Symplectic Geometry Seminar

Monday, Jan 5th, at 4pm
Room 383N

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Equivalent notions of high-dimensional overtwistedness

Abstract

In recent joint work with Borman and Eliashberg, a new definition of overtwisted contact structures was given for high-dimensional contact manifolds, which were classified up to isotopy. The results there also demonstrate the existence of overtwisted contact structures, but the construction is fairly non-explicit. This talk will focus on finding a number of criteria which are equivalent to overtwistedness, giving numerous explicit examples of overtwisted contact manifolds and relating overtwistedness to a number of older works: in particular we show that negatively stabilized open books, looseness of the Legendrian unknot, and existence of a ”nice” plastikstufe are all equivalent to overtwistedness.

This project is joint work with Casals and Presas.

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