

Teixidor i Bigas, Montserrat

Half-canonical series on algebraic curves. (English) Zbl 0627.14022
Trans. Am. Math. Soc. 302, 99-115 (1987).

Let \mathcal{M}_g^r be the subloci of the moduli space \mathcal{M}_g of curves of genus g of those having a halfcanonical g_{g-1}^s with $s \geq r$. The author gives the upper bound $3g - 3r + 2$ for the dimension of \mathcal{M}_g^r (which is sharp in the sense that for every r there is one g for which it is attained) and determines the codimension (in \mathcal{M}_g) in the case $r \leq 4$. Also when $r \leq 4$ the author proves that the generic point in every component of \mathcal{M}_g^r has a unique halfcanonical g_{g-1}^r .

The above results are obtained mainly by using deformation techniques developed by *E. Arbarello* and *M. Cornalba* [*Comment. Math. Helv.* 56, 1-38 (1981; [Zbl 0505.14002](#)) and *Math. Ann.* 256, 341-362 (1981; [Zbl 0454.14023](#))].

Reviewer: [A. Del Centina](#)

MSC:

- [14H10](#) Families, moduli of curves (algebraic)
- [14C20](#) Divisors, linear systems, invertible sheaves
- [14D15](#) Formal methods and deformations in algebraic geometry

Cited in **2** Reviews
Cited in **23** Documents

Keywords:

half-canonical series; linear system; moduli space of curves; deformation

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