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Determinants of Cauchy-Riemann operators on a Riemann surface. (English. Russian original)

Zbl 0603.32016

Funct. Anal. Appl. 19, 31-34 (1985); translation from Funkts. Anal. Prilozh. 19, No. 1, 37-41 (1985).

The author considers on a smooth vector bundle over a compact Riemann surface the space of $\bar{\partial}$ operators (corresponding to the possible complex structures) and constructs on this space a determinant by using the concepts of a determinant line bundle and the determinant of an elliptic operator.

MSC:

32F99 Geometric convexity in several complex variables

58J99 Partial differential equations on manifolds; differential operators

30F10 Compact Riemann surfaces and uniformization

Cited in **13** Reviews
Cited in **173** Documents

Keywords:

determinants of Cauchy-Riemann operators; determinant line bundle; determinant of an elliptic operator

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References:

[1] D. Ray and I. Singer, "Analytic torsion," Ann. Math.,98, No. 1, 154-177 (1973). · [Zbl 0267.32014](#) · [doi:10.2307/1970909](#)

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