



Series of Seminars:

SCINTILLATOR DETECTORS:
from Theory to Applications
(Medicine, Security, High Energy Physics and Engineering)

Seminar #1

Dr. Stratos David

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Dedicated Nuclear Medicine planar detectors: From radiation detection to the final image

Room **160/3**, May 7th 2019, 14.30 – 15.30

Facoltà di Ingegneria, Università Politecnica delle Marche,

Web-streaming: <https://meet.lync.com/univpm-pm/s1062746/QB43IHJE>

Topic

Dedicated Nuclear Medicine detectors used for the imaging of small organs like human head, prostate and breast (scintimammography detectors etc) as well as in preclinical small animal imaging. This lecture will briefly summarize the state-of-the art developments in dedicated Nuclear Medicine detector instrumentation regarding the design of different geometries and various detector technologies used for fast planar imaging. It will be discussed all the physical steps from radiation detection to the final image using pixelated scintillator arrays and position sensitive optical detectors. Energy calibration of the detector, mapping of the crystal array, raw image acquisition, flood correction, application of the energy window and other techniques acquired between the raw image and the final diagnostic image will also be discussed.

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