

Statistics Seminar

Sufficient dimension folding via distance covariance

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Abstract: We propose a new sufficient dimension folding method using distance covariance for regression in which the predictors are matrix- or array-valued. The method works efficiently without strict assumptions on the predictor. It is model-free and neither smoothing techniques or selection of tuning parameters is needed. Moreover, it works for both univariate and multivariate response cases. We use two approaches to estimate the structural dimensions: bootstrap method and a new method of local search. Simulations and real data analysis support the efficiency and effectiveness of the method.

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