

Session Program

25-30 Sept 2023

**The 3rd African Conference on Fundamental
and Applied Physics (ACP2023)**

Parallel Session 2

Protea Hotel King George, Regency Room

Monday 25 September

16:00

Parallel Session 2: Accelerator Physics/ Biophysics/ Materials

Session | **Location:** Protea Hotel King George, Charlotte Room | **Conveners:** Mmantsae Diale, Simone Di Mitri

16:00–16:13 **X-Ray and Terahertz Source Based on Energy Recovery Linac.**

Speaker

Dr Sanae Samsam

16:15–16:28

Luminosity calibration and beam-beam interactions at hadron colliders with Q-Gaussian beams

Speaker

Mr Mohamed Abed

16:30–16:43

A novel 3D vertex model predicts the biomechanical factors of cell delamination in stratified epithelial tissues

Speaker

Dr Somiealo AZOTE epse HASSIKPEZI

16:45–16:58

Electronic Structure Calculations using Quantum Computing

Speaker

Dr Muhammad Al-Zafar Khan

17:00–17:13

STUDY OF SPECTRA OF HF VI

Speaker

Dr Exaucé BOKAMBA MOTOUMBA

17:15–17:28

The Role of Optical Fiber Sensor in Internet of Things: Applications and Challenges: Review

Speaker

Paul Macheso

17:30

Wednesday 27 September

16:00

Parallel Session 2: Instrumentation / Detectors/ Physics Education / Quantum Computing

Session | **Location:** Protea Hotel King George, Charlotte Room | **Conveners:** Pedro Abreu, Uli Raich

16:00–16:13

3D Position-Sensitive Semiconductor Detectors for Nuclear Fuel Imaging

Speaker

Mounia Laassiri

16:15–16:28

The Mu2e experiment and its electromagnetic calorimeter

Speaker

Fabio Happacher

16:30–16:43

Long-term protection of thermal quantum correlations and their role in enhancing quantum teleportation protocol

Speaker

Fadwa BENABDALLAH

16:45–16:58

Elimisha Msichana Elimisha Jamii an Astronomia (Swahili for "Educate a girl, educate the entire community with Astronomy").

Speaker

Ann Njeri

17:00–17:13

Genius in Africa

Speaker

Jesutofunmi Fajemisin

17:15–17:28

Citizens and Travelers II - A Collection of African Scientists' stories

Speaker

Ms Jesutofunmi Fajemisin

17:30–17:55

USATLAS SWT2-OU Storage Evolution from XRootD to CEPH

Speaker

Horst Severini

18:00

Thursday 28 September

16:00

Parallel Session 2: Particle Physics/ Astrophysics

Session | **Location:** Protea Hotel King Room, Charlotte Room | **Conveners:** Prof. Nausheen Shah, Mu-Chun Chen

16:00–16:13

Search for a Higgs boson decaying to a four lepton plus missing transverse energy final state via four vector bosons

Speaker

Xola Gugulethu Mapekula

16:15–16:28

Search for the dark vector boson

Speaker

Diallo Boye

16:30–16:43

The dark side of the photon, ongoing ATLAS search for dark matter through a dark photon.

Speaker

Hannah Van Der Schyf

16:45–16:58

Cosmic web topology and the characteristics of dark matter subhaloes

Speaker

Feven Markos Hunde

17:00–17:25

Topological Stars and Gravity

Speaker

Ibrahima Bah

17:30