Physikalisches Kolloquium — Physics Colloquium

Einladung — **Invitation**

Monday, 26 January 2026

Lecture Hall N24/H13, at 16:15
Coffee and cookies will be served in front of the lecture hall from 16:00

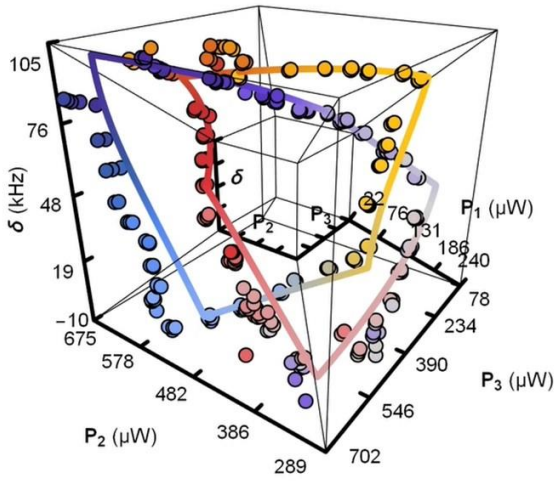
Measuring the knots and braids of non-Hermitian modes

Prof. Dr. Jack Harris

Department of Physics, Sloane Physics Laboratory,
Yale University, USA

https://physics.yale.edu/people/jack-harris

It may seem unlikely that rich mathematical structures remain to be uncovered in classical harmonic oscillators. Nevertheless, oscillators that combine non-reciprocity and loss have provided a number of surprises in recent years. I will describe a collaborative effort between theory and experiment that has led to a concise understanding of why these systems naturally exhibit braids, knots, and other topological structures. I will also present measurements of these structures (using a cavity optomechanical system), and will describe their potential application in various settings. This will be a pedagogical introduction to all of these topics, with lots of pictures and videos!



Host: Prof. Benjamin Stickler, Institute of Complexe Quantum Systems

Organisation: Prof. Dr. Jens Michaelis, Institute of Biophysics, jens.michaelis@uni-ulm.de, +49-731-50-23050