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Moment matching estimation method for an asymmetric generalized Gaussian mixture model

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Abstract : In this paper, the r-order moments of the asymmetric generalized Gaussian (AGG) distribution is originally computed. Then, the moment matching method associated to the expectation-maximization (EM) algorithm is used to estimate the AGG mixture model parameters. The obtained results are comparable to those of the maximum likelihood method which, however, manipulates high nonlinear equations (piece-wise function, log, etc.), contrarily to the proposed method where the calculus is less difficult.

Keywords : Asymmetric generalized Gaussian distribution, finite mixture model, moment matching method, EM algorithm