Project Title

Advanced hybrid imaging PET/MRI system

Researcher

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Field	Medical Physics
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Abstract

Using cutting-edge novel molecular imaging techniques pioneered by my group (PINLab), I have addressed specifically innovative multimodality imaging instrumentation dedicated for clinical and preclinical imaging and advanced quantitative imaging. The introduction of combined PET/MRI systems has further stimulated the development of advanced strategies for quantitative imaging and the use of these technologies for imaging-guided radiation therapy planning, an area where our team made a number of similar contributions. The Ingenuity TF PET–MRI is a whole-body hybrid PET–MR imaging system with a Philips time-of-flight GEMINI TF PET and Achieva 3T X-series MRI system. This sequential design successfully mitigated the interference between the two systems to achieve a level of performance equivalent to the standalone PET and MRI systems with no compromise in patient imaging workflow, while maintaining excellent system performance and image quality. The Ingenuity TF PET–MRI represents the first commercial whole-body hybrid PET–MRI system. It is conceived that advantages of hybrid PET–MRI will become more evident in the near future.

Biography

Prof. Habib Zaidi is Chief physicist and head of the PET Instrumentation & Neuroimaging Laboratory at Geneva University Hospital and faculty member at the medical school of Geneva University. He is also a Professor of Medical Physics at the University of Groningen (Netherlands), Adjunct Professor of Medical Physics and Molecular Imaging at the University of Southern Denmark, and visiting Professor at IAS/University Cergy-Pontoise (France). He is actively involved in developing imaging solutions for cutting-edge interdisciplinary biomedical research and clinical diagnosis. His academic accomplishments have been well recognized by his peers and by the medical imaging community at large since he is a recipient of many awards and distinctions. Prof. Zaidi has been an invited speaker of over 150 keynote lectures and talks at an International level, has authored over 252 peer-reviewed articles in prominent journals and is the editor of four textbooks.