

Personal data

Name: Pantelis Karaiskos

Current position: Professor and Director,
Medical Physics Laboratory, Medical School,
National and Kapodistrian University of Athens, Greece

Date of birth: 09 June 1969

e-mail: pkaraisk@med.uoa.gr, tel: +302107462368

webpage: https://mpl-en.med.uoa.gr/el/staff/academic_staff/karaiskos_pantelis/

Education

2002: Ph.D. in Medical Physics, Medical School, National and Kapodistrian University of Athens, Greece

1994: M.Sc. in Medical Physics, University of Aberdeen, UK

1992: B.Sc. in Physics, Physics Dept., University of Athens, Greece

Employment

03/2018- present: Director, Medical Physics Laboratory, Medical School, National and Kapodistrian University of Athens

09/2018-present: Director of the Inter-University postgraduate MSc course in "Medical and Radiation Physics", Greece

08/2017- present: Professor, Medical Physics Laboratory, Medical School, National and Kapodistrian University of Athens

09/2011- 08/2017: Associate Professor, Medical Physics Laboratory, Medical School, National and Kapodistrian University of Athens

2006-2011: Assistant Professor, Medical Physics Laboratory, Medical School, National and Kapodistrian University of Athens

1999-2006: Medical Physicist, Medical Physics Department, Hygeia Hospital, Athens

1996-2003: Research fellow: Nuclear & Particle Physics Sec., Physics Dept., National and Kapodistrian University of Athens

Teaching responsibilities

- Medical Physics: undergraduate Medical students
- Physics of the human body: undergraduate Medical students
- Radiotherapy: postgraduate Medical Physics students (MSc course in Medical Physics)
- Radiation Protection: IAEA Regional postgraduate courses on radiation protection and the safety of radiation sources (2010, 2014, 2019,2023)
- Computer applications in intensive care units and contemporary surgery techniques: Postgraduate Medical students in the corresponding M.Sc. programs
- Lectures in >40 educational seminars
- Supervisor in >50 MSc thesis in Medical Physics
- Supervisor in 15 PhD thesis in Medical Physics

Professional Service

- Director of the Inter-University (5 Medical Schools from five Greek Universities) postgraduate course in "Medical and Radiation Physics", Greece (<https://medphys-en.med.uoa.gr/>)
- Member of the Board of Directors of the Institute of Accelerating Systems & Applications (IASA), Greece (<https://medphys-en.med.uoa.gr/>)
- Member of the Board: *European Board for Accreditation in Medical Physics (EBAMP)* (<https://www.ebamp.eu>)

- Member of various Institutional Committees
- Member of the Educational Committee of the Hellenic Association of Medical Physicists
- Member of the Program or Scientific Committee in 12 Scientific Conferences, Workshops and Meetings
- Referee in 10 international scientific journals
- Reviewer of grant proposals for national and international bodies

Research Interests

- Quality assurance in advanced radiotherapy applications
- Conventional (TLD, diode, film) and contemporary (3D polymer gel-MRI) experimental dosimetry in modern radiation therapy techniques, such as Intensity Modulated Radiation Therapy (IMRT), high dose rate brachytherapy and stereotactic radiotherapy-radiosurgery
- Development of phantoms and methods for the assessment and correction of geometric distortion in MRI images used for radiotherapy applications
- Comparison and evaluation of modern radiotherapy techniques using physical and biological parameters
- Monte Carlo modelling of brachytherapy sources for the generation of dosimetry data for use in treatment planning systems and development of analytical dosimetry models guided by Monte Carlo simulation
- Monte Carlo simulations of high energy x-rays and charge particles for radiotherapy purposes

Participation in research projects (2010 – present)

- “Assessment of spatial uncertainties in target determination related to MRI and their impact on stereotactic radiotherapy treatment planning in multiple brain metastases cases” (MIS 5047965)
Budget: 45.000€. Source: Greece and European Union (European Social Fund-ESF) (Coordinator)
- “Independent verification of the dose calculation algorithms implemented in the GammaPlan Treatment Planning System”
Budget: 30.000€. Source: ELEKTA Instrument AB, Sweden. Start-end: 2018 – 2020 (Coordinator)
- “Development of advanced tools for quality assurance and optimization in stereotactic radiosurgery-radiotherapy applications”
Budget: 50.000€. Source: State Scholarships Foundation of Greece through the program “Research Projects for Excellence IKY/SIEMENS”. Start-end: 2015 – 2017 (Coordinator)
- “Development of phantoms and methods for the assessment and correction of geometric distortion in MRI images used for radiotherapy applications”
Budget: 50.000€. Source: Intamural Research Fund. King Fahad Medical City Academic & Training Affairs Research & Scientific Publication. Start-end: 2015 – 2016
- “Prospective evaluation and end-user oriented tools to guide the brachytherapy community through a smooth transition to model based, individualized treatment planning dosimetry”
Budget: 350.000€. Source: Research Funding Program: Aristeia, co-financed by the European Social Fund ESF and Greek national funds through an Operational Program of the National Strategic Reference Framework-NSRF. Start-end: 2013 – 2016
- “3D Dosimetry in modern radiotherapy applications”
Budget: 45.000€. Source: "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: Heracleitus II. Investing in

knowledge society through the European Social Fund. Start-end: 2010 – 2012 (Coordinator)

- “Development of dosimetric methods in modern radiation medical applications”
Budget: 9.000€. Source: Greek National Central Council of Health. Start-end: 2010 – 2012 (Coordinator)
- “Research proposal for the independent validation of Acuros based dosimetry calculations in brachytherapy”.
Budget: 67.850€. Source: Varian Medical Systems SA. (funding was managed by the Special Account of Research Grants of the University of Athens). Start-end: 2008-2011.
- Dosimetry in medical applications”
Budget: ~9.000€. Source: Special Research Account of the University of Athens (ELKE 70/4/4285, 70/4/3312, 70/4/3320). Start-end: 2006- 2012) (Coordinator)
- "Development and application of research dosimetry techniques to the quality assurance of radiation therapy in the clinical setting”.
Budget: 184.177€. Source: The Research Promotion Foundation’s Framework Programme for Research, Technological Development and Innovation - Desmi 2008, co-funded by the Republic of Cyprus and the European Regional Development Fund. Start-end: 2008-2010 (Coordinator for Greece)

Reviewer

- Medical Physics (also Associate Editor), Physics in Medicine & Biology, Radiotherapy and Oncology, Journal of Applied Clinical Medical Physics, European Journal of Medical Physics (also member of the Editorial Board)
- Abstract reviewer for ESTRO conferences

Published work

- 116 publications in Peer Reviewed International Journals,
h-index :31, citations:2231 (Source: Scopus Citation Overview, February 2024)
h-index: 36, citations:3210(Source: Google Scholar, February 2024)
- >120 abstracts/presentations in international conferences
- >50 invited talks in national and international conferences-meetings