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SEMINARIO DE GEOMETRÍA ALGEBRAICA

Lunes 10 de abril de 2006, 13:00, Seminario 238

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Profesor de la Universidad de Niza

Impartirá la conferencia

Root arrangements for hyperbolic polynomials and their derivatives

Summary: To define a root arrangement for a hyperbolic polynomial (HP) and its derivatives means to write all these roots in a chain in which any two consecutive roots are connected with the sign $<$ or $=$. A hyperbolic polynomial-like function (HPLF) of degree n is a real-valued smooth function having n real zeros counted with the multiplicities, and whose n -th derivative vanishes nowhere. For $n \leq 3$ (resp. for $n = 4$) all root arrangements compatible with the Rolle theorem are realizable by hyperbolic polynomials and their derivatives (resp. by HPLFs, but not necessarily by HPs). For $n \geq 5$ HPLFs do not realize all such arrangements.