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QR-Submanifolds and Almost Contact 3-Structure

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Abstract: In this paper,QR-submanifolds of quaternion Kaehlerian manifolds with $\dim \blacksquare^{\perp} = 1$ has been considered. It is shown that each QR-submanifold of quaternion Kaehlerian manifold with $\dim \blacksquare^{\perp} = 1$ is a manifold with an almost contact 3-structure. We apply geometric theory of almost contact 3-structure to the classification of QR-submanifolds (resp.Real hypersurfaces) of quaternion Kaehler manifolds (resp.IR^{4m}, m>1). Some results on integrability of an invariant distribution of a QR-submanifold and on the immersions of its leaves are also obtained.

Key Words: Quaternion Kaehler Manifold,QR-Submanifold, Almost Contact 3-Structure.