

Floer Theory

and

Symplectic Dynamics

Dustin Connery-Grigg
(Sorbonne Université)

September 27, 2023
16:00-17:00h on campus in M.G.004
Analysis & Geometry Seminar, Antwerpen

In the late 80s, in order to address a conjecture of Arnold which gives a lower bound on the number of 1-periodic orbits of a Hamiltonian system in terms of the (symplectic) topology of the underlying manifold, Andreas Floer introduced a circle of ideas which have since come to be known under the label of “Floer theory” and which are now an indispensable tool in the modern study of symplectic geometry. More recently, symplectic topologists and dynamicists have grown increasingly interested in studying the relationship between various structures and objects which appear naturally in Floer theory, and the finer-grained dynamics of various conservative systems. In this talk I will give a (necessarily biased) overview of some of these questions and developments, with a particular focus on lower dimensional systems where our techniques allow us to see the furthest.