

## **Joint Symposium 24**

Physics + Paediatric Committee / European Federation of Organisations for Medical Physics (EFOMP)

**Friday, October 30, 10:40-12:10**

### **Session Title**

**Technical Advances in Paediatric Dose Reduction**

### **Chairperson**

Ana Isabel Santos (Almada, Portugal)

### **Programme**

10:40 - 11:09 Marc Kachelriess (Heidelberg, Germany /EFOMP): CT Dose Reduction Techniques

11:09 - 11:38 April-Louise Smith (London, United Kingdom): Dose Reduction in PET

11:38 - 12:07 Marie Claire Attard (Nijmegen, Netherlands): Dose Reduction Approaches for Conventional Nuclear Medicine

### **Educational Objectives:**

1. Basic understanding of dose reduction techniques
2. Applying dose reduction in the context of paediatric imaging
3. Awareness of pitfalls of dose reduction

### **Summary**

Given the growing awareness of exposure of children to ionizing radiation, appropriate dose reduction techniques are essential to achieve diagnostically acceptable image quality at the lowest possible radiation dose. Recent technical innovations in detector and reconstruction technology have allowed the implementation of low-dose imaging protocols for PET/CT and conventional nuclear medicine. To maximize this potential for pediatric imaging, a careful implementation strategy and methodologic approach are necessary to modify adult imaging protocols and minimize the radiation dose for children while maintaining diagnostic utility. This session provides an introduction to different dose reduction approaches for both PET/CT and conventional nuclear medicine and covers the implementation of dose reduction techniques into daily clinical practice for pediatric nuclear medicine imaging.

### **Key Words**

Dose reduction, paediatric imaging, PET/CT, conventional nuclear medicine