

**Graciano Paulo, PhD**

*Professor Coordenador*

Work affiliation: ESTeSC-IPC, Coimbra Health School  
(Escola Superior de Tecnologia da Saúde do Instituto  
Politécnico de Coimbra)

Email: [graciano@estescoimbra.pt](mailto:graciano@estescoimbra.pt)

**Academic Degrees:**

- 2016 - **PhD Degree** in Health Sciences. Thesis: *“Optimization and establishment of national Diagnostic Reference Levels in paediatric radiology”* - **Medical Faculty, University of Coimbra;**
- 2003 - **Master Degree** in Health Economics – Economy Faculty, University of Coimbra;
- 1988 - **Bachelor Degree in Radiography** – IPC, Coimbra Health School

**Professional Experience:**

**RADIOGRAPHER:**

- **General Hospital of Coimbra** – 1988 to 2001 (chief radiographer from 1994);

**ACADEMIC CAREER:**

- 2005 – (current) – Coordinator Professor – IPC, Coimbra Health School;
- 1997 – 2005 – Adjunct Professor – IPC, Coimbra Health School

**Institutional Activity:**

- 2009 – (current) – Scientific Chair of Medical Imaging & Radiotherapy Program of IPC, Coimbra Health School;
- 2017 – (current) - Head of WHO Collaborative Centre for Radiation Protection and Health of Coimbra Health School;
- 2009 – 2017 – Vice-President – IPC, Coimbra Health School
- 2006 – 2009 – President of the Technical-Scientific Board of IPC, Coimbra Health School
- 1999 – 2006 - President of the Pedagogical Board of IPC, Coimbra Health School

### **Participation in International Projects (last 4 years)**

- **MEDIRAD:** Horizon 2020 MEDIRAD project on implications of medical low dose radiation exposure (ongoing)
- **P3-Stroke:** Predictive Prevention and personalized Interventional Stroke Therapy. Ref: P3-Stroke EIT Health (ongoing)
- **EUCLID:** European Study on Clinical Diagnostic Reference Levels for X-ray Medical Imaging (ongoing)
- **PiDRL** - European Diagnostic Reference Levels for Paediatric Imaging (European Commission)
- **MEDRAPET** – Medical radiation protection and training (European Commission)
- **IAEA** – Faculty member

### **Professional & Scientific Societies Activities**

- 2017 - (current) - Board Member (Treasurer) of EURAMED
- 2014 - (current) - member of EUROSAFE Steering Committee and coordinator of “Ask Eurosafe” Campaign.
- 2016 - (Current) - member of the Subcommittee on Professional Issues and Economics in Radiology of the European Society of Radiology
- 2012 - (current) - External Advisor of the Radiation Protection Subcommittee of CIRSE (Cardiovascular and Interventional Radiological Society of Europe)
- 2011 - 2014 - President of the European Federation of Radiographers Societies
- 2008 - 2011 - Vice-President of European Federation of Radiographers Societies
- 2002 - 2008 - President of the Portuguese Society of Radiographers (ATARP)
- 2009 - 2016 - Member of the Scientific Advisory Board of EIBIR (European Institute for Biomedical Imaging Research)

## Peer-reviewed papers

1. Oliveira, Marcus Vinicius Linhares; Santos, António Carvalho; Paulo, Graciano; Campos, Paulo Sergio Flores; Santos, Joana. Application of a newly developed software program for image quality assessment in cone-beam computed tomography. *Imaging Science in Dentistry*, v. 47, n. 2, p. 75-10, 2017.
2. Bartal, Gabriel; Vano, Eliseo; Paulo, Graciano; Roguin, Ariel. Minimizing Radiation Risk to Patients and Staff. *Endovascular Today*, n. 15, p. 56-62, 2016.
3. Bartal, Gabriel; Roguin, Ariel; Paulo, Graciano. Call for Implementing a Radiation Protection Culture in Fluoroscopically Guided Interventional Procedures. *American Journal of Roentgenology*, v. 206, n. 5, p. 1110-1111, 2016.
4. Paulo, Graciano; Bartal, Gabriel; Vano, Eliseo. Radiation Risk to Radiographers: What we need to know. *Endovascular today*, n. 15, p. 77-79, 2016.
5. Santos, Joana; Foley, Shane; Paulo, Graciano; McEntee, Mark F; Rainford, Louise. The impact of pediatric-specific dose modulation curves on radiation dose and image quality in head computed tomography. *Pediatric Radiology*, n. 20197, p. 1-9, 2015.
6. Paulo, Graciano. Looking into the future of radiology. *Insights into Imaging*, n. 6, p. 1-158, 2015.
7. Paulo, Graciano. The fundamentals of evidence-based research. *Insights into Imaging*, n. 6, p. 1-158, 2015.
8. Paulo, Graciano. Role of radiographers in medical radiation protection in the context of EuroSafe imaging. *Insights into Imaging*, n. 6, p. 1-158, 2015.
9. Paulo, Graciano; Vano, Eliseo; Rodrigues, A. Diagnostic reference levels in plain radiography for paediatric imaging: A Portuguese study. *Radiography*, n. 5, p. 1-6, 2015.
10. Bartal, Gabriel; Vano, Eliseo; Paulo, Graciano; Miller, Donald L. Management of Patient and Staff Radiation Dose in Interventional Radiology: Current Concepts. *CardioVascular and Interventional Radiology*, v. 37, n. 2, p. 289-298, 2014.
11. Paulo, Graciano. The radiographer as the interface between patient and technology: clinical judgement and professional accountability. *Insights into Imaging*, n. 5, p. 1-133, 2014.
12. Santos, Joana; Batista, M. d. C.; Foley, Shane; Paulo, Graciano; McEntee, Mark F; Rainford, Louise. Paediatric CT optimisation utilising Catphan(R) 600 and age-specific anthropomorphic phantoms. *Radiation Protection Dosimetry*, v. 162, n. 4, p. 586-596, 2014.
13. Paulo, Graciano. Current challenges for radiation protection research in Europe. *Insights into Imaging*, n. 4, p. 1-144, 2014.
14. Santos, Joana; Foley, Shane; Paulo, Graciano; McEntee, Mark F; Rainford, Louise. The establishment of computed tomography diagnostic reference levels in Portugal. *Radiation Protection Dosimetry*, v. 158, n. 3, p. 307-317, 2014.
15. Teles, P.; Paulo, Graciano; Santos, Joana; Carmen de Sousa, M.; Pascoal, A. Estimativa da dose coletiva na população portuguesa devido a exames médicos de radiologia de diagnóstico e de medicina nuclear. *IRPA 2013*, n. 5, p. 10-15, 2013.
16. Figueira, C.; Becker, F.; Blunck, C.; Dimaria, S.; Baptista, M.; Esteves, B.; Paulo, Graciano; Santos, Joana; Teles, P.; Vaz, P. Medical staff extremity dosimetry in CT fluoroscopy: An anthropomorphic hand voxel phantom study. *Physics in Medicine and Biology*, v. 58, n. 16, p. 5433-54, 2013.

22. Paulo, Graciano. Towards advancing and developing the role of radiographers. *Insights into Imaging*, n. 4, p. 1-144, 2013.
23. Santos, R.; Paulo, G.; Bento, D.; Gomes, S. The Role of Radiographer in Sonography At International Level. *Ultrasound in Medicine & Biology*, v. 39, n. 5, p. S84-S84, 2013.
24. Boieiro, A.; Mogas, F.; Moretto, D.; Tavares, P.; André, A.; Paulo, Graciano. Quadricipite Architecture Evaluation With Ultrasound, in an Elderly Population. *Ultrasound in Medicine & Biology*, v. 39, n. 5, p. S56-S56, 2013.
25. Teles, P.; Vaz, P.; de Sousa, M.C.; Paulo, Graciano; Santos, Joana; Pascoal, A.; Santos, A.I.; Cardoso, G.; Lanca, I.; Matela, N.; Janeiro, L.; Sousa, P.; Carvoeiras, P.; Parafita, R.; Simaozinho, P. Estimation of the collective dose in the portuguese population due to medical procedures in 2010. *Radiation Protection Dosimetry*, v. 154, n. 4, p. 446-458, 2013.
26. Paulo, Graciano. Knowledge development as a tool for radiographers' professional improvement. *Insights into Imaging*, n. 4, p. 1-144, 2013.
27. Teles, P.; Carmen de Sousa, M.; Paulo, G.; Santos, J.; Pascoal, A.; Cardoso, G.; Lanca, I.; Matela, N.; Janeiro, L.; Sousa, P.; Carvoeiras, P.; Parafita, R.; Santos, A. I.; Simaozinho, P.; Vaz, P. Estimation of the collective dose in the Portuguese population due to medical procedures in 2010. *Radiation Protection Dosimetry*, v. 154, n. 4, p. 446-458, 2012.
28. Di Maria, S.; Barros, S.; Bento, J.; Teles, P.; Figueira, C.; Pereira, M.; Vaz, P.; Paulo, Graciano. TLD measurements and Monte Carlo simulations for glandular dose and scatter fraction assessment in mammography: A comparative study. *Radiation Measurements*, v. 46, n. 10, p. 1103-1108, 2011.
29. Paulo, Graciano; Santos, Joana; Moreira, A.; Figueiredo, F. Transition from screen-film to computed radiography in a paediatric hospital: The missing link towards optimisation. *Radiation Protection Dosimetry*, v. 147, n. 1-2, p. 164-167, 2011.
30. Ana Batista; Sandra Ferreira; Paulo, Graciano; Santos, Joana; Marco Costa; Leitão Marques. Factores que influenciam os Valores de DAP e de ESD durante os procedimentos de Cardiologia de Intervenção. *Ciência, Saúde e Inovação*, n. 13, p. 37-58, 2010.
31. Adriana Patrício; Graça Pato; Paulo, Graciano; Santos, Joana. Avaliação e Optimização dos Níveis de Dose em UIV. *Ciência, Saúde e Inovação*, n. 13, p. 21-36, 2010.
32. Paulo, Graciano; Santos, Joana. Evaluation and optimization of dose levels in children pelvis X-ray. *Insights into Imaging*, n. 1, p. 1-196, 2010.
33. Paulo, Graciano. Exposure to operators during interventional cardiology. *Insights into Imaging*, n. 1, p. 1-196, 2010.
34. Ana Almeida; Ana Freitas; Paulo, Graciano. Níveis de referência de Diagnóstico na Radiografia do Tórax no Leito. *Ciência, Saúde e Inovação*, n. 7, p. 7-18, 2009.
35. Marla Soares; Paulo, Graciano. Níveis de Dose de Referência em Radiologia Convencional. *Ciência, Saúde e Inovação*, n. 3, p. 23-32, 2008.
36. Joel Rodrigues; Lino Domingos; Paulo, Graciano. Avaliação do Produto Dose Área em Pacientes sujeitos a Cateterismos Cardíacos. *Ciência, Saúde e Inovação*, n. 3, p. 49-62, 2008.

## Awards

- **2012 - Prémio Boas Práticas em Saúde**, Direção Geral de Saúde/Associação Portuguesa para o Desenvolvimento Hospitalar.
- **2007 - Best Scientific Presentation** (Magna Cum Laude), ECR 2014, European Society of Radiology.

## Selected Conferences

1. Dose values in interventional computed tomography procedures: a multicentre study. ECR 2018. Áustria. 2018.
2. Radiation Protection of patients and staff in fluoroscopy and interventional radiology. P3- Stroke webinar. Portugal. 2017.
3. About BSS directive. PRS 2017. Portugal. 2017.
4. Development of software for image quality assessment in cone-beam computed tomography. ECR 2017. Áustria. 2017.
5. MEDRAPET: An Overview of a European Commission DG ENER Project. PRS 2017. Portugal. 2017.
6. The impact of evidenced applied research . P3-Stroke workshop. Portugal. 2017.
7. The impact of optimization program on DRLs. PRS 2017. Portugal. 2017.
8. Harmonization of practices in medical in medical imaging: the way forward. RPW 2017. França. 2017.
9. Bonn Call for Action - where do we stand in Portugal? PRS 2017. Portugal. 2017.
10. International Pediatric Radiology Conference. Estados Unidos. 2016.
11. Strategic Research Agenda in radiation Protection. Euratom/Melodi Meeting. Alemanha.
12. Analysis of overexposed areas in paediatric plain radiography. International Pediatric Radiology Congress. Estados Unidos. 2016.
13. Análise de procedimentos em tomografia computadorizada com vista à homogeneização. CNR 2016. Portugal. 2016.
14. O impacto do uso da colimação electrónica na exposição em radiografias pediátricas. CNR 2016. Portugal. 2016.
15. Análise de procedimentos em Tomografia Computorizada com vista à otimização - Analysis of procedures in CT scan in order to optimisation. Jornadas Científicas de Imagem Médica e Radioterapia. Portugal. 2016.
16. O impacto da intensidade da modulação da tensão e da corrente da ampola na dose no órgão e na qualidade de imagem em tomografia computadorizada. CNR 2016. Portugal. 2016.
17. Analysis of overexposed areas in paediatric plain radiography. ECR 2016. Áustria.