Stefaan Vandenberghe

Short Biography:

AI techniques can be used to improve images, detector positioning and artefacts in image. In this talk we will explain how AI techniques can be used to design a lower cost Total Body PET with novel detectors and adjusted image reconstruction. This will lead to the possibility for faster and/or lower dose scans.

Abstract:

Stefaan Vandenberghe has been appointed as full time research professor (BOF-ZAP) at Ghent University since October 2007 and leads the MEDISIP research groupsince 2008. In collaboration with different researchers in the group a variety of topics is covered: MonteCarlo simulations, rotating slat SPECT, Time-of-Flight PET, PET- MRI and quantification for radionuclide dosimetry. In 2009 he started the Infinity lab, a laboratory for non-invasive in vivo imaging of laboratory animals (INFINITY lab which has become one of the expertise, core facility centres of Ghent University. During the period 2010-2015 his research has focused on the EEG source localisation, SPECT imaging, the development of attenuation correction and PET system design simulations for PET-MR intwo EU-FP7 projects Hyperimage and Sublima. The research of Medisip has been valorised into two spinoff companies: Molecubes.com (small animal molecular imaging) and Epilog.care (EEG source analysis). More recently his research has focussed on Monolithic detectors for high resolution PET andTotal Body PET system design.