

WORKSHOP ON SUBMANIFOLD THEORY AND GEOMETRIC ANALYSIS

UFSCAR, SÃO CARLOS, BRAZIL, AUGUST 05 – 09, 2019

THURSDAY- 9h - 9:50h -AUDITÓRIO DO DM

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Lagrangian submanifolds of the complex quadric

ABSTRACT. The complex quadric Q^n is the complex hypersurface of complex $(n+1)$ -dimensional projective space given in homogeneous coordinates by the equation $z_0^2 + z_1^2 + \dots + z_{n+1}^2 = 0$. This manifold inherits a Kähler structure from the complex projective space, carries a family of non-integrable almost product structures and its curvature can be relatively easily described in terms of these two. Moreover, Q^n is the natural target space when considering the Gauss map of a hypersurface of a round sphere. In fact, such Gauss maps are related to minimal Lagrangian submanifolds of Q^n . We will discuss this relation – in particular for isoparametric hypersurfaces of spheres – and then study minimal Lagrangian submanifolds of Q^n , obtaining examples and some classifications, such as that of minimal Lagrangian submanifolds of Q^n with constant sectional curvature.

Support:



Organizers:

