

Northeastern University



Mathematics Department

Geometry, Physics, and Representation Theory Seminar

**Junliang Shen**

Massachusetts Institute of Technology

Thursday, October 18, 2:50-3:50 pm, Lake Hall 509

**Gromov-Witten invariants and special subvarieties in  
HyperKähler varieties**

**Abstract**

By the Bogomolov-Mumford theorem, every projective K3 surface contains a rational curve. I will discuss some generalizations of this theorem to higher dimensions concerning rational curves and algebraically coisotropic subvarieties in HyperKähler varieties. I will further discuss some related open questions, examples, and the crucial role played by Gromov-Witten theory in the study of these topics. Based on joint work with Georg Oberdieck and Qizheng Yin.