

Degoli, Lando

Sur la caractéristique de la Jacobienne des systèmes linéaires de quadriques. (On the characteristic of the Jacobian of linear systems of quadrics). (French) Zbl 0621.14006

Czech. Math. J. 36(111), 476-484 (1986).

This paper, on classical algebraic geometry, appears as a list of definitions, theorems, proofs, results, without any explanation. It is not written the introduction, the purpose, the motivations, the main results of it. In reading the paper the impression of the reviewer is that to open a new book and to read from page 205 to page 223. From the bibliography one can understand that this paper is neither the first and, maybe, nor the last one of the series, but for a single paper it is better to have the begin and the end.

Passing now to review the content of the paper, the reviewer finds nice arguments and interesting results about characterizations of the rank of the Jacobian matrix of a linear system of quadrics (hypersurfaces) in the projective space \mathbb{P}^r . It is not possible here to give a precise idea of the work, anyhow the results are of the following type. We call $L_{d_1}, L_{d_2}, \dots, L_{d_s}^a$ chain of linear systems of quadrics if they are not reducible and if L_{d_1} and L_{d_2} have in common at least a quadric, their union system L_a has in common with L_{d_3} at least a quadric and the system L_b union of L_a and L_{d_3} has in common with L_{d_4} at least a quadric, and so on. Then a linear system of quadrics L_d containing a chain of linear systems of "first kind" and no other quadric linearly independent, has the rank of the Jacobian matrix equal to $r-k \leq d$ ($k \geq 0$) if and only if the quadrics of L_d , passing through a generic point of \mathbb{P}^r , have in common a linear space S_{k+1} .

Reviewer: [E.Stagnaro](#)

MSC:

14C20 Divisors, linear systems, invertible sheaves
14N05 Projective techniques in algebraic geometry

Cited in 1 Document

Keywords:

[rank of the Jacobian matrix of a linear system of quadrics](#)

Full Text: [EuDML](#)

References:

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