

*Organisé conjointement par  
CPHT-École Polytechnique et Groupe Théorie IPN Orsay*

## **SÉMINAIRE de PHYSIQUE des PARTICULES**

**Savvas Zafeiropoulos**  
(Heidelberg U.)

### **Parton-pseudo distribution functions from Lattice QCD**

**Résumé :**

The light-cone definition of Parton Distribution Functions (PDFs) does not allow for a direct ab initio determination employing methods of Lattice QCD simulations that naturally take place in Euclidean spacetime. In this presentation we focus on pseudo-PDFs where the starting point is the equal time hadronic matrix element with the quark and anti-quark fields separated by a finite distance. We focus on Ioffe-time distributions, which are functions of the Ioffe-time  $\nu$ , and can be understood as the Fourier transforms of parton distribution functions with respect to the momentum fraction variable  $x$ . We present lattice results for the case of the nucleon and we also perform a comparison with the pertinent phenomenological determinations.

**Vendredi 23 Novembre 2018**

**11:00**

**Salle de conférences Louis Michel, bât. 6**