

<b>PERSONAL INFORMATION</b>
SURNAME: <b>LIAPARINOS</b>
NAME: <b>PANAGIOTIS</b>
DATE OF BIRTH: 16/02/1980
PLACE OF RESIDENCE: ATHENS
Email: liapkin@uniwa.gr
TEL: 2105385319, 6945443070

<b>CURRENT POSITION</b>
<b>02.2017 - now</b> Assistant Professor, Department of Biomedical Engineering, University of West Attica, Greece

<b>PREVIOUS POSITION</b>
<b>02.2012 - 01.2017</b> Lecturer, Department of Biomedical Engineering, TEI of Athens, Greece.
<b>10.2008 – 01.2012</b> Laboratory assistant: Laboratory of Ionizing radiation, Dept of Medical Instruments Technology, TEI of Athens, Greece.

<b>EDUCATION</b>
<b>02.2011 - 01.2012 Post Doc position (IKY: Fellowship)</b> - Department of Biomedical Engineering, TEI of Athens, Greece Title: “Εφαρμογή μεθόδων Μόντε Κάρλο για τη μελέτη ανιχνευτικών συστημάτων ιατρικής απεικόνισης βασισμένων σε φθορίζοντα υλικά νέας δομής με πυκνή διάταξη κόκκων και διαστάσεις έως και την περιοχή των νανοσωματιδίων”
<b>01/2005 – 05/2007 PhD Degree</b> - Medical Physics Laboratory, Department of Medical School, University of Patras, Greece, Title: “Ανάπτυξη υπολογιστικού μοντέλου προσομοίωσης φθορίζοντων υλικών ανιχνευτών ιατρικής απεικόνισης με τεχνικές Monte Carlo”.
<b>10/2002-12/2004 Master Degree</b> - Medical Physics Laboratory, Department of Medical School, University of Patras, Greece, Thesis Title: “Monte Carlo simulation on phosphor screens in medical mammographic imaging systems”.
<b>10/1998 – 09/2002 First Degree</b> - Department of Medical Instruments Technology, TEI of Athens, Greece, Thesis Title: “Μελέτη της απόδοσης φωτός διαφόρων σπινθηριστών (π.χ. LSO, BGO, YAP κτλ) που χρησιμοποιούνται σε ιατρικά απεικονιστικά συστήματα”.

<b>PUBLICATIONS</b>
<b>P. Liaparinos</b> , ‘LIGHTAWE – case studies of LIGHT spreAd in poWder materials: a montE carlo simulation tool for research and educational purposes’, <i>Applied Physics B: Lasers and Optics</i> , Vol. 125 (2019). <a href="https://link.springer.com/article/10.1007/s00340-019-7267-z">https://link.springer.com/article/10.1007/s00340-019-7267-z</a>
<b>P. Liaparinos</b> , S. David,, ‘The Surface-Roughness Effects on Light Beam Interactions between the CsI Phosphor and Optical Sensing Materials’, <i>Crystals</i> , Vol. 10, 174, 2020. <a href="https://www.mdpi.com/2073-4352/10/3/174">https://www.mdpi.com/2073-4352/10/3/174</a>
N. Kalyvas, <b>P. Liaparinos</b> , ‘Analytical and Monte Carlo comparisons on the optical transport mechanisms of powder phosphors’, <i>Optical Materials</i> , Vol. 88, 396-405, 2019. <a href="https://www.sciencedirect.com/science/article/abs/pii/S0925346718308036">https://www.sciencedirect.com/science/article/abs/pii/S0925346718308036</a>
<b>P. Liaparinos</b> , ‘Light beam interactions and emission performance in powder phosphor materials: The role of the binder, <i>Nuclear Instruments and Methods in Physics Research, Section B</i> , Vol. 432, 5-12, 2018. <a href="https://www.sciencedirect.com/science/article/abs/pii/S0168583X1830421X">https://www.sciencedirect.com/science/article/abs/pii/S0168583X1830421X</a>
<b>P.F. Liaparinos</b> , ‘Examining phosphor material properties for imaging purposes: the role of the complex refractive index in the optical diffusion performance, <i>Biomed. Phys. Eng. Express</i> , Vol. 3, 015006, 2017. <a href="https://iopscience.iop.org/article/10.1088/2057-1976/3/1/015006">https://iopscience.iop.org/article/10.1088/2057-1976/3/1/015006</a>
<b>P. Liaparinos</b> , N. Kalyvas, E. Katsiotis, I. Kandarakis, ‘Investigating the particle packing of powder phosphors for imaging instrumentation technology: An examination of Gd <sub>2</sub> O <sub>2</sub> S:Tb Phosphor’, <i>Journal of Instrumentation</i> , Vol. 11(10) P10001, 2016. <a href="https://iopscience.iop.org/article/10.1088/1748-0221/11/10/P10001">https://iopscience.iop.org/article/10.1088/1748-0221/11/10/P10001</a>
<b>P.F. Liaparinos</b> , ‘Anisotropic optical distribution of powder phosphor materials applied in medical imaging instrumentation’, <i>Applied Physics A</i> , Vol. 122:93, 1-9, 2016. <a href="https://link.springer.com/article/10.1007/s00339-015-9583-4">https://link.springer.com/article/10.1007/s00339-015-9583-4</a>

- P.F. Liaparinos**, ‘Optical absorption characteristics in the assessment of powder phosphor-based x-ray detectors: from nano- to micro-scale’, *Physics in Medicine and Biology*, Vol. 60, pp. 8885-8899, 2015.  
<https://iopscience.iop.org/article/10.1088/0031-9155/60/22/8885>
- P.F. Liaparinos**, ‘Strain effects on the optical parameters of quantum dots nanocrystals employed in biomedical applications’, *Journal of Luminescence*, Vol. 146, pp. 193-198, 2014.  
<https://www.sciencedirect.com/science/article/abs/pii/S0022231313006145>
- I. Seferis, C. Michail, I. Valais, J. Zeler, **P. Liaparinos**, G. Fountos, N. Kalyvas, S. David, F. Stromatia, E. Zych, I. Kandarakis, G. Panayiotakis, ‘Light emission efficiency and imaging performance of Lu<sub>2</sub>O<sub>3</sub>:Eu nanophosphor under X-ray radiography conditions: Comparison with Gd<sub>2</sub>O<sub>2</sub>S:Eu’, *Journal of Luminescence*, Vol. 151, pp. 229-234, 2014.  
<https://www.sciencedirect.com/science/article/abs/pii/S0022231314001082>
- A. C. Konstantinidis, M. B. Szafraniec, L. Rigon, G. Tromba, D. Dreossi, N. Sodini, **P.F. Liaparinos**, S. Naday, S. Gunn, A. McArthur, R. D. Speller, and A. Olivo, ‘X-ray performance evaluation of the Dexela CMOS APS X-ray detector using monochromatic synchrotron radiation in the mammographic energy range’, *IEEE Transactions on Nuclear Science*, Vol. 60, pp. 3969-3980, 2013.  
<https://ieeexplore.ieee.org/document/6588989>
- P.F. Liaparinos**, ‘Light wavelength effects in submicrometer phosphor materials using Mie scattering and Monte Carlo simulation’, *Medical Physics*, Vol. 40, pp. 101911, 2013.  
<https://aapm.onlinelibrary.wiley.com/doi/abs/10.1118/1.4821089>
- P. F. Liaparinos**, ‘Optical diffusion performance of nanophosphor-based materials for use in medical imaging’, *Journal of Biomedical Optics*, Vol. 17, 126013, 2012.  
<https://www.ncbi.nlm.nih.gov/pubmed/23212124>
- P. Liaparinos** and K. Bliznakova, ‘Monte Carlo performance on the x-ray converter thickness in digital mammography using software breast models’, *Medical Physics*, Vol. 39, pp. 6638-6651, 2012.  
<https://www.ncbi.nlm.nih.gov/pubmed/23127058>
- N. Kalyvas, **P. Liaparinos**, C. Michail, S. David, G. Fountos, M. Wójtowicz, E. Zych, I. Kandarakis, ‘Studying the luminescence efficiency of Lu<sub>2</sub>O<sub>3</sub>:Eu nanophosphor material for digital X-ray imaging applications’, *Applied Physics A*, Vol. 106, pp. 131-136, 2012.  
<https://link.springer.com/article/10.1007/s00339-011-6640-5>
- P. Liaparinos**, I. Kandarakis, ‘Overestimations in zero frequency DQE of x-ray imaging converters assessed by Monte Carlo techniques based on the study of energy impartation events’, *Medical Physics*, Vol. 38, pp. 4440-4450, 2011.  
<https://www.ncbi.nlm.nih.gov/pubmed/21859045>
- C. M. Michail, G. P. Fountos, **P. F. Liaparinos**, N. E. Kalyvas, I. Valais, I. S. Kandarakis, G. S. Panayiotakis., ‘Light emission efficiency and imaging performance of Gd<sub>2</sub>O<sub>2</sub>S:Eu powder scintillator under x-ray radiography conditions’, *Medical Physics*, Vol. 37, pp. 3694-3703, 2010.  
<https://aapm.onlinelibrary.wiley.com/doi/10.1118/1.3451113>
- K. Bliznakova, R. Speller, J. Horrocks, **P. Liaparinos**, Z. Kolitsi, N. Pallikarakis., ‘Experimental validation of a radiographic simulation code using breast phantom for x-ray imaging’, *Computers in Biology and Medicine*, Vol. 40, pp. 208-214, 2010.  
<https://www.ncbi.nlm.nih.gov/pubmed/20056197>
- P. Liaparinos** and I. Kandarakis, ‘The imaging performance of compact Lu<sub>2</sub>O<sub>3</sub>:Eu phosphor screens: Monte Carlo simulation for applications in mammography’, *Medical Physics*, Vol. 36, pp. 1985-1997, 2009.  
<https://www.ncbi.nlm.nih.gov/pubmed/19610287>
- P. Liaparinos** and I. Kandarakis, ‘The Monte Carlo evaluation of noise and resolution properties of granular phosphor screens’, *Physics in Medicine and Biology*, Vol. 54, pp. 859-874, 2009.

<https://www.ncbi.nlm.nih.gov/pubmed/19141882>

P. Gonias, N. Bertsekas, N. Karakatsanis, G. Saatsakis, A. Gaitanis, D. Nikolopoulos, G. Loudos, L. Papaspyrou, N. Sakellios, X. Tsantilas, A. Daskalakis, **P. Liaparinos**, K. Nikita, A. Louizi, D. Cavouras, I. Kandarakis, G. S. Panayiotakis, 'Validation of a GATE model for the simulation of the Siemens biograph™ 6 PET scanner', *NIMA*, Vol. 571, pp. 263-266, 2007.

<https://www.sciencedirect.com/science/article/pii/S0168900206018754>

**P. Liaparinos**, I. Kandarakis, D. Cavouras, H. Delis, G. Panayiotakis, 'Modeling granular phosphor screens by Monte Carlo methods', *Medical Physics*, Vol. 33, pp. 4502-4514, 2006.

<https://www.ncbi.nlm.nih.gov/pubmed/17278802>

## CONFERENCES

**P. F. Liaparinos**, N. Kalyvas, I. Kandarakis, "Surface roughness effects on light detection performance in microscopy systems' Focus on Microscopy, FOM2019, April, London, 2019.

**P. Liaparinos**, N. Kalyvas, I. Kandarakis, "Monte Carlo study of particle packing effects of powder phosphors for medical imaging purposes' RAD2017 – Fifth international conference on radiation and applications in various fields of research, June, Budva, Montenegro, 2017.

**P. Liaparinos** and I. Kandarakis, "Examination of the variation of the optical diffusion properties in nanophosphor materials for use in biomedical imaging and instrumentation,' SPIE, Biophotonics South America", 22-26 May, Brazil, 2015.

**P. Liaparinos**, I. Kandarakis, "Advanced nanophosphor materials of different porosity for use in medical imaging,' EuroNanoForum 2015 conference", 10-12 June, Riga, Latvia, 2015.

**P. Liaparinos**, S. David and I. Kandarakis, "The effect of light wavelength on optical anisotropy of granular phosphor-based indirect X-ray detectors,' Medical Physics Meeting 2015", 13-16 May, Warsaw, Poland, 2015.

N. Kalyvas **P. Liaparinos**, "Comparing analytical and Monte Carlo optical diffusion models in phosphor-based X-ray detectors", SPIE Medical Imaging, 15-20 February, San Diego, USA, 2014.

I. Valais, S. David, C. Michail, A. Bakas, N. Kalyvas, K. Kourkoutas, I. Seferis, I. Kandarakis and **P. F. Liaparinos**, "Light emission measurements of LFS-3 and GAGG:Ce single crystal samples under X-ray radiographic conditions", Tipp, International conference on technology and instrumentation in particle physics, Amsterdam, Netherlands, 2014.

**P. Liaparinos** and I. Kandarakis, "Investigating the optical diffusion capabilities of nanophosphors for use in medical imaging", SPIE Medical Imaging, 09-14 February, Florida, USA, 2013.

N. Kalyvas, I. Valais, S. David, Ch. Michail, G. Fountos, **P. Liaparinos**, I. Kandarakis, "Studying the energy dependence of intrinsic conversion efficiency of single crystal scintillators under X-ray excitation", XVth International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions, Kazan, Russia, 2013.

## REVIEWING ACTIVITIES

### A. Reviewer in scientific Journals:

1. Physics in Medicine and Biology, 2. Nuclear Instruments & Methods A, 3. Applied Physics B – Lasers and Optics, 4. European Radiology, 5. Journal of Alloys and Compounds, 6. Journal tissue and science engineering, 7. International Journal of Nanomedicine, 8. Journal of Radiological Protection, 9. Results in Physics, 10. Nuclear Science and Techniques, 11. Journal of Electromagnetic Waves and Applications, 12. Mini-Reviews in Medicinal Chemistry, 13. Journal of Medical Imaging, 14. Materials, 15. Optical Materials Express, 16. Biomedical Research International, 17. Journal of Rare Earths, 18. Crystals, 19. Sensors, 20. Scientific Reports, 21. Applied Sciences, 22. Journal of Spectroscopy, 23. ACS Applied Nano Materials, 24. Quantitative Spectroscopy and Radiative Transfer, 25. Current Medical Imaging.

### B. Reviewer in scientific Conferences:

- International Conference on Physics, Mathematics and Statistics (ICPMS) Shanghai, China, 2018.  
- BIOMEPP 2017 – Conference on Bio-Medical Instr. and related Engin. and Phys. Sciences, Athens, 2017.  
- The 6<sup>th</sup> Global Conference on Materials Science and Engineering (CMSE) Beijing, China, 2017.  
- The 5<sup>th</sup> Inter. Conference on Biomedical Engineering and Biotechnology (ICBEB) Hangzhou, China, 2016.  
- International Conference *Science in Technology*' ScinTE 2015, Athens, 2015.  
- BIOMEPP 2015 – Conference on Bio-Medical Instr. and related Engin. and Phys. Sciences, Athens, 2015.

**C. Editorial Board** of the e- journal "Engineering, Technology & Applied Science Research" (ETASR).

**D. Reviewer in scientific books:**

- “Principles of Medical Instrumentation Engineering” by Inan Gular (ELSEVIER)
- “Printed Sensors: Theory and Instrumentation” (BENTHAM SCIENCE PUBLISHERS)
- “The Best and the Fittest: Human resource selection in Education” (BENTHAM SCIENCE PUBLISHERS)
- “Rock Particle Image Processing and Analysis” (BENTHAM SCIENCE PUBLISHERS)
- “Introduction to Biomedical Instrumentation and its Applications” (ELSEVIER)
- “Practical Applications of Biomedical Instrumentation” (ELSEVIER)

**E. Reviewer in scientific programs:**

- CONSOLIDER (large scale, budget 6.000.000 €) on behalf of the Spanish Ministry of Science and Innovation (Novel sensors and technologies for medical imaging: application to breast cancer diagnosis)

**TEACHING ACTIVITIES**

**02.2017 - Today** Assistant Professor, Department of Biomedical Engineering, University of West Attica, Greece (Topics: Biomedical Optics, Radiation Physics, Radiotherapy)

**02.2012 - 01.2017** Lecturer, Department of Biomedical Engineering, TEI of Athens, Greece

**2014-Today** Postgraduate course (master) - ‘Advanced systems and methods in Biomedical Engineering’, Department of Biomedical Engineering, University of West Attica, Greece

**2015-2020** Postgraduate course (master) - ‘Medical Physics’, Dept. of Medical School, University of Patras,

**26/11/2012–30/11/2012** ERASMUS - «Indirect digital detectors in medical imaging systems», Technical University of Madrid E.T.S.I.T, Department of Electronic Engineering, Spain.

**25/11/2013–01/12/2013** ERASMUS - «Current status and future prospects of nanophosphor based detectors for use in medical imaging», Technical University of Madrid E.T.S.I.T, Department of Electronic Engineering, Spain.

**10/04/2016–16/04/2016** ERASMUS – 1. Phosphor-based X-ray detectors: Basic principles and future prospects, 2. An introduction of Monte Carlo techniques in medical imaging applications, Budapest University of Technology and Economics, Optics and Mechanical Engineering Informatics, Hungary.

**07/05/2017–13/05/2017** ERASMUS – 1. X-ray detectors: Basic principles and applications in medical imaging, 2. Introducing the basic components of medical imaging systems, ISEP – Instituto Superior de Engenharia do Porto, Department of Biomedical Engineering, Portugal.

**10/06/2019–14/06/2019** ERASMUS – 1. Effects of phosphor materials in medical image science, 2. Basic principles and systems in radiation therapy, University of Wroclaw, Department of Chemistry, Poland.

**16/09/2019–15/11/2019** ERASMUS – Specific topics relative to phosphor material science and medical imaging, Student: Hediye Nur Bostanci. Collaboration with the University T.C Düzce University /Biomedical Engineering, Turkey

**SUPERVISION OF GRADUATE STUDENTS AND POST DOCTORAL FELLOWS**

**2012-2020** Number of undergraduate students: **36**

Department of Biomedical Engineering, TEI of Athens, Greece

Department of Biomedical Engineering, University of West Attica

**2018-2020** Number of graduate (master) students: **3**

Department of Biomedical Engineering, University of West Attica

**2019-2020** Number of advisory committee in PhD: **1**

Department of Biomedical Engineering, University of West Attica

**\*Important note:** TEI of Athens did NOT give the capability to the PI for PhD supervision until its transformation to University of West Attica (September 2018)

**FELLOWSHIPS AND AWARDS**

**2012:** Academic and research excellence for the contribution in Hellenic academic education – Theme: “Medical imaging detector evaluation - The effect of phosphor materials on detector performance”

**2006:** Award article: «P. Liaparinos, I. Kandarakis, D. Cavouras, H. Delis, G. Panayiotakis, ‘Modeling granular phosphor screens by Monte Carlo methods’, *Medical Physics*, Vol. 33, pp. 4502-4514, 2006.» in «Virtual Journal of Biological Physics Research», published by the American Physical Society and the American Institute of Physics, Topic: instrumentation development

04/2005 -12/2005 European Union Scholarship (Marie Curie Fellowships), Department of Electronic Engineering, Technical University of Madrid, Spain.

**2003-2004** IKY: Award of best student performance, Medical Physics Laboratory, Dept of Medical School, University of Patras

**1999-2000** IKY: Award - best student performance, Dept of Med. Instr. Technology, TEI of Athens, Greece.

**1998-1999 IKY: Award - best student performance, Dept of Med. Instr. Technology, TEI of Athens, Greece.**

<b>RESEARCH GRANTS</b>			
<b>Project Title</b>	<b>Funding source</b>	<b>Period</b>	<b>Role of PI</b>
EIIEE – «YIATIA: Monte Carlo application of studying high packing nanoscale materials for use in medical imaging systems»	“Special Account for Research Grants” of the TEI of Athens	10/2015 – 09/2016	Coordinator (PI)
ARISTEIA I: MISCIRLU ‘Medical Image Science through luminescence’	General Secretariat of Research and Technology	09/2012 – 09/2015	Main research Team
ARCHIMEDES III: NANOCARLO “Evaluation of nanophosphor materials in medical imaging applications: Monte Carlo and experimental examination”	Greek Ministry of Education	03/2012 – 06/2015	Main research Team
ARCHIMEDES III: SCoDo “Experimental evaluation of new co-doped scintillator materials for use in combined tomographic imaging systems”	Greek Ministry of Education	03/2012 – 06/2015	Investigator
ARCHIMEDESIII:XDUALGNOSIS “Novel applications of x-ray dual energy for early diagnosis in osteoporosis, mammography and angiography”	Greek Ministry of Education	03/2012 – 06/2015	Investigator
EPEAEK II-«Program: Provision Services, Code: B. 583»,	Greek Ministry of Education	07/2010 – 12/2010	Technical Assistant
European research program NANOTHER: «Integration of novel NANOparticle based technology for THERapeutics and diagnosis of different types of cancer»	European Grants of European Union	01/2009 – 06/2009	Investigator
EPEAEK I-«ARCHIMEDES I»: «Phosphor investigation for use in detectors of medical imaging systems»	Greek Ministry of Education	02/2004 – 08/2006	Investigator
EPEAEK II-«ARCHIMEDES II»: «Experimental investigation and Monte Carlo simulation of radiation detector materials used in Diagnostic Radiology and Nuclear Medicine systems»	Greek Ministry of Education	09/2005 – 12/2006	Investigator
«ATHENA 2004» - Research and Education Committee: «Simulation of Computed Tomography Breast Imaging: Effect of Detector Material and Reconstruction Algorithm on Image Quality»	“Special Account for Research Grants” of the TEI of Athens	01/2006 – 03/2006	Investigator
EPEAEK II-«Reformation of undergraduate program studies»	“Special Account for Research Grants” of the TEI of Athens	03/2004 – 10/2004	Technical Assistant
EPEAEK-«Program for master studies-topic: Medical Physics»	University of Patras	12/2002 – 04/2003	Technical Assistant

## **SCIENTIFIC ACHIEVEMENTS**

### **TEN (10) REPRESENTATIVE PUBLICATIONS**

#### **EIGHT (8) REPRESENTATIVE JOURNAL PUBLICATIONS**

N. Kalyvas, **P. Liaparinos**, ‘Analytical and Monte Carlo comparisons on the optical transport mechanisms of powder phosphors’, *Optical Materials*, Vol. 88, 396-405, 2019.

**P. Liaparinos**, N. Kalyvas, E. Katsiotis, I. Kandarakis, ‘Investigating the particle packing of powder phosphors for imaging instrumentation technology: An examination of Gd<sub>2</sub>O<sub>2</sub>S:Tb Phosphor’, *Journal of Instrumentation*, Vol. 11(10) P10001, 2016.

**P. Liaparinos**, N. Kalyvas, I. Kandarakis, D. Cavouras, ‘Analysis of the imaging performance in indirect digital mammography detectors by linear systems and signal detection models’, *Nuclear Instruments and Methods in Physics Research, Section A*, Vol. 697, pp. 87-98, 2013.

**P. Liaparinos** and K. Bliznakova, ‘Monte Carlo performance on the x-ray converter thickness in digital mammography using software breast models’, *Medical Physics*, Vol. 39, pp. 6638-6651, 2012.

[11] N. Kalyvas, **P. Liaparinos**, C. Michail, S. David, G. Fountos, M. Wójtowicz, E. Zych, I. Kandarakis, ‘Studying the luminescence efficiency of Lu<sub>2</sub>O<sub>3</sub>:Eu nanophosphor material for digital X-ray imaging applications’, *Applied Physics A*, Vol. 106, pp. 131-136, 2012.

**P. Liaparinos**, I. Kandarakis, ‘Overestimations in zero frequency DQE of x-ray imaging converters assessed by Monte Carlo techniques based on the study of energy impartation events’, *Medical Physics*, Vol. 38, pp. 4440-4450, 2011.

**P. Liaparinos** and I. Kandarakis, ‘The imaging performance of compact Lu<sub>2</sub>O<sub>3</sub>:Eu phosphor screens: Monte Carlo simulation for applications in mammography’, *Medical Physics*, Vol. 36, pp. 1985-1997, 2009.

**P. Liaparinos** and I. Kandarakis, ‘The Monte Carlo evaluation of noise and resolution properties of granular phosphor screens’, *Physics in Medicine and Biology*, Vol. 54, pp. 859-874, 2009.

#### **TWO (2) REPRESENTATIVE CONFERENCE PUBLICATIONS**

##### **Progress in Biomedical Optics and Imaging - Proceedings of SPIE**

**P. Liaparinos** and I. Kandarakis, ‘Examination of the variation of the optical diffusion properties in nanophosphor materials for use in biomedical imaging and instrumentation,’ SPIE, Biophotonics South America”, 22-26 May, Brazil, 2015.

**P. Liaparinos** and I. Kandarakis, ‘Investigating the optical diffusion capabilities of nanophosphors for use in medical imaging”, SPIE Medical Imaging, 09-14 February, 2013, Florida, USA.

#### **RESEARCH MONOGRAPHS**

**P. Liaparinos**, ‘LIGHTAWE – case studies of LIGHT spreAd in poWder materials: a montE carlo simulation tool for research and educational purposes’, *Applied Physics B: Lasers and Optics*, Vol. 125 (2019).

**P. Liaparinos**, ‘Light beam interactions and emission performance in powder phosphor materials: The role of the binder’, *Nuclear Instruments and Methods in Physics Research, Section B*, Vol. 432, 5-12, 2018.

**P.F. Liaparinos**, ‘Examining phosphor material properties for imaging purposes: the role of the complex refractive index in the optical diffusion performance’, *Biomed. Phys. Eng. Express*, Vol. 3, 015006, 2017.

**P.F. Liaparinos**, ‘Anisotropic optical distribution of powder phosphor materials applied in medical imaging instrumentation’, *Applied Physics A*, Vol. 122:93, 1-9, 2016.

**P.F. Liaparinos**, ‘Optical absorption characteristics in the assessment of powder phosphor-based x-ray detectors: from nano- to micro-scale’, *Physics in Medicine and Biology*, Vol. 60, pp. 8885-8899, 2015.

**P.F. Liaparinos**, ‘Strain effects on the optical parameters of quantum dots nanocrystals employed in biomedical applications’, *Journal of Luminescence*, Vol. 146, pp. 193-198, 2014.

**P.F. Liaparinos**, ‘Light wavelength effects in submicrometer phosphor materials using Mie scattering and Monte Carlo simulation’, *Medical Physics*, Vol. 40, pp. 101911, 2013.

**P. F. Liaparinos**, ‘Optical diffusion performance of nanophosphor-based materials for use in medical



imaging', Journal of Biomedical Optics, Vol. 17, 126013, 2012.

**P. Liaparinos**, 'Monte Carlo simulations in medical imaging', *e-Journal of Science and Technology (e-JST)*, 364-367, 2009.

### **INVITED PRESENTATIONS**

- **P. Liaparinos** COST – ACTION TD1401 **Presentation title:** Scintillating materials and optical diffusion mechanisms in medical imaging detectors (2016).
- I. Kandarakis, I. Valais, **P. Liaparinos**, G. Fountos, N. Kalyvas, C. Michail, S. David BIOMEPE 2015 – Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences **Presentation title:** Medical Image Science through luminescence -MISCIRLU project (2015).
- P. Liaparinos**, International Conference, Bio-Medical Instrumentation and related Engineering and Physical Sciences (BIOMEPE), Department of Medical Instruments Technology, **Presentation title:** Nanophosphors (2014)
- **P. Liaparinos**, - ΕΚΠΑ, TEI of Athens, IIBEAA, ΕΚΕΦΕ, Master Program: “Computer Technologies in Medicine and Biology”, Invited lectures: **Presentation title:** “Monte Carlo methods in medical imaging systems,” **Presentation title:** “**Basic principles and computational parameters in medical imaging detective systems**,” Academic years: 2010-2014.
- **P. Liaparinos**, Faculty of Chemistry, University of Wroclaw, Poland: **Presentation title:** Optical diffusion in nanophosphor materials: Physics and requirements in medical image science (2013).
- Becollari, **Liaparinos**, » *MEDICEXPO2011* - International Exhibition of Medical & Hospital Machinery & Equipment **Presentation title:** «Monte Carlo simulation of radiation scattering in detectors of medical imaging systems (2011).
- **P. Liaparinos**, 3<sup>rd</sup> International Conference on Experiments/Process/System Modeling/Simulation & Optimization 3<sup>rd</sup> IC-EpsMsO, **Presentation title:** Monte Carlo simulations in medical imaging (2009).
- **P. Liaparinos**, *MEDICEXPO2009* - International Exhibition of Medical & Hospital Machinery & Equipment, **Presentation title:** Monte Carlo techniques in medical applications (2009).
- **P. Liaparinos**, A. Konstadinidis, *MEDICEXPO2007* - International Exhibition of Medical & Hospital Machinery & Equipment, **Presentation title:** Monte Carlo methods in radiographic imaging (2007).

### **ORGANIZATION OF INTERNATIONAL CONFERENCES**

1. Bio-Medical Instrumentation and related Engineering and Physical Sciences (BIOMEPE), Department of Medical Instruments Technology, TEI of Athens, June 21-22, 2013.
2. Bio-Medical Instrumentation and related Engineering and Physical Sciences (BIOMEPE), Department of Medical Instruments Technology, TEI of Athens, June 18-20, 2015.

### **FELLOWSHIPS AND AWARDS**

**2012:** Academic and research excellence for the contribution in Hellenic academic education – Theme: “Medical imaging detector evaluation - The effect of phosphor materials on detector performance”.

**2006:** Award article: «P. Liaparinos, I. Kandarakis, D. Cavouras, H. Delis, G. Panayiotakis, ‘Modeling granular phosphor screens by Monte Carlo methods’, *Medical Physics*, Vol. 33, pp. 4502-4514, 2006.» in «Virtual Journal of Biological Physics Research», published by the American Physical Society and the American Institute of Physics, Topic: instrumentation development.

04/2005 -12/2005 European Union Scholarship (Marie Curie Fellowships), Department of Electronic Engineering, Technical University of Madrid, Spain.

**2003-2004** IKY: Award of best student performance, Medical Physics Laboratory, Dept of Medical School, University of Patras.

**1999-2000** IKY: Award - best student performance, Dept of Med. Instr. Technology, TEI of Athens, Greece.

**1998-1999** IKY: Award - best student performance, Dept of Med. Instr. Technology, TEI of Athens, Greece.

### **MAJOR CONTRIBUTIONS TO THE EARLY CAREERS OF EXCELLENT RESEARCHERS**

Researcher: S. Kallivokas

Master Thesis: Supervisor, PhD Advisory committee

S. Kallivokas, I. Kandarakis, E. Labdas, **P. Liaparinos**, M. Gavra, M. Chasiotou, D. Verganelakis, V. Papadakis, H. Tshipou, N. Tourkantoni, E. Rigatou, D. Demenagas, V. Lyra, “18F-FDG PET/CT Imaging in Bone and Soft Tissue Pediatric Sarcomas: Experience from the Children’s Hospital of Greece,” Anniversary Conference 20 Years Cyprus Society of Nuclear Medicine (CySNM20) Cyprus, 6th – 10th November 2019.