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Abstracts of Short Communications and Posters

Section:

5. Differential Geometry and Global Analysis

1991 MS Classification: Primary 53C40: Secondary 53C42
Matsuyama, Yoshio, Department of Mathematics, Chuo Univ. Japan
On totally real submanifolds in $CP^n(c)$
We'd like to announce the following two characterizations of a totally real minimal submanifolds M^n in $CP^n(c)$.
(1) If M^n has at most two principal curvatures in the direction of any normal, then M^n is isotropic, and M^n is totally geodesic or $n = 2, 8, 14, 26$.
(2) If M^n satisfies $RA_\xi = 0$ in the direction of any normal ξ, then M^n is isotropic, and M^n is totally geodesic or $n = 2, 5, 8, 14, 26$.
References: S. Montiel, A. Ros and F. Urbano, Curvature pinching and eigenvalue rigidity for minimal submanifolds, *Math. Z.* **191** (1986), 537-548.
S. Montiel and F. Urbano, Isotropic totally real submanifolds, *Math. Z.* **199**(1988), 55-60.