

**CENTRE D'ETUDES NUCLÉAIRES DE
BORDEAUX-GRADIGNAN**

Jeudi 14 Décembre 2017

à 14H

Un café sera servi à partir de 13h45

Jenny THOMAS

University College London

**CHIPS: a possible path to faster measurements
of neutrino oscillation physics**

Neutrino Oscillations have provided a new insight into the properties of neutrinos since their discovery almost 20 years ago. There are a number of experiments presently providing new results pointing to a future direction in the field. One fundamental and overarching difficulty associated with any kind of measurements of neutrinos is that they only interact with the weak interaction, making their observation rather rare. This leads to very long wait times for results and the need for larger and larger detectors which eventually break the bank. It is time for a paradigm shift in the way neutrino physics is carried out, without the need for 1000 people for each experiment, sums of money that take your breath away and detectors that are so small they need 20 years to make the next fundamental step. I will give an introduction to the physics, the recent results in the field and then talk about an alternative future where we can make measurements quickly with huge detectors at a fraction of the cost of presently planned experiments.

Salle des Séminaires du CENBG

Le Haut Vigneau - BP 120 - F-33175 Gradignan Cedex