SEMPARIS – Séminaires en région parisienne

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Seminaire exceptionnel

Mardi 30 Novembre 2021, 11 :30
LPENS, L367
Domaines : cond-mat.stat-mech

Titre : *New advances in simplifying Hall and Thermal Hall Kubo formulas*

Orateur : **Assa Auerbach (Technion)**

Résumé : *Kubo formulas in hyperspace are convenient starting point for deriving computable expressions for transport coefficients of general lattice Hamiltonians. These include : (i) Continued fractions expansion of dynamical conductivities, (ii) Static (thermodynamic) formulas for DC Hall and thermal Hall coefficients, and (iii) On-shell formulas for Hall and thermal Hall conductivities. The latter are expressed as commutators of degeneracy-projected polarizations. The new formulas expose general properties of Hall and thermal Hall current carrying states in bulk-gapped and gapless metallic phases.*

Refs : 1. Noga Bashan, Assa Auerbach, arXiv :2108.11372 2. A. Auerbach, Phys. Rev. B 99, 115115 (2019). 3. Netanel H. Lindner and Assa Auerbach, Phys. Rev. B81, 054512-14, (2010).
