

## SEMINARIO DI MATEMATICA

**Mercoledì 10 ottobre 2012**

Ore 15.00

Scuola Normale Superiore

Pisa

Aula Mancini

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Terrà un seminario dal titolo:

### **“Lifting sections along torsors”**

**Abstract:**

Let  $k$  be a number field and  $X/k$  a proper hyperbolic curve. Each rational point gives a section of the morphism of étale fundamental groups  $\pi_1(X) \rightarrow \text{Gal}_k$ . Grothendieck's section conjecture predicts that this gives a bijection between the set of rational points and the set of such sections, up to conjugacy. A stunning consequence of a refined version of this conjecture is that for each open subset  $U$  of  $X$ , a section of  $\pi_1(X) \rightarrow \text{Gal}_k$  lifts to a section of  $\pi_1(U) \rightarrow \text{Gal}_k$ . This consequence, the cuspidalization conjecture, is also part of various strategies to attack the section conjecture. As a first approach, one can study the lifting of a section of  $\pi_1(X) \rightarrow \text{Gal}_k$  to a section of  $\pi_1(E) \rightarrow \text{Gal}_k$ , where  $E/X$  is a natural torsor under a torus, trivial over  $U$ . I will explain how to get positive results in this setting for very specific  $U$  and only when  $k = \mathbb{Q}$ . This is joint work (in progress) with Michel Emsalem and Jakob Stix.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze