Algebraic Geometry Seminar

Combinatorics of polytopes and a model of nonrational toric varieties

Speaker: Dan Zaffran (KAIST)

ABSTRACT

Toric varieties are in one-to-one correspondence with rational fans. Using this correspondence, algebraic geometers can translate many problems into statements which are more amenable to computations. Conversely, and even more remarkably, some combinatorial questions can be successfully reformulated in algebraic-geometric terms. An example of this is Stanley's theorem on simple polytopes, which I will explain in details. Then I will describe a foliated model of toric varieties associated to nonrational fans, with supporting evidence that the rich interplay between algebraic and convex geometries carries over to this model. This is a joint work with F. Battaglia.

- **Time & Date : 02:00p.m.~03:00 p.m. June 1 (Fri) 2012**
- **Place : Math Science Building room 404**