

Seminar „Between physics, biology and medicine”

Organized by Department of Medical Physics
and Department of Experimental Particle Physics and Applications, Institute of Physics JU

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„ Edge detection in FDG-PET/CT-fused images for biological tumor volume delineation”

Abstract

Fused PET/CT images are correlated with the level of metabolism of the radiopharmaceutical at each anatomical region and have an important role in external beam radiotherapy for accurate target volume delineation. For contouring the biological tumor volume, manual drawing or source-to-background ratio algorithms for boundaries detection are currently used. We have evaluated the performance of a Canny's edge detection algorithm implemented in ROOT and of the ITK-SNAP open-source software by delineation of regions of interest in a phantom with irregular geometries but rigid walls and in an agar phantom which accounts for radiopharmaceutical diffusive processes. The results of this will be presented in the seminar.

when: 14th January 2020, 4:15 p.m.

where: A 1-08 (Aula), FAIS, Łojasiewicza 11

