

First (2nd part) CFP Zewail City Mini-school on 'experimental tools in particle physics'

Tuesday 15 September 2015 - Thursday 17 September 2015

Other Institutes

Scientific Programme

The daily program consists of 2 lectures and 1 tutorial session. During the 2nd part of the mini-school, the lecture sessions will cover the following topics: • Space-Time Symmetries: o Translational invariance o Rotational invariance o Parity , Charge conjugation, and Time Reversal

- The Quark Model: o Isospin symmetry o The lightest hadrons o Colour o Charmonium and Bottomium

- Weak Interactions: o Charged current reactions o The third generation o Neutral currents and the Unified theory o Gauge Invariance and the Higgs Boson

- Experimental Methods: o Accelerators and Beams o Particle Interactions with Matter o Particle Detectors o Detector Systems and Experiments

During the 1st part of the mini-school, the tutorial sessions will cover the following topics: • Introduction to C++ (2) • Monte-Carlo tools for event generations (2) • ROOT (2)