SEMINARIO DE GEOMETRÍA ALGEBRAICA Jueves 7 de Abril de 2011, **14:00**, Seminario 238 **Stefania Fanali**

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Maximal Curves and related codes

Resumen.

A curve defined over the finite field with q elements \mathbb{F}_q is called \mathbb{F}_q -maximal if the number of its \mathbb{F}_q -rational points attains the Hasse-Weil upper bound $q + 1 + 2g\sqrt{q}$ where g is the genus of the curve. Maximal curves have interesting properties and have also been investigated for their applications to Coding theory. In this talk, we deal with the classification problem for \mathbb{F}_q -maximal curves for some small q, and with the problem of the spectrum of genera of maximal curves. Finally, we construct some algebraic-geometric codes from maximal curves having better parameters with respect to the previously known linear codes.