

Floer homology of Lagrangian submanifolds

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Abstract

In this talk we explain the general framework of Floer homology of Lagrangian submanifolds which is developed jointly with Oh-Ohta-Ono. It is based on homological (homotopical) algebra and virtual fundamental chain technique. Several calculations of Floer homology and structure on it will be given (they are based on Lagrangian surgery). Some applications to the study of symplectic topology of Lagrangian submanifold will be mentioned.