APCTP SEMINAR

Algebraic non-Hermitian skin effect and ultra spectral sensitivity in two dimensions

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Online Via Zoom

The non-Hermitian skin effect, characterized by a proliferation of exponentially localized edge modes in open-boundary systems, has unveiled a range of novel physical phenomena and applications. In sharp contrast to the traditional short-range exponential localization, we find that in two or higher dimensions, skin modes often exhibit quasi-long-range algebraic decay, with their amplitude decaying as a power-law function of the distance from the boundary. As a physical consequence, the algebraic skin effect gives rise to a novel phenomenon termed ultra spectral sensitivity: while a single weak, point-like impurity leaves the spectrum unchanged, the introduction of a second, spatially distant impurity leads to a dramatic spectral shift. We provide an analytic theory to characterize the algebraic skin effect and its associated spectral instabilities.

■ **Zoom Meeting Information**

Link: https://us06web.zoom.us/meeting/register/hRZeDMmMTBuf6Ifef9BEiw
Meeting ID: 831 0268 9242
Password: 0

■ **Contact Information**

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