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SEMINARIO DE GEOMETRÍA ALGEBRAICA

Viernes 24 de marzo de 2006, 13:00, Seminario 238

Claus Scheiderer

Profesor de la Universidad de Konstanz

Impartirá la conferencia

Nichtnegativstellensätze for semi-algebraic sets of dimension two

Summary: Let polynomials $h_1, \ldots, h_r \in \mathbf{R}[x, y]$ be given, and assume that the semi-algebraic subset $K = \{h_1 \geq 0, \ldots, h_r \geq 0\}$ of $\mathbf{R}^2$ is compact. We will discuss the question whether every polynomial which is non-negative on K is contained in the preordering T generated by $h_1, \ldots, h_r$. If this is the case, one says that T is saturated. The main point will be to reduce the problem to power series rings. From our results we will obtain plenty of new cases where T is saturated.