

# Generalized Z-Ricci Soliton on Sasakian 3-manifold with Generalized Z-Tensor

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## ABSTRACT

In this paper, we consider generalized Z-Ricci solitons on Sasakian 3-manifolds and study some properties of generalized Z-tensor. A Sasakian 3-manifold equipped with generalized Z-Ricci Soliton is shrinking with an amount of soliton constant  $\lambda = -2$  and with constant curvature amount  $r = 6$ . Further, we consider Ricci solitons on Sasakian 3-manifolds with generalized Z-tensor of Codazzi type and cyclic parallel generalized Z-tensor. We also find out the conditions for Generalized Z-recurrent and generalized Ricci-recurrent Sasakian 3-manifold equipped with generalized Z-tensor. Among others we have also found out the relation between the 1-form A and B on generalized Z-recurrent sasakian-3 manifold.

**Keywords:** Ricci Soliton; Z-tensor; Generalized Z-tensor; Ricci-Recurrent.

