

A seminar "Between Physics and Biology and Medicine"

Department of Medical Physics and Department of Experimental Particle Physics and Applications

Institute of Physics M. Smoluchowski of the Jagiellonian University

„Electronic Design of a Compact 100 ps FWHM CTR TOF-PET Detector with 3D Positron Sensitivity and Wide Photon Detection Dynamic Range”

dr Shirin Pourashraf

Radiology Department, Stanford University School of Medicine

The electronic design aspects of a scalable side-readout TOF-PET will be discussed in that not only does it achieve ~ 100 ps full-width-at-half-maximum (FWHM) coincidence time resolution (CTR) for highly multiplexed timing channels, but also provides a linearized energy spectra with a good energy resolution @511 keV which is important for rejection of patient tissue scatter events and reconstructing higher quality and accuracy images.

About the Speaker:

Since Jan. 2019, Shirin has been with Molecular Imaging Instrumentation Laboratory (MIIL) at Radiology Department, Stanford Medicine School, where she is currently a Postdoctoral Researcher and a Stanford Cancer Imaging Fellow to design High Speed and Low Noise/Jitter Instrumentation/Data Acquisition Electronics to build a 100 ps Coincidence Time Resolution (CTR) Pre-Clinical Partial Ring Time of Flight Positron Emission Tomography.



Date: 10 OCTOBER 2023, 10 am

Place: B-2-50, FAIS, Łojasiewicza 11