

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

**12:00 pm, Thursday, December 7, 2017, 243 Altgeld Hall**

**Least Dilatation of Pure Surface Braids**

**Marissa Loving (Illinois Math)**

The  $n$ -stranded pure surface braid group of a genus  $g$  surface can be described as the subgroup of the pure mapping class group of a surface of genus  $g$  with  $n$ -punctures which becomes trivial on the closed surface.

For the  $n=1$  case, much is known about this group including upper and lower bounds on the least dilatation of its pseudo-Anosovs due to Dowdall and Aougab—Taylor. I am interested in the least dilatation of pseudo-Anosov pure surface braids for  $n>1$  punctures. In this talk, I will describe the upper and lower bounds I have proved as a function of  $g$  and  $n$ .

[Video](#)