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Complex K-theory of the moduli space of Higgs bundles

The moduli spaces of semistable SL_n and PGL_n Higgs bundles form dual abelian fibrations over (generic locus of) an affine space called the Hitchin base. Motivated by the Hausel-Thaddeus mirror symmetry picture, we construct an isomorphism between the complex K-theory of the two moduli spaces on the spectra level. As part of our proof, we show both K-theory groups are torsion-free. This is joint work in progress with Michael Groechenig.