

## **Mathieu HATT**

### **Short Biography:**

**Mathieu Hatt is a senior director of research at the Laboratory of Medical Information Processing (LaTIM, INSERM and Univ Brest, UMR 1101), Brest, France. He is in charge of the radiomics and multiparametric modelling group within the team ACTION (therapeutic action guided by multimodal imaging in oncology). His main expertise lies in radiomics, PET/CT/MRI medical image analysis and processing, clinically-relevant modelling using ML/DL, multi-centric harmonization and DL-based image synthesis, as well as interpretability methods for DL in radiomics. He recently coordinated the joint EANM/SNMMI guideline on radiomics in nuclear medicine. He also serves as chair of the AAPM taskgroup 363 on evaluation of PET automatic segmentation algorithm, and has been contributing to the organization of the MICCAI HECKTOR challenge since 2021.**

### **Abstract:**

**Deep learning techniques are being increasingly considered as potential solutions for developing decision-aid tools for patient management, for example predictive modeling relying on images contents. However, this methods are often black boxes containing millions of weights/parameters that cannot directly be explained, or interpreted by the users. Therefore, alternative tools and methods needs to be developed to "open the box" and make these algorithms explainable/interpretable. The presentation will present current developments in that regard using radiomics/predictive modeling from multimodal medical imaging as an example.**