

## DIFFERENTIAL METRICS IN PROBABILITY SPACES

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*Abstract:* In this paper we discuss the construction of differential metrics in probability spaces through entropy functional and examine their relations with the information metric introduced by Rao using the Fisher information matrix in the statistical problem of classification and discrimination, and the classical Bergman metric. It is suggested that the scalar and Ricci curvatures associated with the Bergman information metric may yield results in statistical inference analogous to those of Efron using the Gaussian curvature.

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