Department of Mathematics,
University of California San Diego

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Department Colloquium

Julian Chaidez

Princeton

Symplectic dynamics without Floer homology

Abstract:

Symplectic dynamics is the study of dynamical systems using tools from symplectic topology, like Floer homology. Many natural dynamical systems in physics and topology can be studied fruitfully through this lens, including many-body problems, billiards and surface diffeomorphisms.

In this talk, I will give an overview of three tools in symplectic dynamics that are independent of Floer homology: the Ruelle invariant, piecewise-smooth contact geometry and min-max spectral invariants. I will discuss several recent applications to open problems, including the Viterbo conjecture and the (strong) closing lemma for higher dimensional Reeb flows.

Lei Ni

January 26, 2023

4:00 PM

APM 6402

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