

ABSTRACT

This thesis is devoted to the study of CR-submanifolds of nearly Kaehler and Kaehler manifolds. An improvement of Bejancu's characterization theorem for CR-submanifolds of an almost Hermitian manifold is obtained. Some results on D-parallel normal sections and mixed foliate CR-submanifolds of a Kaehler manifold are shown also be true in a nearly Kaehler manifold. The non-existence of certain classes of CR-submanifolds in a 6-dimensional nearly Kaehler manifold is proved. A connected totally umbilical CR-submanifold of a nearly Kaehler manifold is shown to be either totally geodesic, or totally real, or H is not D-parallel, or it admits a nearly Sasakian structure. The characterization for CR-products of a Kaehler manifold is discussed. Some consequences of the results of Sun-Li on Sasakian anti-holomorphic submanifolds of a Kaehler manifold are also discussed.

ABSTRAK

Geometri submanifold-CR dalam manifold Kaehler dan dekat Kaehler manifold dikajikan dalam tesis ini. Teorem pencirian submanifold-CR dalam manifold Hermitean yang diperolehi oleh Bejancu diperketatkan. Beberapa hasil tentang keratan normal yang selari-D dan submanifold-CR foliate bercampur dalam manifold Kaehler ditunjukkan benar juga dalam manifold dekat Kaehler. Ketakwujudan sesetengah klas submanifold-CR dalam manifold dekat Kaehler yang bermatra-6 ditunjukkan. Submanifold-CR umbilical keseluruhan yang terkait dalam manifold dekat Kaehler ditunjukkan adalah geodesik keseluruhan atau nyata keseluruhan atau H tidak selari-D atau ia mempunyai sesuatu struktur Sasakian dekat. Pencirian bagi hasil darab-CR dalam manifold Kaehler dikajikan. Beberapa akibat hasil Sun-Li tentang submanifold Sasakian anti-holomorfi dalam sesuatu manifold Kaehler juga diperolehi.