



Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 11. Juni 2024

17 Uhr, Geom H4

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Title:

What analysis, combinatorics, and quilted spheres can tell us about symplectic topology

Abstract:

A central tool for studying symplectic manifolds is the Fukaya category. In this talk, I will describe a program, which is ongoing joint work with Katrin Wehrheim, to relate the Fukaya categories of different symplectic manifolds via a structure called the "symplectic $(A\text{-infinity}, 2)$ -category". The key objects are "witch balls", which are pseudoholomorphic maps whose domain is the Riemann sphere decorated with circles and points, and "2-associahedra", the configuration spaces of these domains. I will describe applications to symplectic topology, and explain how my work enables a unified, functorial version of Kontsevich's Homological Mirror Symmetry conjecture.

**Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H4
Kaffee und Tee bereit.**