

Geometry, Physics, and Representation Theory  
Northeastern University

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Wednesday, November 30, 2.50-3.50 pm, Ryder 153 (note unusual date and room!).

**Metric SYZ for hyperkahler manifolds.**

**Abstract.**

I will discuss a proof of a conjecture of Kontsevich-Soibelman and Gross-Wilson about the behavior of unit-diameter Ricci-flat Kahler metrics on hyperkahler manifolds (fibered by holomorphic Lagrangian tori) near a large complex structure limit. The collapsed Gromov-Hausdorff limit is a special Kahler metric on a half-dimensional complex projective space, away from a singular set of Hausdorff codimension at least 2. The resulting picture is also compatible with the Strominger-Yau-Zaslow mirror symmetry. This is joint work with Yuguang Zhang.