

Marijke DE SAINT-HUBERT



Dr. Marijke De Saint-Hubert studied Biomedical Sciences at the Katholieke Universiteit Leuven, where she also obtained a Master's degree in Medical Imaging. Her doctoral research focused on evaluating new aspects in molecular imaging of therapy response in oncology, leading to her PhD in Biomedical Sciences.

Following her PhD, Dr. De Saint-Hubert worked as a post-doctoral researcher at the University of Maastricht, where she evaluated new probes for molecular imaging of neovascularization using pre-clinical imaging technology. Since 2014, she has been a senior scientist at the Belgian Nuclear Research Center (SCK CEN), specifically in the unit on Research in Dosimetric Applications (RDA). Her current research focuses on dosimetry applications in the medical

field, with a particular emphasis on out-of-field organ doses during radiotherapy.

Dr. De Saint-Hubert has extensive expertise in various dosimetry systems, including thermoluminescent detectors (TLD), optically stimulated luminescence (OSL), radiophotoluminescence (RPL), and bubble detectors. She also has specialized knowledge in neutron dosimetry in proton therapy using Monte Carlo tools and is actively exploring new technologies, such as compact semiconductor pixel detectors, for the characterization of stray radiation.

She has played significant roles in various European and national projects. She serves as a member and secretary of EURADOS Working Group 9, focusing on radiation dosimetry in radiotherapy. She has led several tasks and work packages in major European-funded projects, such as the HARMONIC project, which studies the long-term effects of modern radiotherapy on children, and the SINFONIA project, which addresses radiation risk appraisal in the treatment of lymphoma and brain tumors. Additionally, she coordinates the ProPOSE project, which focuses on optimizing proton therapy for cancer treatment during pregnancy, and leads a work package in the SONORA project, aiming to develop safer radiation exposure protocols for pregnant patients.

Dr. De Saint-Hubert is the author or co-author of over 40 papers published in international peer-reviewed journals. Some of her recent work includes studies on the influence of Monte Carlo radiation transport codes in proton therapy, challenges and opportunities for proton therapy during pregnancy, and validation of a Monte Carlo model of a proton beam. Her research significantly contributes to advancing the field of radiation dosimetry, particularly in medical applications.#