

ERRATA

CORRECTION TO “IDEAL KAEHLERIAN SLANT SUBMANIFOLDS IN COMPLEX SPACE FORMS”

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We state a theorem of characterization of ideal Kaehlerian slant submanifolds in the complex Euclidean space.

Theorem 3.5. *Let M be an n -dimensional Kaehlerian slant submanifold of the complex Euclidean space \mathbf{C}^n such that $\text{Im } h_p \neq T_p^\perp M$, at each point $p \in M$. Then M is ideal if and only if M is a ruled minimal submanifold.*

PROOF. Let M be an n -dimensional ideal Kaehlerian slant submanifold in \mathbf{C}^n . Then, by Theorem 2.1, M is a minimal submanifold.

Let U_l denote the interior of the subset consisting of points in M such that the relative null space at p has dimension l . Since $\text{Im } h_p \neq T_p^\perp M$, at each point $p \in M$, it follows that $U_l \neq \emptyset$, for some integer $1 \leq l \leq n$. By applying Codazzi equation, it is easily seen that $\text{Ker } h$ is integrable on U_l and each leaf of $(\text{Ker } h)|_{U_l}$ is an l -dimensional totally geodesic submanifold of \mathbf{C}^n . Thus, M contains a geodesic of \mathbf{C}^n through each point $p \in U_l$. Since M is the union of the closure of all U_l , we conclude by continuity that M contains a geodesic of the ambient space through each point in M . Therefore, M is a ruled minimal submanifold.

The converse statement is obvious. \square

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Note added in proof. After the acceptance for publication of this article, we discovered a very recent paper of I. Salavessa [12]. By combining Proposition 1.2 of [12] and Theorem 2.1 of this article, we have the following nonexistence result.

Theorem 3.6. *There do not exist n -dimensional ideal Kaehlerian slant submanifolds in the complex projective space $P^n(\mathbf{C})$.*

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