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Quantized Coulomb branches of 3d N=4 gauge theories and difference operators

Tuesday 28 June 2016 09:30 (50 minutes)

In [arXiv:1503.03676,1601.03586] (with Braverman and Finkelberg), I have proposed a mathematical approach to define Coulomb branches of 3d N=4 SUSY gauge theories. It is based on the homology group of a certain moduli space, and has a natural quantization by the equivariant homology group. For a quiver gauge theory, the quantized Coulomb branch has an embedding into the ring of difference operators on the Lie algebra of the maximal torus of the gauge group [arXiv:1604.03586]. We then discuss examples, e.g., relation to Macdonald operators and cyclotomic rational Cherednik algebras, which is a joint work with Kodera (to appear).

Summary

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