



SCUOLA
NORMALE
SUPERIORE
PISA

Colloquio De Giorgi

Martedì 22 maggio 2012
ore 16.00

Scuola Normale Superiore
Pisa
(Aula Mancini)

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Terrà un seminario dal titolo:

“The tropicalization of moduli space”

Abstract:

Geometers are obsessed with moduli spaces: these are spaces which themselves parametrize isomorphism classes of other spaces (such as Riemann surfaces, vector bundles, etc.).

A celebrated example in algebraic geometry is the space of stable n -pointed algebraic curves of genus g , due to Deligne–Mumford and Knudsen. It has a delightful combinatorial structure based on weighted graphs.

Recent papers of Branetti, Melo, Viviani and of Caporaso defined an entirely different moduli space parametrizing tropical curves, a type of weighted metrized graphs generalizing earlier constructions of Culler and Vogtmann, Mikhalkin and others. It also has a delightful combinatorial structure based on weighted graphs.

One is led to ask whether there is a geometric connection between these moduli spaces; such questions were asked by Caporaso, Baker–Rabinoff–Payne, and Viviani.

In joint work with Caporaso and Payne, we show that indeed there is a connection, and a very nice one, which passes through a third type of geometry, nonarchimedean analytic geometry.

My goal is to give an intuitive description of the moduli spaces and the connection between them without requiring knowledge of algebraic geometry or analytic geometry.

Tutti gli interessati sono invitati a partecipare

Classe di Scienze