Seminari de Geometria Algebraica 2016-2017

Divendres 9 de juny a les 15:00, aula T2 FMI–UB

http://www.ub.edu/sga/

On the weak bounded negativity conjecture for blow-ups of the complex projective plane

Piotr Pokora

Leibniz Universität Hannover, Alemanya

In the talk, I will present a new approach toward the proof of the bounded negativity conjecture using the so-called weighted intersection numbers of reduced and irreducible curves. The main result presents an effective lower bound on the weighted self-intersections, which can be formulated as follows.

Let X_s be the blow-up of the complex projective plane along a finite set of mutually distinct s points. Denote by C a reduced and irreducible curve in X_s, and by H the pull-back of a general hyperplane section of the complex projective plane, then one has $C^2 \geq -5/2 \cdot s \cdot (C.H)$.

My talk will be divided into two parts. In the first I will present a general introduction to the subject, emphasizing some open problems. In the second part, I will present a sketch of the proof of the above theorem.

This result comes from a recent joint work with Roberto Laface (Technical University of Munich).