Generalized concordance measure: Generalized regression model and dimension reduction

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In the scientific research literature, rank-based measures have been widely used to characterize a monotonic association between a univariate response and some transformation of multiple covariates of interest. Instead of using a linear combination of covariates, we introduce a multivariate polynomial score to compute the corresponding concordance index through more general semi-parametric regression models. It involves the estimation for the degree of the multivariate polynomial and the central subspace (CS). To deal with this research issue, we propose a BIC-type estimation approach, which is implemented by an effective computational algorithm, to achieve the model selection consistency.

Biography
Wang Shao Hsuan is currently studying at National Taiwan University, Department of Mathematics in a PhD program. He had published a paper in SCI while pursuing his Master’s degree.

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