Session Program

30 June 2024 to 4 July 2024

25th International Workshop on Radiation Imaging Detectors.

Poster Session

FMDUL, Main Auditorium
Main Auditorium of the Faculty of Dental Medicine at the University of Lisbon (Faculdade de Medicina Dentária da Universidade de Lisboa)

Monday 1 July

17:40

Poster Session: Session 1

Session |
Location: FMDUL, Main Auditorium, Main Auditorium of the Faculty of Dental Medicine at the University of Lisbon (Faculdade de Medicina Dentária da Universidade de Lisboa)

17:40–17:41

Design and implementation of a ground detection system for HERD-TRD front-end electronics

Speaker
Yangzhou SU

17:41–17:42

Low-cost FPGA-based multi-channel TDC with high resolution and density for time-of-flight detectors

Speakers
Xinpeng WANG, Haibo Yang, Yangzhou Su

17:42–17:43

Development of a common pixel readout electronics for pixel detector

Speaker
Mr Wenchao SUN

17:43–17:44

TCAD Simulation of Stitching for Passive CMOS Strip Detectors

Speaker
Marta Baselga

17:44–17:45

Characterization results of the first full scale HYLITE chip and a small scale front-end module

Speaker
Xining Jia

17:45–17:46

Design of the first full-scale HYLITE, a charge integration pixel detector readout chip for XFEL

Speaker
Mujin Li

17:46–17:47

A High Accuracy CMOS Peak Detection and Holder ASIC for Neutron Detectors

Speaker
任佳轶 Jiayi REN

17:47–17:48

Timepix CdTe Radiation Monitor on board of VZLUSAT-2: Characterizing LEO Space Weather Dynamics

Speaker
David Hladík

17:48–17:49

Airborne Radiation Monitoring System of KAERI and Environmental Radiation Survey in Fukushima

Speaker
Dr Eunjoong Lee

17:49–17:50

Metal-Polymer Hybrid Wafer to Wafer Bonding Process Development for Fabrication of Ultra-Thin Low-Mass Hybrid Pixel Detectors

Speaker
Thomas Fritzsch

17:50–17:51

Feasibility Study of 3D CNN-Based Angular Positioning of Radioisotope Using 8×8 SiPM array

Speaker
Mr Wonku Kim

17:51–17:52

Pragmatic method to minimize the discrepancy of grayscale values of teeth caused by exomass effect in dental CBCT of a small field of view

Speaker
Soohyun Lee

17:52–17:53

MLEM-based Image Reconstruction Algorithm for Fast Neutron Scattering Imaging

Speaker
Ms JIMIN SHIN

17:53–17:54 **Estimation of dose linearity for halide scintillation detectors**

Speaker
Wanook Ji

17:54–17:55

Detection of radioactive hotspots inside the Fukushima Daiichi Nuclear Power Station Unit 3 reactor building using an optical fiber radiation sensor based on wavelength-resolving analysis

Speaker
Dr Yuta Terasaka

17:55–17:56

Development of a novel compact and fast SiPM-based RICH detector for the future ALICE 3 PID system at LHC

Speakers
Nicola Mazziotta, Roberta Pillera

17:56–17:57

Performance of the Analog Pixel Test Structure in 65 nm TPSCo CMOS imaging technology for the ALICE ITS3

Speaker
Chiara Ferrero

17:57–17:58 **ITk Pixel System Test of the ATLAS Experiment**

Speaker
Zaza Chubinidze

17:58–17:59
Machine learning models for single-particle classification with Timepix 3 detectors

Speaker
Katerina Sykorova

17:59–18:00 **TCAD simulation of 3D silicon sensors for thermal neutron imaging**

Speaker
Jixing Ye

18:00–18:01 **ATLAS ITk Pixel Detector Overview**

Speaker
Niraj Kakoty

18:01–18:02
Characterisation of analogue MAPS produced in the 65 nm TPSCo process

Speaker
Eduardo Ploerer

18:02–18:03
Enhancement of Hybrid Radiation Detector Characteristics through Size Control of MoS2 Nanocrystals

Speaker
Chanyeol Lee

18:03–18:04
Low-dose CT denoising via a hybrid network of transformer and residual dense network

Speaker
Mr Duhee Jeon

18:04–18:05
Performance and optics robustness of the ATLAS Tile hadronic calorimeter

Speaker
Rute Pedro

18:05–18:06
Feasibility Study on the Development of an Integrated Fast neutron and Gamma ray Radiography System for Material Decomposition

Speaker

18:06–18:07
Evolution of the electrical characteristics of the ATLAS ITk strip sensors with HL-LHC radiation exposure range

Speaker
Javier Fernandez-Tejero

18:07–18:08
High-Resolution Digital 3D CZT Drift Strip Detectors for Spectroscopic X-ray and Gamma Ray Imaging

Speaker
Prof. Leonardo Abbene

18:08–18:09
Low beam intensity raster scan measurements with the Timepix3 at CNA

Speaker
Daniel Prelipcean

18:09–18:10
Test Beam Results on 3D pixel sensors for the CMS Tracker Upgrade at the High-Luminosity LHC

Speaker
Clara Lasaosa Garcia

18:10–18:11
Timepix2-radiation camera for single particle imaging in high count-rate particle therapy

Speaker
Dr Cristina Oancea

18:11–18:12
SPHIRD: readout controller and communication protocol – design and implementation

Speaker
Piotr Otfinowski

18:12–18:13
Computational microscopy with the PERCIVAL detector system at TwinMic

Speaker
Dr Francesco Guzzi

18:13–18:14
SiC MiniPIX-Timepix3 Radiation Camera: detection resolving power to neutrons, ions, protons and electrons

Speaker
Dr Carlos Granja

18:14–18:15
Development of the Readout Electronics for the Large Area ¬3¬He Tube Array Detector in High Pressure Neutron Diffractometer at the China Spallation Neutron Source

Speaker
Weigang Yin

18:15–18:16
Characteristic analysis of scintillator and pixel size for ultra-high resolution X-ray imaging in digital flat-panel detectors

Speaker
Dr Bo Kyung Cha

18:16–18:17
R&D of a Generic Readout Platform Based on the Modern SoC Architecture for CSNS

Speaker
Li Yu

18:17–18:18
Development of Automatic Classification Algorithm of Fast Neutron from Gamma-ray in Pulse Shape Discrimination for Organic Plastic Scintillators

Speaker
Seoyun Jang

18:18–18:19
Improvement of the sensitivity of Perovskite based photodetector fabricated with n-type conjugated polymers for indirect X-ray detection

Speaker
Mr Bumjin Park

18:19–18:20
Numerical Study of beam induced space charge effect in a small TPC with hydrodynamic model

Speaker
Mr Pralay Kumar das

18:20–18:21 **Particle Monte Carlo codes in SEM**

Speaker
Mitja Majerle

18:21–18:22
Anatomy of low noise front-end electronics for solid-state particle detectors based on bare-die technology

Speaker
Robert Macků

18:22–18:23
Performance and quality control of the first CMS GE2/1 muon production chambers

Speaker
Abigail Catherine Warden

18:23–18:24 **The ATLAS ITk Strip Detector for the Phase-II LHC Upgrade**

Speaker
Roland Koppenhöfer

18:24–18:25
The read-out integrated circuit for the high energy resolution X-ray strip detectors

Speaker
Weronika Zubrzycka

18:25–18:26
Production and optical characterisation of PET and PEN scintillator samples

Speaker
Rudnei Machado

18:26–18:27 **X-ray detectors at the MAX IV synchrotron**

Speaker
Michele Cascella

18:27–18:28
Improvement of a hybrid C-arm for interventional X-ray and scintigraphy imaging through new scintillator developments

Speaker
Marc Snoeyink

18:28–18:29
Radioactive source localization in 3D using a coded aperture device under near field irradiation with the aid of convolutional neural networks

Speaker
Dr Ioannis Kaissas

18:29–18:30 **Low Power Design for Medipix Readout Systems**

Speaker
Guilherme Paulino

18:30–18:31
Development of fine-pitch hybrid silicon pixel detectors with self-trigger function for electron tracking Compton imaging

Speaker
Mizuki Uenomachi

18:31–18:32 **ATLAS ITk-Pixel DAQ system**

Speaker
Wael Alkakhi

18:32–18:33 **X-ray Single-Pixel Imaging with MPGD-based detectors**

Speaker
Matilde Simões

18:33–18:34
SPECTRUM 1k – An Integrated Circuit for Precise Energy Measurement

Speaker
Rafal Kleczek

18:34–18:35 **Nuclear fuel imaging using position-sensitive detectors**

Speaker
Santeri Saariokari

18:35–18:36
Potential of Timepix Hybrid Sensor in 4D-STEM in a Scanning Electron Microscope (SEM)

Speaker
Petr Hlavenka

18:36–18:37
Compact multi-channel analyzer for SiPM detectors with real time on-board signal analysis

Speaker
Mr Patrik Kučera

18:37–18:38
Spatially resolved XRD using polychromatic fan beam and a hybrid pixel detectors Timepix3

Speaker
Ondrej Urban

18:38–18:39
Detective quantum efficiency of a dual-energy photon-counting x-ray detector

Speaker
Junho Lee

18:39–18:40
Charge transport dynamics studies of planar GaAs:Cr sensors by laser excitation

Speaker
Mihaela Bezak

18:40–18:41
#192 - Upgrade of the CMS Drift Tube electronics for the High Luminosity LHC

Speaker
Cristina Bedoya

18:41–18:42
Space radiation characterization in LEO orbit on board of JoeySat OneWeb satellite with miniaturized spacecraft monitor MiniPIX-Timepix3 Space

Speaker
Lukas Marek

18:42–18:43
Compensation of temperature dependence on spectrometry of X-rays by MiniPIX Timepix3 SiC Detector

Speaker
Nikola Kurucová

18:43–18:44
CZT detector based spectrometer for drone and balloon borne measurements

Speaker
Timo Eero Hilden

18:44–18:45 **CdTe photon counting detector: a discriminator threshold study**

Speakers
Luca Brombal, Prof. Renata Longo

18:45–18:46
Development of 3He Linear Position-Sensitive Detector for the SANS Instrument at CPHS

Speaker
Dr Nan Hua

18:46–18:47
Advancements in assembly and integration of new DSSC detector systems at the European XFEL

Speaker
David Lomidze

18:47–18:48
Transimpedance amplifier for LGAD noise measurements: Design and Characterization

Speaker
Iurii Eremeev

18:48–18:49
Characterisation of iLGAD sensors on a JUNGFRAU detector in burst mode operation

Speaker
Nuno Duarte

18:49–18:50 **Development of plastic scintillators for thermal neutron detection**

Speaker
João Luciano Amorim Azevedo

18:50–18:51 **Argon Scintillation in the 160 - 650 nm range**

Speaker
Joana Maria Teixeira

18:51–18:52
Re-assessment of the air-mediated response in Bi-based perovskite X-ray detectors

Speaker
Aditya Bhardwaj

19:00

Wednesday 3 July

14:00

Poster Session: Session 2

Session |
Location: FMDUL, Main Auditorium, Main Auditorium of the Faculty of Dental Medicine at the University of Lisbon (Faculdade de Medicina Dentária da Universidade de Lisboa)

14:00–14:01

Experimental Validation of Gamma Emission Tomography to Inspect Partial-Defects within the Pressurized Water Reactor-Type Spent Nuclear Fuel

Speaker
Hyung-Joo Choi

14:01–14:02

A cosmic ray muons imaging system based on bar plastic scintillator detectors

Speakers
shikai wang, Haibo Yang

14:02–14:03

Model-based scatter correction method for improving image visibility in CBCT with an offset-detector configuration

Speaker
JIWON PARK

14:03–14:04

Automatic geometry calibration based on metric optimization in stationary computed tomography baggage scanner with 2 pi-angle sparsity

Speaker
Mr DUHEE JEON

14:04–14:05

Novel sinogram restoration method based on Fourier separation of higher-order harmonics in sparse-view CBCT for improving its reconstruction quality

Speaker
Jonghyeok Lee

14:05–14:06

Single-exposure material decomposition in digital tomosynthesis using a CdTe-based photon-counting detector: Simulation study

Speaker
Soohyun Lee

14:06–14:07

Feasibility of scintillators and imaging assessment of a flat-panel X-ray detector with dual-layer structure

Speaker
Bo Kyung Cha

14:07–14:08

Synthesizing 2D mammographic image from compressed-sensing digital breast tomosynthesis image for reducing imaging dose

Speaker
Seohee Han

14:08–14:09
Triple GEM detectors for the Phase-2 upgrade of the CMS experiment at the LHC

Speaker
Marco Buonsante

14:09–14:10
Design and Validation of the DAQ hardware for MAPS based telescope readout

Speaker
Weigang Yin

14:11–14:12
Upgrade of the CMS Electromagnetic Calorimeter for High-Luminosity LHC

Speaker
Chiara Amendola

14:12–14:13
Parallel CPU and GPU-based connected component algorithms for event building for hybrid pixel detectors

Speaker
Tomas Celko

14:13–14:14
Experimental results of the pFREYA16 ASIC for x-ray ptychography in continuous wave light sources

Speaker
Mr Paolo Lazzaroni

14:14–14:15
Characterization of silicon Monolithic Stitched Sensors for ALICE ITS3 in view of LHC Run 4

Speaker
Marius Wilm Menzel

14:15–14:16
Modulation transfer function and energy response of the new Timepix4 pixel detector

Speaker
Nina Dimova

14:16–14:17
Measurement of neutron energy spectrum by ToF technique using triggered MiniPIX-Timepix3 detectors with Si and SiC sensors

Speaker
Dušan Poklop

14:17–14:18
Proposed upgrade of the Belle II Vertex Detector with depleted monolithic active pixel sensors

Speaker
Marike Schwickardi

14:18–14:19
Functional Tests of the Detector Assembly Demonstration Model of the eXTP Wide Field Monitor: System Description and Results

Speaker
Matias Antonelli

14:19–14:20
Characterization of TlBr Gamma Detector Based on Electrical Charge and Cherenkov Light Analysis

Speaker
Mr Moh Hamdan

14:20–14:21 **ATLAS New Small Wheel Performance Studies with LHC Run3 data**

Speaker
Chiara Arcangeletti

14:21–14:22
Extending the time-over-threshold calibration of Timepix3 for spatial-resolved ion spectroscopy

Speaker
Dr Radu-Emanuel Mihai

14:22–14:23
Response of iLGAD sensors to single X-ray photons absorbed within and close to the gain layer

Speaker
Jiaguo Zhang

14:23–14:24
Characterisation and Initial Radiation Measurements of Pixellated LGAD Sensors for Soft X-Ray Spectroscopy using the HEXITEC ASIC

Speaker
Matt Larkin

14:24–14:25
55µm-pitch indium bump deposition on MEDIPIX single die without using photolithography

Speaker
Andreas Schneider

14:25–14:26
Preparing ATLAS for the High-Luminosity LHC: System Testing and Performance Evaluation of the ITk Strip Detector

Speaker
Alex Toldaiev

14:26–14:27
Defect detection and size classification in CdTe detector samples in 3D

Speaker
Mr Mika Väänänen

14:27–14:28
A study of particle detectors based on single crystal diamond substrates

Speaker
Bohumír Zaťko

14:28–14:29
Joint cross-talk and Hanbury Brown and Twiss effect measurement with the LinoSPAD2 detector

Speaker
Mr Sergei Kulkov

14:29–14:30 **Tritium detection in CCDs with machine learning**

Speaker
Ryan Heller

14:30–14:31
Characterisation of the Charge Transport Properties and Linearity of HF-CdZnTe Material

Speaker
Max Bishop

14:31–14:32 **All-silicon tracker for a multi-TeV Muon Collider**

Speaker
Nazar Bartosik

14:33–14:34 **Al alloys phases recognition using X-ray transmission**

Speaker
Valentina Vicini

14:34–14:35 **Accelerated radiation hardness qualification of CMOS image sensors**

Speaker
Rob Braan

14:35–14:36 **A Gaseous Compton Camera for Gamma Imaging**

Speaker
Lara Filipa Das Neves Dias Carramate

14:36–14:37
Innovative structures for improved light collection in argon-based TPCs

Speaker
André Cortez

14:37–14:38
A Novel Theoretical Model Framework with Experimental Verification for the 3D CdZnTe Drift Strip Detector

Speaker
Evangelos Istatiadis

14:39–14:40
Longevity study of CMS Muon Detector facing the High Luminosity LHC phase

Speaker
Dayron Ramos Lopez

14:40–14:41

Multi-channel readout electronics of silicon photomultipliers for plastic scintillating fiber detector

Speaker
Zibing Wu

14:41–14:42

Experimental LET characterization with Minipix Timepix3 for quality assurance in proton therapy

Speaker
Ms Paulina Stasica

14:42–14:43

Effect of the fiber-optic plate on imaging performance of a CMOS x-ray detector

Speaker
Seungjun Yoo

14:43–14:44

Iterative reconstruction methods for limited angle tomography: A comparative study

Speaker
Seokwon Oh

14:44–14:45

Design of a Time to Digital Converter for LGAD detector at HIAF complex

Speakers
Dr Chaojie Zou, Weijia Han

14:45–14:46

Development of an X-ray backscatter Imaging System for Cargo Inspection

Speakers
Dr JongWon Park, Jeonghee Lee, Dr Chang Hwy Lim

14:46–14:47

Enhancing Aerial Mapping with Gamma Radiation Detection: A Study in UAE

Speaker
Prof. Joaquim Marques Ferreira Dos Santos <jmf@uc.pt>

14:47–14:48

Development of a Clock and Data Recovery (CDR) ASIC for heavy-ion physics experiments

Speaker
Mr Xiaomeng Ma

14:48–14:49

A feasible study of scintillator-based detectors for PCCT with variance Cramer-Rao Lower Bound(CRLB) in basis material decomposition.

Speaker
He Li

14:49–14:50

Measurement of Scattering Azimuthal Distribution of Polarized Gamma-Rays in Compton Scattering Using GAGG(Ce) Scintillator

Speaker
Riku Sato

14:50–14:51
UFERI – hybrid photon-counting pixel detector for diffraction experiments at synchrotrons

Speaker
Marie Andrae

14:51–14:52
Peculiarity behaviour of the Inter-pad region in Double Trenched LGAD: Insights from RD50 and AIDAInnova Production Runs

Speaker
Gordana Lastovicka Medin

14:52–14:53
Development of a transportable neutron imager for localization of radioactive sources

Speaker
Ali Murteza ALTINGUN

14:53–14:54
Improved spectrometry of semi-insulating GaAs detectors by significant thinning detector thickness

Speaker
Andrea Sagatova

14:54–14:55 **Neutral bremsstrahlung emission spectrum in argon**

Speaker
Dr Carlos Henriques

14:55–14:56
A direct electron detector for electron microscopy based on EMPIX2 ASIC

Speaker
Tong Wei

14:56–14:57
X-ray performance evaluation and structural analysis of the wide-field X-ray monitor with Lobster Eye Optics

Speaker
Shunsuke Kurosawa

14:57–14:58
Solid angle compensation in Gas proportional scintillation counters using an annular anode with azimuthal geometry.

Speaker
Pedro Silva

14:58–14:59
Conceptual design of TUPI (Timepix-based Ultra-fast Photon Imaging) detector's front-end electronics

Speaker
Mr Allan Borgato

14:59–15:00
Timepix2 with a 500 µm thick silicon sensor in adaptive gain mode as a dE/dX spectrometer for relativistic heavy ions

Speaker
Dr Petr Smolyanskiy

15:00–15:01
Perceptual Evaluation of Lossy Compression Techniques in Synchrotron Tomography: Bridging Visual and Quantitative Measures

Speaker
Dr Francesco Guzzi

15:01–15:02
Development and Characterisation of the HEXITEC 2X6 Detector System for the NXCT

Speaker
Rhian Mair Wheater

15:02–15:03
Advancements in the Silicon Tracking System of the CBM Experiment: Module series production, testing, and operational insights

Speaker
Dr Adrian Rodríguez Rodríguez

15:03–15:04
A Methodology for the Timing Performance Optimization of the Pre-amplifier Design in High Energy Physics

Speaker
Yujing Gan

15:04–15:05
Characterization of a readout integrated circuit with in-pixel time measurement

Speaker
Mr Lukasz Kadlubowski

15:05–15:06 **TUPI (Timepix-based Ultra-fast Photon Imaging) Detector**

Speaker
Jean Marie Polli

15:06–15:07 **Study of primary scintillation yield of pure krypton**

Speaker
Rui Daniel Mano

15:07–15:08 **TOFHIR2: The readout ASIC of the CMS Barrel MIP Timing Detector**

Speaker
Giacomo Da Molin

15:07–15:08
Spectrum Analysis for Identification of Nuclides at Radiological Crime Scene

Speaker
Ioannis Kaissas

15:08–15:09

Normalized metal artifact reduction using CNR-based metal segmentation in dental computed tomography

Speaker
Sungmin Park

15:08–15:09

Introducing the easyPET/CT: a Novel Multimodal Preclinical Imaging Scanner

Speaker
R. G. Oliveira

15:09–15:10

Application of Richardson-Lucy deconvolution to images obtained from GEM scintillation readout by a commercial Hamamatsu S13361-3050 SiPM unit

Speakers
C. M. B. Monteiro, J.P.G. Neves

15:09–15:10

Efficient noble gas purification using hot getters and gas circulation by convection

Speaker
J. M. R. Teixeira

15:10