SEMINARIO MATEMATICA

Mercoledì 20 novembre 2013
ore 15:45

Scuola Normale Superiore
Pisa
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Terrà un seminario dal titolo:

"On a conjecture of Donagi and Morrison"

Abstract:

Let S be a K3 surface and C a genus g curve lying on it. The Donagi-Morrison conjecture concerns complete linear series A of type g^r_d on C such that $d \le g - 1$ and the Brill–Noether number is negative. It predicts that such an A is contained in another linear series which is cut out from a line bundle on S and satisfies some numerical conditions, meaningful from a Brill–Noether theory viewpoint. We provide counterexamples to the conjecture already for r = 2. We then study a slight modification of the conjecture, which is known to hold for r = 1, 2. After exhibiting counterexamples to the modified conjecture for $r \ge 3$, we prove an optimal result on its range of validity. This is done by using coherent systems and generalized Lazarsfeld–Mukai bundles. The conjecture turns out to be strictly connected with existence of some special secant varieties to the curve C and its deformations.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze