

Scalar curvature as moment map in generalized Kahler geometry

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Fujiki and Donaldson show that the moment map framework plays a crucial role in Kähler geometry and scalar curvature arises as the moment map for the action of Hamiltonian diffeomorphisms.

Generalized Kahler Geometry is a successful generalization of the ordinary Kahler Geometry.

In pursuit of this analogy, we show that there exists the moment map on a generalized Kähler manifold under the certain cohomological condition.

We prove that the Lie algebra of the reduced automorphisms is reductive if a generalized Kahler manifold admits a constant scalar curvature, which is an extension of Matsushima-Lichnerowicz theorem.

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