



# GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

## The Kähler cone of the Mirror Quintic

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Friday, October 18, 2019, 4:00 p.m.  
Room 6635 South Hall

**Abstract:** The mirror of the generic quintic threefold was found by Greene and Plesser in 1990 and used to predict enumerative invariants of the quintic by Candelas, de la Ossa, Green, and Parkes in 1991. To perform mirror computations in the opposite direction for this pair of examples seems daunting, since the vector space describing Kähler moduli (and containing the Kähler cone) has dimension 101. We will describe some work in progress with Katz and some work in progress with Morgan which describes the structure of the Kähler cone as well as its dual, the Mori cone. We will also review the recent construction of Hayashi, Jefferson, Kim, Ohmori, and Vafa (arXiv:1905.00116) which makes enumerative predictions for the mirror quintic, predictions which are confirmed in many cases by our analysis.

Information about future meetings of this seminar can be found at  
<http://www.math.ucsb.edu/~drm/GTPseminar/>