

Tips and tricks – exercise sessions

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Title: Floer homology with non abelian coefficients.

Abstract: I will first discuss - along an approach due to Evans-Kedra and, independently, Damian - the following statement originating in work of Fukaya: Let L be a monotone Lagrangian submanifold and suppose that there exists a holomorphic disc of Maslov index two, with a non contractible boundary. Then the index of the centralizer of the boundary in the fundamental group of L has finite index. Then, I will explain how this is an essential ingredient in the proof that $d^2=0$ for a version of Floer homology with non abelian coefficients, using local systems of rank greater than one.