

abstract

Joint IAS-PU Symplectic Geometry Seminar
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

I will explain how essential information about the structure of symplectic manifolds is captured by algebraic data, and specifically by the non-commutative (mixed) Hodge structure on the cohomology of the Fukaya category. I will discuss how mirror symmetry leads to Hodge theoretic symplectic invariants arising from twist functors, and from geometric extensions. I will also explain how the instanton-corrected Chern-Simons theory fits in the framework of normal functions in non-commutative Hodge theory and will give applications to explicit descriptions of quantum Lagrangian branes. This is a joint work with L. Katzarkov and M. Kontsevich.