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Oberseminar Dynamische Systeme

Dehn-Seidel twist, C^0 symplectic geometry and barcodes

Dienstag, 27. April 2021
16:15 Uhr – per Zoom

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Abstract:

In this talk I will present my work initiating the study of the C^0 symplectic mapping class group, i.e. the group of isotopy classes of symplectic homeomorphisms, and present the proofs of the first results regarding the topology of the group of symplectic homeomorphisms. For that purpose, we will introduce a method coming from Floer theory and barcodes theory. Applying this strategy to the Dehn-Seidel twist, a symplectomorphism of particular interest when studying the symplectic mapping class group, we will generalize to C^0 settings a result of Seidel concerning the non-triviality of the mapping class of this symplectomorphism. We will indeed prove that no power of the square of the generalized Dehn twist is not in the connected component of the identity in the group of symplectic homeomorphisms. Doing so, we prove the non-triviality of the C^0 symplectic mapping class group of some Liouville domains.

Guests are very welcome!