

**SOME STUDIES ON CONTACT METRIC GENERALIZED (κ, μ) -SPACE
FORMS AND RICCI SOLITONS**

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ABSTRACT. The present paper contains the study of Ricci almost soliton on a contact metric generalized (κ, μ) -space form $M(f_1, f_2, f_3, f_4, f_5, f_6)$. It is shown that in a contact metric generalized (κ, μ) -space form of dimension greater or equal to 5, a Ricci almost soliton reduces to Ricci soliton though such almost solitons exist for three-dimensional cases. In order to find nature of symmetry of such spaces, we have established that if a contact metric generalized (κ, μ) -space form of dimension greater or equal to 5 admits Ricci soliton, then it is locally ϕ -symmetric. It is also proved that if a $(2n + 1)$ -dimensional contact metric generalized (κ, μ) -space form admits gradient Ricci soliton, then $2nf_1 + 3f_2 - f_3$ is constant.

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