

# An introduction to non-Hermitian physics

*Tuesday 26 August 2025 15:20 (40 minutes)*

This talk provides an introduction to non-Hermitian physics, covering key consequences of non-Hermitian Hamiltonians such as complex eigenvalues, nonorthogonal eigenstates, and the non-Hermitian skin effect (NHSE). It presents our contributions to non-Hermitian topological band theory, including clarifying topological charges of exceptional points and classifying 3D exceptional line semimetals, as well as advancements in non-Bloch band theory like establishing the bulk-boundary correspondence between spectral winding number and NHSE and proposing dynamical degeneracy splitting. Additionally, the talk discusses experimental realizations and physical understandings of NHSE, and outlines future directions in non-Hermitian many-body theory with a call for collaborators.

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