CME Session 4
Physics Committee
Sunday, October 20, 16:45 - 18:15

Session Title
Clinical applications of AI

Chairpersons
Bernhardt Peter (Göteborg, Sweden)
Margarita Kirienko (Milano, Italy)

Programme

16:45 - 17:05   **Vincent Andrearczyk** (Lausanne, Switzerland): Detection and segmentation

17:08 - 17:28   **Catherine Cheze Le Rest** (Poitiers, France): Prediction and prognosis

17:31 – 17:51   **Johannes Tran-Gia** (Wuerzburg, Germany): Dosimetry

17:55 - 18:15   **Laszlo Papp** (Vienna, Austria): Future perspectives of AI and potential impact in NM applications

Educational Objectives
1. Learn about the clinical applications where recently AI methods have made progress, already have a demonstrated impact, and could impact clinical practice in the near future.
2. Understand the potential and limitations of current AI techniques in terms of automation, performance, interpretability, depending on the clinical applications.
3. Discover what the future of AI development (quantum computing, generative AI…) could hold for clinical applications.

Summary
This session will present the current and near future impact of methods from the field of AI in three different clinical applications, namely detection and delineation of objects of interest in images, multiparametric models for predicting patients' outcome, and dosimetry. Finally, the session will present future perspectives of the AI field, and how these developments could impact clinical practice, including these applications but also beyond.

Key Words
Machine/deep learning; automation; interpretability; evaluation; clinical impact