Contribution ID: **7** Type: **not specified**

RADIATION DETECTORS AND MEDICAL IMAGING

Medical imaging technology has dramatically changed healthcare in the past 30 years, by giving doctors a powerful tool to detect and diagnose disease at its earliest and to determine the most appropriate and effective care. Medical imaging is the technique and process of creating visual representations of the interior of a body for clinical analysis and medical intervention, as well as visual representation of the function of some organs or tissues. The progress of well-known techniques like X-ray Computed Tomography (CT), Single Photon Emission Computed Tomography (SPECT) and Positron Emission Tomography (PET) is largely connected with the progress of radiation detectors. The aim of this lecture is to explain the basic principles of operation of the radiation imaging detectors and to present the current status and trends of their development. Particular emphasis will be placed on the novel photon-counting pixel detectors like the ones based on Medipix technology and their potential use in medical application.

Primary author: Dr ZHEMCHUGOV, Alexey (JINR)

Presenter: Dr ZHEMCHUGOV, Alexey (JINR)