1163-53-557 **Jacob Bernstein** (bernstein@math.jhu.edu) and **Lu Wang*** (drluwang@caltech.edu).

Relative expander entropy in the presence of a two-sided obstacle and applications.

We study a notion of relative entropy motivated by self-expanders of mean curvature flow. In particular, we obtain the existence of this quantity for arbitrary hypersurfaces trapped between two self-expanders that are asymptotic to the same cone and bound a domain. This allows us to begin to develop the variational theory for the relative entropy functional for the associated obstacle problem. We also obtain a version of the forward monotonicity formula for mean curvature flow proposed by Ilmanen. (Received September 09, 2020)