



MUTUAL INFORMATION AND QUADRATIC DEPENDENCE FOR POST NONLINEAR BLIND SOURCE SEPARATION (TueAmOR11)

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* Abstract :

This work focuses on solving the problem of Blind Source Separation (BSS) using Independent Component Analysis (ICA) method for nonlinear mixtures. Since ICA methods require a dependence measure, we will investigate the use of mutual information and quadratic dependence. Mutual information has already often been used for solving BSS problem, but difficulties occur in order to carry out an asymptotic study. In contrast, the quadratic dependence was introduced recently and has already been used for independence tests. Finally, the difficulty of solving the BSS problem is illustrated through examples of the shape of the objective-functions.