Conference, Book of Abstracts, s184, ISSN 0009-2770, 18-23th April 2010, Mariánské Lázně, Czech Republic.

J. Melo, I. Lopes, J. Abrantes, M.J. Madruga, M. Reis, *Comparative study of gross alpha and beta measurements in drinking waters*. International Conference on Advances in Liquid Scintillation Spectrometry, LSC 2010. Book of Abstracts p. 38. 6-10 September 2010, Paris, France.

M. Malta, J.M. Oliveira, L. Silva, F.P. Carvalho, *Monitoring radioactivity from urban wastewater*

discharges into the Tejo River Estuary. International Conference on Coastal Conservation and Management in the Atlantic and Mediterranean (ICCCM 2010). Book of Abstracts, p. 12511-17. Universidade Nova de Lisboa e Câmara de Cascais. April 2010, Estoril, Cascais, Portugal.

National Communications

Oral

H. Fonseca. *O radão em Portugal e na Europa*. Jornadas do Radão, 14-15 May 2010, Guarda, Portugal.

M.J. Madruga, M. Reis. *Radioactividade Natural em Materiais de Construção: A Legislação Europeia e a sua Implementação em Portugal*. Décimas Quartas Jornadas Portuguesas de Proteção Contra Radiações, 17-19 November 2010, IST, Lisbon, Portugal

T. Melo, J. Fernandes, C. Midões, C. Almeida, H. Amaral, A.R. Gomes, M.J. Madruga, M. Silva, L. Mendonça. *Reservas estratégicas de água subterrânea na região centro (Projecto Images)*. 10^o Congresso da Água, 21-24 March 2010, Alvor, Algarve, Portugal.

Internal Reports

M.J. Madruga, F.P. Carvalho, M. Reis, J. Alves, J.A. Corisco, R. Trindade, I. Lopes, J. Abrantes, L. Silva, L. Torres, L. Portugal, M. Malta, A. Libânio, A. Mourato, G. Silva, J.M. Oliveira, L. Santos, A. Batista, A.R. Gomes, G. Carvalhal, H. Fonseca, J. Melo, M. Pereira. *Programas de Monitorização Radiológica Ambiental (Ano 2009)*. *Internal Report UPSR, Série A, n°37/10, ISBN 978-989-96542-5-9, Depósito Legal 194022/03, pp. 146.*

Radioprotection and Radioactive Waste

National Journals

R. Trindade, I. Paiva. *Detectores iónicos de fumos e resíduos radioactivos*, *Proteger* 7, (ISSN 1647-1288) (2010) 40-42.

International Journals

L. Portugal, J. Cardoso, C. Oliveira. *Monte Carlo validation of the irradiator parameters of the Portuguese gamma irradiation facility after its replenishment*. *Appl. Radiat. Isot.* 68, (2010) 190-195.

International Conference Proceedings

R. Trindade, I. Paiva. *Management of Radioactive Sealed Sources in Portugal: IAEA/ ITN/UPSR International Workshop on Sustainable Management of Disused Sealed Radioactive Sources (DSRS)*, 11-15 October 2010, Sacavém, Portugal.

International Communications

Oral

R. Trindade, I. Paiva. *Management of Radioactive Sealed Sources in Portugal: IAEA/ ITN/UPSR International Workshop on Sustainable Management of Disused Sealed Radioactive Sources (DSRS)*, 11-15 October, 2010, Sacavém, Portugal.

International Communications

Poster

M. Reis, M.C. Freitas, A. Mateus, I. Paiva, L. Silva, I. Dionisio, H. M. Dung, M.J. Madruga, P. Duarte, M. A. Gonçalves. *Characterization of Geomaterials from NE Portugal using Instrumental Neutron Activation Analysis (INAA) and Gamma Spectrometry*, Fourth International Symposium on Nuclear Analytical Chemistry (NAC-IV), Bhabha Atomic Research Centre, 15-19 November, 2010 Mumbai, Índia.

National Communications

Segurança Electrónica e de Protecção Incêndio, 4
May, Lisboa, Portugal.

Oral

R. Trindade, I. Paiva. *Detectores iónicos de fumos e
resíduos radioactivos*, Associação Portuguesa de

Measurement Laboratories

International Journals

L. Silva, A. Turkman, C.D. Paulino. Bayesian
statistical evaluation of peak area measurements in
gamma spectrometry. *Applied Radiation and Isotopes*,
68, (2010). 1397-1402.

International Communications

Oral

G. Carvalhal. *Exercise ICRM 2009-2010:
Intercomparison of the methods used for computing
the coincidence summing corrections – Part II*. ICRM
GS Workshop, 18-19 October, 2010, Rome, Italy.