

# Utilisation de la dérivée des signaux pour la séparation de sources supposées indépendantes

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## Abstract

In this presentation, we consider independence property between a random process and its first derivative. Then, for linear mixtures, we show that cross-correlations between mixtures and their derivatives provide a sufficient number of equations for analytically computing the unknown mixing matrix. In addition to its simplicity, the method is able to separate Gaussian sources, since it only requires second order statistics. For two mixtures of two sources, the analytical solution is given, and a few experiments show the efficiency of the method for the blind separation of two Gaussian sources.