Panagiotis Papagiannis, PhD

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Education

2000-2003: University of Athens, Physics Dept., Nuclear and Particle Physics Sec. PhD thesis. Subject: "Monte Carlo and Analytical dosimetry in modern radiotherapy applications".

1997-2000: University of Athens, Medical School. MSc in Medical Physics. MSc thesis: "Analytical dosimetry in interstitial brachytherapy. Review and extension of the AAPM TG-43 dosimetric protocol for ^{192}Ir wire sources".

1992-1997: University of Athens, Physics Dept. First Diploma in Physics. Diploma thesis: "Mixed radiation field (n – γ) dosimetry using thermo-luminescence detectors".

Working Experience

2000- Research assistant (under paid contract) of the Dosimetry Laboratory, Institute of Accelerating Systems and Applications, and the Medical and Nuclear & Particle Physics Sec., Physics Dept., University of Athens

2002 – 2003: Medical Physicist in the Medical Physics and Engineering Department of the Offenbach Clinic, Germany within the framework of an EU Marie Curie Fellowship.

1998 - 1999: One year training in the fields of Radiotherapy, Diagnostic Radiology, Nuclear Medicine and Radiation Protection at Areteion University Hospital, Athens, Greece.

Research Programs

2005- "Computational and experimental, three-dimensional dosimetry techniques for the planning and quality assurance of contemporary radiotherapy" funded by the Greek Ministry for Education and Religious Affairs.

2005- Greece-Czech Joint Research and Technology Program "Three-dimensional dosimetry using experimental and computer simulation methods for the quality assurance of contemporary radiation therapy applications" funded by the Greek Secretariat for Research and Technology.

2005- Greece-Slovenia Joint Research and Technology Program "A feasibility study on the use of antiprotons for medical diagnostic and therapy applications" funded by the Greek Secretariat for Research and Technology

2000-2005 Participation in several research projects under paid contract by appointment of Nucletron B.V. (Venendal, The Netherlands) Bebig GmbH (Berlin, Germany) .and Varian Oncology Systems (Palo Alto, USA).

2000-2005 Participation in several research programs on experimental and computational dosimetry funded by the Special Research Account of the University of Athens.

2003-2005 Greece-Poland Joint Research and Technology Program "Development and Characterization of Polymer gel dosimeters for use in ionizing radiation applications" funded by the Greek Secretariat for Research and Technology.

1999-2001 "Development of tissue mimicking materials for MRI and radiotherapy applications " funded by the Greek Secretariat for Research and Technology.

Scientific-Professional Societies

- Member of the Greek Association of Physicists in Medicine
- Consultant of a European Society for Therapeutic Radiology and Oncology (ESTRO) sub-committee for quality assurance in brachytherapy (TG43 under Quality Assurance in http://www.estro.be/).

Language skills

Cambridge Certificate of Proficiency in English (1990)

Publications

28 publications in Peer Reviewed, International Journals (Impact Factor: 55.884, Citations: 142)

18 presentations in International Conferences

Two chapters (Experimental Thermoluminescence Dosimetry in Brachytherapy and Applications of Polymer Gel Dosimetry in modern Brachytherapy) in the first volume of "The Physics of modern brachytherapy", D. Baltas, L. Sakelliou, N Zamboglou (Eds), Taylor & Francis Books Ltd.

Reviewer

Medical Physics (Med. Phys.)

Physics in Medicine and Biology (Phys. Med. Biol.)

List of Publications

1. P. Papagiannis, E. Pantelis, E. Georgiou, P. Karaiskos, A. Angelopoulos, L. Sakelliou, S. Stiliaris, D. Baltas and I. Seimenis "Polymer gel dosimetry for the TG-43 dosimetric characterization of a new ^{125}I interstitial brachytherapy seed," Phys. Med. Biol., **51**, in print (2006).

2. P. Papagiannis, L. Sakelliou, G. Anagnostopoulos and D. Baltas "On the dose rate constant of the selectSeed ^{125}I interstitial brachytherapy seed," Med. Phys., **33**, in print (2006).

3. G. Lymperopoulou, **P. Papagiannis**, L. Sakelliou, N. Milickovic, S. Giannouli and D. Baltas "A dosimetric comparison of 169Yb versus 192Ir for HDR prostate brachytherapy," Med. Phys., **32**, 3832-3842 (2005).

4. G. Lymperopoulou, **P. Papagiannis**, L. Sakelliou, P. Karaiskos, P. Sandilos, A. Przykutta and D. Baltas "Monte Carlo and thermoluminescence dosimetry of the new

IsoSeed® model I25.S17 ^{125}I interstitial brachytherapy seed," Med. Phys., **32**, 3313-3317 (2005).

5. P. Baras, I. Seimenis, P. Sandilos, L. Vlahos, T. Bieganski, E. Georgiou, E. Pantelis, **P. Papagiannis** and L. Sakelliou "An evaluation of the TSE MR sequence for time efficient data acquisition in polymer gel dosimetry of applications involving high doses and steep dose gradients," Med. Phys., **32**, 3339-3345 (2005).

6. E. Pantelis, G. Lymperopoulou, **P. Papagiannis**, L. Sakelliou, E. Stiliaris, P. Sandilos, I. Seimenis, M. Kozicki and J. M. Rosiak "Polymer gel dosimetry close to an ^{125}I interstitial brachytherapy seed," Phys. Med. Biol., **50**, 4371 – 4384 (2005).

7. **P. Papagiannis**, P. Karaiskos, M. Kozicki, J. M. Rosiak, L. Sakelliou, P. Sandilos, I. Seimenis, and M. Torrens "Three-dimensional dose verification of the clinical application of gamma knife stereotactic radiosurgery using polymer gel and MRI," Phys. Med. Biol. **50**, 1979-1990 (2005).

8. P. Karaiskos, L. Petrokokkinos, E. Tatsis, A. Angelopoulos, P. Baras, M. Kozicki, **P. Papagiannis**, J. M. Rosiak, L. Sakelliou, P. Sandilos and L. Vlachos "Dose verification of single shot gamma knife applications, using VIPAR polymer gel and MRI," accepted for publication in Phys. Med. Biol. **50**, 1235-1250 (2005).

9. E. Pantelis, **P.** Papagiannis, P. Karaiskos, A. Angelopoulos , G. Anagnostopoulos, D. Baltas and L. Sakelliou, "The effect of finite patient dimensions and tissue inhomogeneities on dosimetry planning of ^{192}Ir HDR breast brachytherapy: a Monte Carlo dose verification study,**"** Int. J. of Radiat. Oncol., **61**, 1596-1602 (2005).

10. G. Lymperopoulou, E. Pantelis, **P. Papagiannis**, E. Rozaki-Mavrouli, L. Sakelliou, D. Baltas and P. Karaiskos, "A Monte Carlo dosimetry study of vaginal 192Ir brachytherapy applications with a shielded cylindrical applicator set," Med. Phys., **31**, 3080-3086 (2004).

11. E. Pantelis, A. Karlis, M. Kozicki, **P. Papagiannis**, L. Sakelliou and M. J. Rosiak, "Polymer gel water equivalence and relative energy response with emphasis on low photon energy dosimetry in brachytherapy," Phys. Med. Biol. ***49***, *3495 – 3514* (2004)
(Selected to be included in IOP Select, http://Select.iop.org, and highlights 2004, www.iop.org/journals/pmb/highlights)

12. G. Anagnostopoulos, D. Baltas, P. Karaiskos, E. Pantelis, **P. Papagiannis** and L. Sakelliou, "The effect of patient inhomogeneities in oesophageal Ir-192 HDR brachytherapy: a Monte Carlo and an analytical dosimetry study," Phys. Med. Biol., **49**, 2675 – 2685 (2004).

13. E. Pantelis, **P. Papagiannis**, G. Anagnostopoulos, D. Baltas, P. Karaiskos,P. Sandilos and L. Sakelliou, "Evaluation of a TG-43 compliant analytical dosimetry model in clinical ^{192}Ir HDR brachytherapy treatment planning and assessment of the significance of source position and catheter reconstruction uncertainties", Phys. Med. Biol. **49**, 55-67 (2003).

14. G. Anagnostopoulos, D. Baltas, A. Geretschlaeger, T. Martin, **P. Papagiannis**, N. Tselis and N. Zamboglou, "In vivo TLD dose verification of transperineal ^{192}Ir HDR brachytherapy using CT-based planning for the treatment of prostate cancer," Int. J. of Radiat. Oncol., **57**, 1183-1191 (2003).

15. P. Kipouros, **P. Papagiannis**, L. Sakelliou, P. Karaiskos, P. Sandilos, P. Baras, I. Seimenis, M. Kozicki, G. Anagnostopoulos and D. Baltas, "3D dose verification in ^{192}Ir HDR prostate monotherapy using polymer gels and MRI," Med. Phys., **30,** 2031 – 2039 (2003).

16. G. Anagnostopoulos, D. Baltas, P. Karaiskos, E. Pantelis, **P. Papagiannis** and L. Sakelliou, "An analytical dosimetry model as a step towards accounting for inhomogeneities and bounded geometries in ^{192}Ir brachytherapy treatment planning," Phys. Med. Biol., **48**, 1625 – 1647 (2003).
17. **P. Papagiannis**, A. Angelopoulos, E. Pantelis, P. Karaiskos, Y. Shimizu and L. Sakelliou, "Monte Carlo dosimetry of ^{60}Co HDR sources," Med. Phys. **30**, 712 – 721 (2003).
18. P. Karaiskos, A. Angelopoulos, E. Pantelis, **P. Papagiannis**, L. Sakelliou, E. Kouwenhoven, D. Baltas, "Monte Carlo dosimetry of a new ^{192}Ir pulsed dose rate brachytherapy source," Med. Phys., **30**, 9-16 (2003).
19. P. Baras, I. Seimenis, P. Kipouros, **P. Papagiannis**, A. Angelopoulos, L. Sakelliou, E. Pappas, D. Baltas, P. Karaiskos, P. Sandilos, L. Vlachos, "Polymer gel dosimetry using a three-dimensional MRI acquisition technique," Med. Phys. **29**, 2506-2516 (2002).
20. **P. Papagiannis**, A. Angelopoulos, E. Pantelis, L. Sakelliou, D. Baltas, P. Karaiskos, P. Sandilos, L. Vlachos, "Dosimetry comparison of ^{192}Ir Sources," Med. Phys. **29**, 2239-2246 (2002).
21. E. Pantelis, D. Baltas, K. Dardoufas, P. Karaiskos, **P. Papagiannis**, H. Rosaki, L. Sakelliou, "On the dosimetric accuracy of a Sievert integration model in the proximity of Ir-192 HDR sources," Int. J. of Radiat. Oncol., **53**, 1071-1084 (2002).
22. C. Kalantzis, C. Markoglou, P. Gabriel, **P. Papagiannis**, S. Tarazis, I. Bramis, H. Bastounis, N. Kalantzis, "Endoscopic ultrasonography in the preoperative staging of colorectal cancer," Hepato-Gastroenterology, **49,** 683-686 (2002).
23. G. Anagnostopoulos, D. Baltas, P. Karaiskos, P. Sandilos, **P. Papagiannis**, L. Sakelliou, "Thermoluminescent dosimetry of the selectSeed ^{125}I interstitial brachytherapy seed," Med. Phys. **29**, 709-716 (2002).
24. P. Kipouros, G, Anagnostopoulos, A. Angelopoulos, D. Baltas, P. Baras, A. Drolapas, P. Karaiskos, E. Pantelis, **P. Papagiannis**, L. Sakelliou, I. Seimenis, "Dosimetric calculations and VIPAR polymer gel dosimetry close to the microSelectron HDR," Zeit. Med. Physik, **12**, 252-259 (2002).
25. D. Baltas, P. Karaiskos, **P. Papagiannis**, L. Sakelliou, E. Loeffler, N. Zamboglou, "Beta versus gamma dosimetry close to ^{192}Ir brachytherapy sources," Med. Phys. **28**, 1875-1882 (2001).
26. P. Karaiskos, **P. Papagiannis**, L. Sakelliou, G. Anagnostopoulos, D. Baltas, "Monte Carlo dosimetry of the selectSeed ^{125}I interstitial brachytherapy seed," Med. Phys. **28**, 1753-1760 (2001).
27. **P. Papagiannis**, E. Pappas, P. Kipouros, A. Angelopoulos, L. Sakelliou, P. Baras, P. Karaiskos, I. Seimenis, P. Sandilos, D. Baltas, "Dosimetry close to an Ir HDR source using N-vinylpyrrolidone based polymer gels and magnetic resonance imaging," Med. Phys. **28**, 1416-1426 (2001).
28. P. Karaiskos, **P. Papagiannis**, A. Angelopoulos, L. Sakelliou, D. Baltas, P. Sandilos, L. Vlachos, "Dosimetry of ^{192}Ir wires for LDR interstitial brachytherapy following the AAPM TG-43 dosimetric formalism," Med. Phys. **28**, 156-166 (2001).