



量子物理学・ナノサイエンス第 69 回特別セミナー

【開催場所変更】

Classification of intrinsic non-Hermitian topology

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概 要

A unique feature of non-Hermitian systems is the skin effect, which is the extreme sensitivity to the boundary conditions. In this talk, I show that the skin effect originates from intrinsic non-Hermitian topology, by using the bulk-boundary correspondence of the equivalent Hermitian system. I also discuss a non-Hermitian counterpart of topological insulators/superconductors — symmetry-protected skin effects. In particular, we discovered the Z_2 skin effect protected by time-reversal symmetry in one and two space dimensions [1]. We also categorized which non-Hermitian topological phases are intrinsic to non-Hermitian systems for any space dimensions and any internal symmetry [1,2].

[1] Nobuyuki Okuma, Kohei Kawabata, Ken Shiozaki, Masatoshi Sato, arXiv:1910.02878.

[2] Ken Shiozaki, in preparation.

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