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Integrable systems and special Kähler metrics. (English) [Zbl 07394436] EMS Surv. Math. Sci. 8, No. 1-2, 163-178 (2021)

Summary: We describe the Special Kähler structure on the base of the so-called Hitchin system in terms of the geometry of the space of spectral curves. It yields a simple formula for the Kähler potential. This extends to the case of a singular spectral curve and we show that this defines the Special Kähler structure on certain natural integrable subsystems. Examples include the extreme case where the metric is flat.

MSC:
14H60 Vector bundles on curves and their moduli
14H70 Relationships between algebraic curves and integrable systems
37J99 Dynamical aspects of finite-dimensional Hamiltonian and Lagrangian systems
53D05 Symplectic manifolds (general theory)
53C55 Global differential geometry of Hermitian and Kählerian manifolds

Keywords:
integrable system; Higgs bundle; special Kähler

Full Text: DOI

References:

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