

## Graduate Algebraic Geometry Seminar

### *Groups of birational transformations of algebraic surfaces*

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**Abstract:** The collection of birational self-maps of an algebraic variety  $X$  forms a group  $\text{Bir}(X)$ . When  $X$  is a surface, this group acts on an infinite hyperbolic space, constructed via divisors on blowups of the surface. In this talk, we introduce this construction and use it to understand  $\text{Bir}(X)$ . Time permitting, we will discuss very recent work of Lonjou and Urech on  $\text{Bir}(X)$  for higher dimensional  $X$ . The main source for this talk is the paper "Sur les groupes de transformations birationnelles des surfaces" by Serge Cantat.

Wednesday, January 22 at 4:00 PM in 512 SEO