Learn & Improve Professional Skills Session 8
Physics Committee
Monday, October 6, 16:45 – 18:15

Session Title
Getting Imaging Right with Protocol Optimisation

Chairpersons
Laetitia Imbert (Nancy, France)
Johannes Tran-Gia (Würzburg, Germany)

Programme
16:45 – 17:15   **Johannes Tran-Gia** (Würzburg, Germany): Image optimisation in SPECT
17:15 – 17:45   **Ian Amstrong** (Manchester, United Kingdom): Image optimisation in PET
17:45 – 18:15   **Irène Buvat** (Orsay, France): Getting the best out of your data with
                 optimised image processing

Educational Objectives
1. To describe the fundamental principles and key parameters influencing image accuracy in SPECT and PET.
2. To explain strategies for image optimisation, including acquisition protocols and image reconstruction techniques.
3. To discuss advanced image processing approaches that enhance the extraction and interpretation of image data, aiming to improve diagnostic accuracy and quantification.

Summary
Through these objectives, the aim is to provide a comprehensive understanding of image quality in SPECT and PET imaging. The session will cover the fundamental principles and key factors — such as resolution, sensitivity, and noise — that influence the quality of obtained images. Various strategies for optimising images, with an emphasis on acquisition protocols and advanced reconstruction techniques, will also be presented and explained. Additionally, the objectives will further highlight the importance of cutting-edge image processing methods to enhance diagnostic precision and the accuracy of quantitative assessment.

Key Words
SPECT; PET; optimisation; image quality; image processing