

Joint IAS-PU Symplectic Geometry Seminar

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Lagrangian Caps in High-Dimensional Symplectic Manifolds

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Date & Time: Fri, 03/08/2013 - 13:30 - 14:30

Location: Fine Hall 322

I will present a recent result (joint with Yakov Eliashberg) demonstrating the existence of exact Lagrangian cobordisms with a loose Legendrian in the negative end, in all dimensions greater than 4. In particular, we show that there exists a Lagrangian disk in $C^n \setminus B^{\{2n\}}$ which has Legendrian boundary in $S^{\{2n-1\}}$, whenever $n > 2$. It is known there are no such disks in C^2 . The proof showcases a new Lagrangian Whitney trick. As an application, we prove a universal embedding theorem for flexible Weinstein manifolds, showing in particular that any Weinstein manifold has interesting geometry only in a topological collar of the boundary. We also construct exact Lagrangian immersions with fewer intersections than the philosophy of the Arnold conjecture would predict (this application is joint with Tobias Ekholm, Eliashberg, and Ivan Smith).

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terms:

- [School of Mathematics](#)