

## **abstract**

WORKSHOP ON TOPOLOGY: IDENTIFYING ORDER IN COMPLEX SYSTEMS

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

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We discuss some geometric and topological methods that are applied to overcome the large gap problem in Arnold diffusion for a priori unstable Hamiltonian systems. The geometric methods rely on the theory of normally hyperbolic invariant manifolds and on the scattering map. The topological methods rely on correctly aligned windows, and on the connecting orbits of Birkhoff and Mather for twist maps. We will illustrate these methods in an example based on the spatial circular restricted three-body problem.