

中央研究院數學研究所

Institute of Mathematics, Academia Sinica

Taipei Postdoc Seminar

Speaker : 邱聖夫 Sheng-Fu Chiu (本所 Institute of Mathematics, Academia Sinica)

Title : Hamiltonian Dynamics and Symplectic Rigidity from the Viewpoint of Triangulated Categories

Time : 14:00 - 15:00, Wednesday, Dec. 30, 2020

Venue : Lecture Hall 5F, Cosmology Building (NTU Campus) 次震宇宙館 五樓演講廳

Abstract :

The famous Gromov-Eliashberg C^0 -rigidity theorem is a miracle in symplectic geometry. Roughly speaking, the theorem states that the group of symplectomorphisms of a symplectic manifold is topologically closed in its group of diffeomorphisms, in the sense of uniform norm. It turns out that this rigidity phenomenon has its roots deeply mined in the interaction between Hamiltonian dynamics and Poisson brackets under C^0 -limit. The somehow interesting thing is that this functional analytical style properties are related to Hom structures of certain triangulated (or dg) categories. In this talk I will give an introduction to Hamiltonian diffeomorphism groups and their Lie algebras, and explain how the homological algebra of triangulated categories can be used to answer these symplectic C^0 -rigidity problems.

Organizer : Wei-Bo Su (Academia Sinica), Peng-Jie Wong (National Center for Theoretical Sciences)

https://www.math.sinica.edu.tw/www/file_upload/conference/2016TPS/index.html

中央研究院數學研究所 敬上

2020.12.24