Contribution ID: **15** Type: **not specified**

Recent advances of positron emission tomography image reconstruction

Thursday 27 April 2023 11:50 (40 minutes)

Positron emission tomography (PET) is a widely used imaging modality that enables the non-invasive visualisation of physiological and biochemical processes in living organisms. However, PET images are inherently noisy and suffer from low spatial resolution, which can limit their diagnostic accuracy and clinical utility. To address these challenges, numerous image reconstruction methods have been proposed and developed over the past years.

In this presentation, we will discuss the recent trends in PET image reconstruction, focusing on techniques designed to improve image quality, allow the reduction of the injected radioactive dose as well as the acquisition time. Specifically, we will cover dynamic and quantitative PET imaging, total-body PET, time-of-flight (TOF) technology, resolution recovery. Finally, we will discuss the challenges and opportunities in using artificial intelligence (AI) and deep learning (DL) for PET.

Presenter: VARNYU, Dora (Mediso Medical Imaging Systems Ltd)

Session Classification: Positronium in medical imaging

Track Classification: Positronium in medical applications