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On the moduli of curves with theta-characteristics. (English) Zbl 0726.14019
Compos. Math. 75, No. 3, 287-297 (1990).

Let $\mathcal{M}_g^r \subset \mathcal{M}_g$ be the closure of the locus of all curves of genus g having a theta-characteristic \mathcal{L} (i.e. a line bundle \mathcal{L} such that $\mathcal{L}^{\otimes 2} = K$, K the canonical bundle) such that $h^0(\mathcal{L}) \geq r$ and $h^0(\mathcal{L}) \equiv r \pmod{2}$.

In this paper it is shown that the tangent space to \mathcal{M}_g^r at a point is the orthogonal to the image of the Gauss map $\bigwedge^2 H^0(\mathcal{L}) \rightarrow H^0(K)$. The author then studies \mathcal{M}_g^r for some specific values of r and g and in particular he shows that \mathcal{M}_g^3 has two irreducible components.

Reviewer: [A.Del Centina \(Ferrara\)](#)

MSC:

14H10 Families, moduli of curves (algebraic)
14K25 Theta functions and abelian varieties

Cited in **5** Documents

Keywords:

[theta-characteristic](#); [Gauss map](#)

Full Text: [Numdam](#) [EuDML](#)

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