

THE UNIVERSITY OF HONG KONG

DEPARTMENT OF PHYSICS

SEMINAR

Quantum geometry in electronic bands

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Abstract:

Electrons inside crystals occupy Bloch energy bands. Traditionally in condensed matter it is the energy of the bands that controls most of the physics. However, the wavefunctions of a band, or a small collection of bands, define a restricted Hilbert space whose geometry is different from the whole and can influence physical properties. I will discuss some recent work in our group discussing how quantum geometry controls correlations in interacting flat bands, as well as how quantum geometry appears in a proper description of electron motion in dispersive bands.

Thursday, March 20, 2025, 10:00am

KK102, 1/F, K.K. Leung Building, Main Campus, The University of Hong Kong

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Phone: 28592360 Fax: 25599152. Anyone interested is welcome to attend.