

BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

## INTRINSIC MIRROR SYMMETRY AND CATEGORICAL CREPANT RESOLUTIONS

Daniel Pomerleano  
University of Massachusetts, Boston

October 28, 2020, 4-5pm

Zoom link:

<https://bostonu.zoom.us/j/97456419902?pwd=Vk5hdGQ0dlgwTXZkZ1hRUHM0WndqZz09>

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**Abstract:** A general expectation in mirror symmetry is that the mirror partner to an affine log Calabi-Yau variety is "algebraically convex" (meaning it is proper over its affinization). We will describe work in progress which shows how this algebraic convexity of the mirror manifests itself directly as certain finiteness properties of Floer theoretic invariants of  $X$  (the symplectic cohomology and wrapped Fukaya category). As an application of these finiteness results, we will show that for maximally degenerate log Calabi-Yau varieties equipped with a "homological section," the wrapped Fukaya of  $X$  gives an (intrinsic) categorical crepant resolution of the affine variety  $\text{Spec}(SH^0(X))$ .

See <http://math.bu.edu/research/geom/seminar.html> or contact Yu-Shen Lin ([yslin@bu.edu](mailto:yslin@bu.edu)) or Siu-Cheong Lau ([lau@math.bu.edu](mailto:lau@math.bu.edu)) for more information.