

Cohomology of Hitchin fibers: cup product structure

Alexei Oblomkov^{*}

oblomkov@math.umass.edu

In my talk I will give a conjectural description of cohomology ring of Hitchin fibers (in type A) in terms of structure ring of some moduli space of maps of a formal disc into the corresponding spectral curve (a local version of GW/DT correspondence). The conjecture is proven in the case of the fibers that admit G_m symmetry. I will also explain how to interpret the perverse filtration on the cohomology of the Hitchin fiber as the weight filtration on the slice of wild character variety.

This is joint work with Zhiwei Yun.

^{*}Department of Mathematics and Statistics, University of Massachusetts Amherst, 710 N. Pleasant Street, Amherst, MA 01003-9305 USA