

Northeastern University



Mathematics Department

Geometry, Physics, and Representation Theory Seminar

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Thursday, November 14, 2:50-3:50 pm, Lake Hall 509

Toric degeneration and symplectic rigidity

Abstract

This talk is based on joint work with Milena Pabiniak. We say that a family of symplectic manifolds satisfies symplectic rigidity if they are classified up to symplectomorphism by their cohomology ring and the cohomology class of the symplectic form. We use toric degeneration to construct new (non-equivariant) symplectomorphisms between certain smooth toric manifolds. This enables us to show that symplectic rigidity holds for a large family of Bott manifolds. In particular, it holds for the family of symplectic toric manifolds whose integral cohomology is isomorphic to that of the product of n two-spheres.