SFB Colloquium

TIME:
4 Dec 2007, 16:00 - 19:00

LOCATION:
HU-Berlin
Invalidenstraße 42
Nordbau, Hörsaal 8
10115 Berlin

PROGRAM:

16:00 - 17:00   **PD Dr. Priska Jahnke (Universität Bayreuth)**

The classification of Fano varieties - and some number mysticism
A compact complex manifold is called Fano if its Ricci curvature
is positive. As end products of the so called minimal model program, Fano
varieties play a central role in algebraic geometry. Their classification
is an ongoing project, in particular in the singular case there are still
many open questions. In the talk I will try to give an overview on results
and open problems.
If a Fano manifold can be anticanonically embedded, then a general
hyperplane section is a Calabi-Yau manifold. In dimension three, Fano
classification gives a complete answer to the question which Calabi-Yau
surfaces arise in this way. Can this question also be answered by mirror
symmetry?

17:00 - 17:30   Coffee Break

17:30 - 18:30   **Dr. Oliver Schnürer (FU Berlin)**

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Evolution of convex lens-shaped networks under curve shortening flow

We consider convex symmetric lens-shaped networks in R2 that evolve under curve shortening flow. We show that the enclosed convex domain shrinks to a point in finite time. Furthermore, after appropriate rescaling the evolving networks converge to a self-similarly shrinking network, which we prove to be unique in an appropriate class. We also discuss a classification result for some self-similarly shrinking networks.

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