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The multi-monopole equations for Kähler surfaces. (English) Zbl 0873.53049

Turk. J. Math. 20, No. 1, 119-128 (1996).

The authors introduce the multi-monopole equations for a 4-manifold and study the gauge theoretic properties of the moduli space and its configuration space. For simply connected Kähler surfaces, the moduli spaces are constructed explicitly. The following lemma is used: on a smooth compact Riemannian manifold (of any dimension), $\Delta u + Ae^u - Be^{-u} - w = 0$ has a unique C^∞ solution, for A, B, w smooth functions with A, B nonnegative, $\int(A - B) > 0, \int w > 0$.

Reviewer: [A.Aeppli \(Minneapolis\)](#)

MSC:

53C55 Global differential geometry of Hermitian and Kählerian manifolds

32G13 Complex-analytic moduli problems

81T13 Yang-Mills and other gauge theories in quantum field theory

Cited in **1** Review
Cited in **5** Documents

Keywords:

gauge theory; multi-monopole equations; 4-manifold; moduli space; Kähler surfaces