

Lie-Poisson Equations: from Quantum Liquids to Gravity

vendredi 22 novembre 2024 09:30 (1 heure)

I argue that translation-invariant dynamical systems on Lie groups are ubiquitous in Nature. Numerous examples are provided, ranging from basic mechanics and hydrodynamics to the edge modes of topological insulators and quantum gravity. The geometric approach to such setups yields observables that are natural but surprisingly overlooked in the literature, notably including Berry phases that probe the symplectic geometry of coadjoint orbits. [Based on arXiv:2408.03991]

Orateur: OBLAK, Blagoje (CNRS, Université Claude Bernard Lyon 1)