

On quasimap invariants of moduli spaces of Higgs bundles

Denis Nesterov

Abstract

We compute odd-degree genus 1 quasimap and Gromov–Witten invariants of moduli spaces of Higgs SL_2 -bundles on a curve of genus $g \ge 2$. We also compute certain invariants for all prime ranks. This proves some parts of the author's conjectures on quasimap invariants of moduli spaces of Higgs bundles.

More generally, our methods provide a computation scheme for the genus 1 quasimap and Gromov–Witten invariants in the case when degrees of maps are coprime to the rank. This requires an analysis of the localisation formula for certain Quot schemes parametrising higher-rank quotients on an elliptic curve. Invariants for degrees which are not coprime to the rank exhibit a very different structure for a reason that we explain.