



STATISTICAL RICCI-SOLITON ON HOPF HYPERSURFACES IN COMPLEX SPACE FORM

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In this paper, we define a statistical Ricci-soliton vector field and then we show that if structural vector field of compact Hopf statistical hypersurface of complex space form is a statistical Ricci-soliton vector field, it has at most three constant principal curvatures.

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Contents

1	Introduction	1
2	Preliminaries	4
3	Statistical Ricci-Soliton Hopf Hypersurfaces of Complex Space Forms	7
	References	14

1. Introduction

The Hopf hypersurfaces in the complex projective space or complex hyperbolic space with constant principal curvatures were studied by Chen and Maeda [7]. After that, Kon investigated Hopf hypersurfaces in the complex space form $\overline{M}(c)$ ($c \neq 0$) with constant sectional curvature for the sectional planes which are included ξ and then classified these hypersurfaces in the complex projective space and the complex hyperbolic space in [11]. Also, he classified these hypersurfaces where the Ricci tensor of hypersurfaces is satisfied in the particular condition $g((\nabla_X \text{Ric})X, \xi) = 0$ for any tangent vector field X and the structural vector field ξ (see [12]).