Stuttgarter Physikalisches Kolloquium

Fachbereich Physik, Universität Stuttgart
Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme

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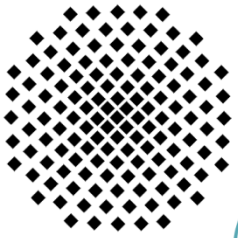

Dienstag, 27. November 2018	16:00 Uhr c.t.	Hörsaal V 57.01

Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

Gastgeber: Apl. Prof. Jörg Main, Universität Stuttgart, Telefon: 0711 - 685-64999

The Physics of Exceptional Points

Stefan Rotter
TU Wien

Abstract

In my talk I will discuss the recent exciting developments associated with non-Hermitian degeneracies, also known as “exceptional points” [1]. After having been studied mostly in the domain of mathematical physics, quite a number of experiments have recently demonstrated how the presence of exceptional points leads to very counter-intuitive effects, such as loss-induced lasing, chiral field modes, topological energy transfer etc. I will try to provide an introduction to this topic as well as an overview of the many different areas of physics in which exceptional points are meanwhile being explored.

[1] El-Ganainy, Makris, Khajavikhan, Musslimani, Rotter, Christodoulides, Nature Physics 14, 11 (2018).