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Stokes Matrices for the Quantum Cohomologies of Orbifold Projective Lines

Abstract: We prove a conjecture formulated by Boris Dubrovin in the cases of orbifold projective lines. The conjecture predicts that, for a projective variety X, Stokes matrix of an ordinary differential equation arising from quantum cohomology of X coincides with the Euler matrix of the derived category of coherent sheaves on X. Our proof is based on the homological mirror symmetry and Picard-Lefshetz theory. This is a joint work with Atsushi Takahashi.