

Independent Component, Principal Component and Minor Component Analysis

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Independent component analysis is an emerging research field in both theory and applications. It has been motivated by practical applications that involve multiple source signals and observation sensors and share a common objective, that is to separate source signals and estimate channel parameters without knowing the sources and characteristics of the transmission channel.

Principal component and minor component extractions provide powerful techniques in many information processing fields. There have been proposed a number of algorithms for principal and minor component (or subspace) extraction, which have different dynamical behaviors.

In this talk, we will speak of these issues through the view of information geometry and analyze the stability of the algorithms.