On symplectic invariants of integrable Hamiltonian systems

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March 03, 2021
16-17h via Microsoft Teams
Analysis & Geometry Seminar, Antwerpen

The talk is devoted to new ideas and constructions related to the problem of symplectic classification of singular Lagrangian fibrations associated with integrable Hamiltonian systems. Main goal of the talk is to show that in many cases, symplectic classification can be given in terms of the most natural symplectic invariants, namely, action variables. Typical examples include non-degenerate singular points, parabolic orbits and spherical singularities. However, there are many examples where the information about action variables is not sufficient for classification. Some of these examples will be presented to explain and illustrate this phenomenon.