2011-2012 Distinguished Lecture Series

UCLA Department of Mathematics

Paul Seidel
MIT

Complex curves and Lagrangian submanifolds in symplectic topology

Lecture 1: Examples and constructions

Abstract: We will consider some simple constructions of low-dimensional symplectic manifolds; how they look from the point of view of holomorphic curve theory; and what the use of Lagrangian submanifolds can add to that picture.

Lecture 2: Flux and related invariants

Abstract: Starting with the classical notion of flux, we will consider new invariants of symplectic manifolds associated to odd cohomology classes. These are related to the derived Picard groups of homotopical algebra.

Lecture 3: Hidden symmetries

Abstract: Certain classes of symplectic manifolds show non-geometric symmetries. These can be used to produce refined intersection numbers and monodromy maps. If time permits, we will explain the relation with mirror symmetry.

Lecture 1
Tuesday, January 24, 2012
3:00 - 3:50 pm
MS 6627

Lecture 2
Wednesday, January 25, 2012
3:00 - 3:50 pm
MS 6627

Lecture 3
Thursday, January 26, 2012
3:00 – 3:50 pm
MS 6627

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