



Seminar

Numerical studies of continuous transitions from fractional quantum anomalous Hall states

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Venue: Room M212, Physics building, Peking University

地点: 北京大学物理楼, 中212会议室

Abstract

With the rapid advances in the studies of fractional quantum anomalous Hall (FQAH) states, the quantum phase transitions between such topologically ordered states and the symmetry-broken phases are attracting broad interest. In this talk, I will discuss our numerical evidence of two different continuous transitions out of the symmetric FQAH states. The first transition is driven by the softening of the magnetoroton mode in the FQAH, which spontaneously breaks the translation symmetry and leads to a smectic FQAH state. The second transition is between a bosonic Laughlin state and a superfluid, which is theoretically believed to be beyond the Landau theory.

About the speaker

Hongyu Lu received his B.Sc. in 2020 from Beihang University and Ph.D. in 2025 from The University of Hong Kong. He is now a postdoctoral fellow at HKU and interested in strongly correlated and topological systems, recently focusing on the fractional Chern insulators.