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Oberseminar Dynamische Systeme

A Hölder-type inequality for the C^0 distance and Anosov-Katok pseudo-rotations

Dienstag, 22. November 2022
16:15 Uhr – Raum IA 1/53

Dusan Joksimovic
(Paris)

Abstract:

In this talk, we will show that sufficiently fast convergence in Hofer/spectral metric forces C^0 convergence. We achieve this by proving a Hölder-type inequality for Hamiltonian diffeomorphisms relating the C^0 norm, the C^0 norm of the derivative, and the Hofer/spectral norm. As an application of our Hölder-type inequality, we prove C^0 rigidity for a certain class of pseudo-rotations. In the first part of the talk, we will state the main results and prove the inequality. In the second part, we will introduce the class of Anosov-Katok pseudo-rotations (AKPRs) and prove (using the inequality) that exponentially Liouville AKPRs are C^0 rigid. This talk is based on joint work with Sobhan Seyfaddini.

Guests are very welcome!