Symplectic Geometry Seminar

Monday, Oct 13, 4pm
Room 383N

DAVID TREUMANN
(Boston College/MSRI)

Lagrangian fillings of Legendrian knots

Abstract

Ekholm-Honda-Kalman produced a Catalan-number’s worth of exact Lagrangian fillings of the standard Legendrian \((2, n)\) torus knot. I will present some evidence (i.e., a conjecture) that this is a complete list of exact fillings with no repetitions (i.e., any exact filling is ”exact isotopic” to precisely one on EHK’s list.) The same reasoning suggests the conjecture that the \((3, n)\) Legendrian torus knot has infinitely many distinct exact fillings, for \(n > 6\). The argument goes via hyperKahler rotation through the theory of irregular connections and their moduli. Part of this talk is based on joint work with Shende and Zaslow.

http://math.stanford.edu/~ionel/sgs.html