MONDAY JUNE 3, 2024

Ivar EKELAND (Paris Dauphine)
Title: Memories from the eighties

Yakov ELIASHBERG (Stanford)
Title: Non-trivial elements in the homotopy groups of spaces of high-dimensional Legendrian knots

Abstract: The generating functions and hypersurfaces construction yields injection of stable homotopy groups of Waldhausen’s h-cobordism and Cerf’s pseudoisotopy spaces into homotopy groups of various spaces of Legendrian submanifolds. This is a joint work with Thomas Kragh.

Dustin CONNERY-GRIGG (Sorbonne Université)
Title: TBA
Abstract: TBA.

Pazit HAIM KISLEV (Tel Aviv)
Title: Quantitative results on symplectic barriers

Abstract: Lagrangian submanifold rigidity has been a fundamental topic in symplectic topology since the 1990s, contributing to key theories like the Arnold-Givental conjecture and Lagrangian Floer theory. These theories often involve intersections with Lagrangian submanifolds which are unavoidable via symplectic maps, as in the notion of Lagrangian barriers introduced by Biran in 2001. Conversely, submanifolds not containing Lagrangian submanifolds usually exhibit flexibility, and can often be symplectically displaced. Recently, together with Richard Hind and Yaron Ostrover, we introduced Symplectic Barriers, demonstrating necessary intersections of symplectic embeddings with symplectic (non-Lagrangian) submanifolds. In this talk I will review our construction and present new quantitative results concerning symplectic barriers. In particular, we answer a question by Sackel–Song–Varolgunes–Zhu regarding the symplectic capacity of the ball after removing a codimension 2 hyperplane.

David NADLER (Berkeley)
Title: Speculations on barcodes

Abstract: I’ll explain how to view sheaves, in good situations, as maps into a moduli space of barcodes, and in turn as principal bundles on bifurcations spaces. This provides a useful perspective on many results about rulings of Legendrian knots. I’ll speculate on what it might be good for in general. (Based on joint discussions with D. Álvarez-Gavela and Y. Eliashberg.)