

SPHERICAL CR STRUCTURE ON BRIESKORN MANIFOLD

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ABSTRACT. We study *spherical CR -structure* on the 3-dimensional Brieskorn manifolds $M(p, q, r)$. Using Milnor's classification of $M(p, q, r)$ we show the existence of *homogeneous* spherical CR -structure on it. In this case the limit set of the holonomy group is the empty set, one-point or the geometric circle in S^3 . On the other hand, Goldman-Kapovich-Leeb constructed a spherical CR -structure on the principal circle bundles over surfaces. Using this result, we prove that $M(p, q, r)$ with $\frac{1}{p} + \frac{1}{q} + \frac{1}{r} - 1 < 0$ admits a *non-homogeneous* spherical CR -structure. The limit set of this CR -structure is a non-rectifiable circle of S^3 . This is a joint work with Y. Kamishima.

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