

SAINTS@tlabs Workshop on:

Spectrum, Presentation, Analysis, Manipulation, and Simulation (SPAMS)

Date: 12- 14 November 2018

Venue: Auditorium and Computer Lab,
iThemba LABS NRF (Cape) Auditorium

Lecturers/facilitators:

Dr Tanya Hutton (Dept. of Physics, UCT), Dr Pete Jones (Dept. of Subatomic Physics, iThemba LABS), Dr Philippos Papadakis (Univ. of Liverpool), Dr Carl Unsworth (STFC Daresbury Laboratory, UK)

Keywords: *spectrometry, radiometry, radiation detection, peak fitting, peak-area analysis, energy calibration, detection efficiency, ROOT, Excel, Python, Gnuplot, GF3, MIDAS, Radware, GEANT, Monte Carlo*

Target group: *Masters and Doctoral students in Nuclear/Particle physics in their first year of study, with a preference for students working on projects linked to iThemba LABS*

Workshop Outline: *Students will be introduced briefly to different data acquisition systems used in nuclear physics experiments involving gamma-ray spectrometry. Ways to analyze these spectra to determine energy calibrations, peak areas, efficiency calibrations and peak-to-total ratios, amongst others, will be discussed. Ways to convert spectra from one format to another (for software compatibility) and to present publication/presentation quality spectra will also be discussed. Students will also be given a brief introduction to spectrum simulation. The workshop will involve a mix of lectures and student hands-on work in the iThemba LABS Computer Lab.*

Organizers:

Prof. Alison Bruce (Univ. of Brighton, UK), Dr Pete Jones (Department of Subatomic Physics, iThemba LABS), and Prof. Richard Newman (SAINTS Office, iThemba LABS)

Sponsors:

Science and Technology Facilities Council (UK) – Global Challenge Research Fund (grantholder: Prof. Alison Bruce (Univ. of Brighton, UK))

Registration: *Capacity for only 20 students. Apply before 27 Oct. No cost to students (no travel, accommodation support). To apply for participation use the link:*

https://docs.google.com/forms/d/e/1FAIpQLSdY0Ap1SXNaQXuVpYzRLwFK7fb71PwyA1AHnqtK1910TnMQ4Q/viewform?usp=sf_link

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