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Forum de Physique Statistique @ ENS

Mercredi 25 Mai 2022, 12 :00
LPENS, L367
Domaines : cond-mat.stat-mech

Titre : *Floquet chains and the stability of their edge modes*

Orateur : **Aditi Mitra (NYU)**

Résumé : *Floquet or periodically driven systems show topological phases that are qualitatively different from their static counterparts. In this talk I will first introduce the new kinds of topological phases that can be realized in free-fermion Floquet systems. I will then show that the edge modes encountered in certain free fermion Floquet systems are remarkably robust to adding interactions, even in disorder-free systems where generic bulk quantities can heat to infinite temperatures due to the periodic driving. This robustness of the edge modes to heating can be understood in the language of strong modes for free fermion chains, and almost strong modes for interacting chains. I will then outline a tunneling calculation for extracting the long lifetimes of these edge modes by mapping the Heisenberg time-evolution of the edge operator to dynamics of a single particle in Krylov subspace.*