

# JITCP Seminar

THE UNIVERSITY OF HONG KONG  
HKU-UCAS JOINT INSTITUTE OF THEORETICAL AND COMPUTATIONAL PHYSICS  
[Thursday afternoon, 4 pm, Zoom (online)]

## Topological Physics in Iron-Based Superconductors

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Iron-based superconductors and topological matters have been two important research frontiers in condensed matter physics. Here we discuss the recent progress to bridge these two fields. First, we show that iron-based superconductors can be considered as connate topological superconductors in which there are topological nontrivial bands, coexisting with bands that are responsible for superconductivity. Recent experiments have provided strong supporting evidence. Second, we show that the intrinsic sign structures of pairing order parameters in iron-based superconductors can be linked to topology. Thus, measuring topological properties can provide a smoking gun evidence to determine the superconducting order parameters. Finally, we point out that all these physics are attributed to the nonsymmorphic symmetry group associated with the building block of the materials. In summary, iron-based superconductors are unique topological materials to provide opportunities for realizing topological superconductivity and Majorana modes at high temperature.

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### Online Zoom Seminar

Thursday, November 3, 2022, 4:00 pm

Meeting ID: 945 9098 9115

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