Πανεπιστήμιο Κύπρου
Τμήμα Φυσικής

Το Τμήμα Φυσικής του Πανεπιστημίου Κύπρου
σας προσκαλεί την

Τρίτη, 30 Μαΐου 2023, ώρα 13:00

στην παρουσίαση της Διδακτορικής Διατριβής της Madeleine Dale

"Hadron masses from full QCD+QED_C simulations"

In this work, we have measured baryon and meson masses through first-principles non-perturbative simulations of QCD+QED, using the QEDC formulation of QED on the lattice. In particular, we measured the octet baryons, the Ω− baryon and the K and D mesons with n f = 1 + 2 + 1, including an estimation of the effects of flavour mixing induced by the C∗ boundary conditions. The baryon interpolating operators were smeared using spatial gradient-flow-smeared links that enter into a Gaussian smearing operator. The baryon mass results are discussed in relation to their physical values. We also implemented the Generalised Eigen-value method in order to optimise the smearing parameters and provide information on excited states. A modified version of the Backus-Gilbert method was also used in a preliminary investigation of the excited states of the Ω− baryon.

Η παρουσίαση θα είναι ανοικτή στο κοινό μέσω τηλεδιάσκεψης:

https://ucy.zoom.us/j/93806735027?pwd=YlhVOUZIYlBoWGhaUXcyUjNDWnp2QT09

Meeting ID: 938 0673 5027 Passcode: 418670

Για περισσότερες πληροφορίες παρακαλώ επικοινωνείτε: Τμήμα Φυσικής, τηλέφωνο: 22892820