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Leaf-wise Coisotropic Intersections

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Abstract

The Lagrangian intersection property asserts that a Lagrangian submanifold necessarily intersects its image under a Hamiltonian diffeomorphism which is in some sense close to the identity. This property is unquestionably one of the most fundamental results in symplectic topology and its generalizations to coisotropic submanifolds are also of interest and arise in several different ways. In this talk, we focus on one of such generalizations, the existence of leaf-wise intersections, originally studied by Moser in the late 70s. We prove the leaf-wise intersection property for coisotropic submanifolds of restricted contact type under certain natural assumptions on the ambient symplectic manifold. This theorem generalizes a recent result of Albers and Frauenfelder concerning leaf-wise intersections of hypersurfaces.

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