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Oberseminar Dynamische Systeme

On non-geometric augmentations of Chekanov-Eliashberg algebras

Dienstag, 13. Juni 2023
16:15 Uhr – Raum IA 1/181

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Abstract:

Legendrian contact homology is a modern invariant of Legendrian submanifolds of contact manifolds defined by Eliashberg–Givental–Hofer and Chekanov, and developed by Ekholm–Etnyre–Sullivan for the case of the standard contact vector space.

It is defined to be the homology of the Chekanov-Eliashberg algebra of a given Legendrian submanifold. This invariant is difficult to compute, and, in order to make it computable, one needs to use augmentations. Some augmentations come from certain geometric objects called exact Lagrangian fillings, some do not. We will discuss non-geometric augmentations for high dimensional Legendrian submanifolds. Along the way, we prove a Künneth formula for (linearized) Legendrian contact homology for high spuns of Legendrian submanifolds. If time permits, we will also discuss whether algebraic torsion appears in Legendrian contact homology.

Guests are very welcome!