

Geometry, Groups and Dynamics/GEAR Seminar  
(held at the Illinois hub of GEAR )

**12:00 pm, Tuesday, February 21, 2017, 243 Altgeld Hall**

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Groups Associated with Rational Proper Maps

Abstract: Given a rational proper map  $f$  between balls of typically different dimensions, we define a subgroup  $\Gamma_f$  of the source automorphism group. We prove that this group is noncompact if and only if  $f$  is linear. We show how these groups behave under certain constructions such as juxtaposition and partial tensor products. We then sketch a proof of the following result. If  $G$  is an arbitrary finite subgroup of the source automorphism group, then there is a rational map  $f$  for which  $\Gamma_f = G$ . We provide many examples and, if time permits, discuss the degree estimate conjecture. This work is joint with Ming Xiao.

[Video](#)