SEMINARIO DI GEOMETRIA E ALGEBRA

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Lunedì 11 Marzo 2024 - Ore 15:00 - Dip. di Matematica, aula VI

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Magnetic Jacobi fields in almost contact metric manifolds

Abstract. The first variation of the Landau Hall functional on a Riemannian manifold leads to the notion of magnetic curves. Computing the second variation, we obtain the equation of a Jacobi-type field along a magnetic curve. In this talk we focus on the contact magnetic trajectories in Sasakian and cosymplectic manifolds (as ambient space) emphasising the main differences between the two cases. We will give several examples.

This talk is based on some joint papers:

1. M.I. Munteanu, *Magnetic geodesics in (almost) cosymplectic Lie groups of dimension 3*, Mathematics, (Special Issue: Topics in Differential Geometry), 10 (2022) 4, art. 544.
2. J. Inoguchi, M.I. Munteanu, *Magnetic Jacobi fields in 3-dimensional Sasakian space forms*, J. Geom. Analysis, 32 (2022) 3, art. 96.
3. M.I. Munteanu, A.I. Nistor, *Magnetic Jacobi fields in cosymplectic 3-dimensional manifolds*, Mathematics, (Special Issue: Differential Geometry: structures on manifolds and their applications), 9 (2021) 24 art. 3220.
4. J. Inoguchi, M.I. Munteanu, *Magnetic Jacobi fields in Sasakian space forms*, Mediterranean J. Mathematics, 20 (2023) art. 29.