



## GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

# Nilpotent structures and collapsing Ricci-flat metrics on K3 surfaces

Jeffrey A. Viaclovsky  
UC Irvine

Friday, May 18, 2018, 3:00 p.m. (note unusual time)  
Room 6635 South Hall

**Abstract:** I will discuss a new construction of families of Ricci-flat Kahler metrics on K3 surfaces which collapse to an interval, with Tian-Yau and Taub-NUT metrics occurring as bubbles. There is a corresponding singular fibration from the K3 surface to the interval, with regular fibers diffeomorphic to either 3-tori or Heisenberg nilmanifolds. This is joint work with Hans-Joachim Hein, Song Sun, and Ruobing Zhang.

This seminar is part of the NSF/UCSB 'Research Training Group' in Topology and Geometry. Information about future meetings can be found at <http://www.math.ucsb.edu/~drm/GTPseminar/>