



SCUOLA  
NORMALE  
SUPERIORE  
PISA

## SEMINARIO DI MATEMATICA

mercoledì 28 maggio 2008  
ore 16.00

Scuola Normale Superiore  
Pisa  
(Aula Tonelli)

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Terrà un seminario dal titolo:

***“Complete hyperbolicity of Lempert's elliptic tubes”***

**Abstract**

Given a domain  $D$  of  $\mathbb{R}P^n$ , Lempert gives a projectively invariant construction for its elliptic tube  $D^e$  in  $CP^n$ . Moreover  $D^e$  is homotopically equivalent to  $D$ . In particular it is (simply) connected if and only if  $D$  is. For  $D$  contained in an affine chart  $\mathbb{R}^n$  and convex, Lempert gives an explicit formula for the elliptic tube, and a simple example shows that  $D^e$  can be non convex. However  $D^e$  is a domain of holomorphy if and only if  $D$  is convex. In this case  $D$  is Hilbert hyperbolic,  $D^e$  is Kobayashi hyperbolic, and the Kobayashi distance restricted to  $D$  coincides with the Hilbert distance.

In a joint work (in progress) with Daniele Alessandrini, we show that actually if  $D$  is convex in an affine chart,  $D^e$  is  $C$ -convex in the corresponding chart, thus complete hyperbolic and hyperconvex.

Tutti gli interessati sono invitati a partecipare.

La Segreteria della  
Classe di Scienze