



SCUOLA
NORMALE
SUPERIORE

SEMINARIO DI MATEMATICA

Venerdì 27 marzo 2015
ore 16:00

Scuola Normale Superiore
Pisa
Aula Fermi

Jung Kyu CANCI
Universitat Basel

Terrà un seminario dal titolo:

“Quadratic maps with a marked periodic point of small order”

Abstract:

In a joint work with Jeremy Blanc and Noam Elkies we took in consideration the variety $\text{Rat}2(n)$ that parametrizes the pairs (f, P) where f is an endomorphism of degree 2 of P^1 and P is a periodic point for f of minimal period n , for an arbitrary fixed integer n . One considers a canonical conjugation action of $\text{PGL}2$ on $\text{Rat}2(n)$. The quotient $M2(n) = \text{Rat}2(n)/\text{PGL}2$ exists as a geometric quotient of dimension 2. We proved that $M2(n)$ is rational over \mathbb{Q} when $n \leq 5$ and is of general type for $n = 6$. An explicit description of the surface with $n = 6$ lets us find several infinite families of quadratic endomorphisms defined over \mathbb{Q} with a rational periodic point of order 6. We will see why this is in contrast with the polynomial case, where it is conjectured that no polynomial endomorphism defined over \mathbb{Q} with degree 2 admits rational periodic points of order $n > 3$.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze Matematiche e Naturali