ECOLE POLYTECHNIQUE
FEDERALE DE LAUSANNE

Centre Interfacultaire Bernoulli (CIB)

SEMINAR

Friday, May 2nd, 2008 from 10 AM to 12 PM
In room AAC 006

To be followed by discussion

"Approximation by Monotone Families of Compact Sets and Topological Complexity of the Sets Definable in o-minimal Structures"

(joint work with N. Vorobjov)

Andrei Gabrielov

(Purdue University)

Abstract :

A geometric-combinatorial construction suggested by Gabrielov and Vorobjov (2007) allows one to approximate a set definable in an o-minimal structure, such as a real semialgebraic or sub-Pfaffian set, by an explicitly constructed monotone family of compact definable sets homotopy equivalent to the original set. This implies improved upper bounds for the Betti numbers of non-compact semialgebraic, fewnomial, and sub-Pfaffian sets.

Lausanne, April 29th 2008
TR/tvw