

Lupascu, Paul

The abelian vortex equations on Hermitian manifolds. (English) Zbl 1018.32014

Math. Nachr. 230, 99-113 (2001).

The object of this paper is to obtain a description of the moduli space of solutions of the vortex equations for line bundles on compact Hermitian manifolds in terms of effective divisors. This generalizes (in the case of line bundles) the results of *S. Bradlow* [*Commun. Math. Phys.* 135, 1-17 (1990; [Zbl 0717.53075](#))] for the Kähler case.

Reviewer: [P.E.Newstead \(Liverpool\)](#)

MSC:

[32G13](#) Complex-analytic moduli problems

[32L05](#) Holomorphic bundles and generalizations

[53C55](#) Global differential geometry of Hermitian and Kählerian manifolds

Cited in **1** Review
Cited in **2** Documents

Keywords:

[vortex equations](#); [line bundles](#); [Hermitian manifolds](#); [effective divisors](#)

Full Text: [DOI](#)

References:

- [1] : Topologie und Analysis. Eine Einführung in die Atiyah-Singer-Indexformel, Universitext, Springer-Verlag, 1977 · [Zbl 0364.58017](#)
- [2] Bradlow, *Comm. Math. Phys.* 135 pp 1– (1990)
- [3] Bradlow, *J. Diff. Geom.* 33 pp 169– (1991)
- [4] and : Non-Abelian Monopoles and Vortices, *Geometry and Physics (Aarhus, 1995)*, 567-589, *Lecture Notes in Pure and Appl. Math.* 184, Dekker, New York, 1997
- [5] Bryan, *Turkish J. of Math.* 20 pp 119– (1996)
- [6] Gauduchon, *Math. Ann.* 267 pp 495– (1984)
- [7] and : Moduli of Simple Holomorphic Pairs and Effective Divisors, preprint (Prépublication de l'Institut Fourier, Laboratoire de Mathématiques, No. 485/1999)
- [8] Kazdan, *Ann. Math.* 99 pp 14– (1974)
- [9] Lübke, *Math. Ann.* 276 pp 663– (1987)
- [10] and : The Kobayashi-Hitchin Correspondence, World Scientific Publishing Co., 1995 · [Zbl 0849.32020](#)
- [11] : Seiberg-Witten Equations and Complex Surfaces, Ph. D. Thesis, Zürich, 1998 · [Zbl 0955.53040](#)
- [12] Miyajima, *Publ. R. I. M. S., Kyoto Univ.*, 25 pp 301– (1989)
- [13] : Seiberg-Witten Monopole auf Kählerflächen, Diplomarbeit Zürich, 1999
- [14] Okonek, *Internat. Journ. Math.* Vol. 6 pp 893– (1995)
- [15] Okonek, *Math. Ann.* 312 pp 261– (1998)
- [16] and : Seiberg-Witten Invariants for 4-Manifolds with $b_+ = 0$, to appear in "Memorial Volume dedicated to M. Schneider"
- [17] : Lectures on Differential Geometry, *Conference Proceedings and Lecture Notes in Geometry and Topology, Vol. 1*, International Press (1994) · [Zbl 0830.53001](#)
- [18] : Stable Vector Bundles over Non-Kählerian Surfaces, Ph. D. Thesis, Zürich, 1993

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.