سمینار هندسه و توپولوژی

Counting Real Curves in Symplectic Manifolds

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چکیده

For every genus g, there are different types of J-holomorphic curves in a symplectic manifold invariant under an antisymplectic involution. In genus zero there are two: those that have a fixed point locus and those that do not. The former are described by moduli spaces of J-holomorphic disks, which are well studied in the literature. In this talk, we first study moduli spaces describing the latter and then combine the two types of moduli spaces to get a well-defined theory of counting real curves of genus 0. We then talk about the difficulties of generalizing this construction to higher genus and mention some recent results in genus one. I will provide several examples in genus zero and one, explaining the theory and results.

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