

Fragility of leafwise intersections

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Abstract:

Persistence of leafwise coisotropic intersections was first investigated by Moser in the late '70s. Recently, a number of very strong persistence results have been obtained under, in most of the cases, additional assumptions (e.g., contact type) on the hypersurface. In this talk we discuss a construction showing that leafwise intersections are in general fragile. More specifically, we construct a closed hypersurface and a sequence of Hamiltonians converging to zero such that the hypersurface and its images have no leafwise intersections. As a consequence, a form of the contact type condition is needed to guarantee the existence of leafwise coisotropic intersections. The talk is based on a joint work with Ginzburg.