



Robust estimation of number of factors in high dimensional factor modeling via Spearman's rank correlation matrix

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Abstract: Determining the number of factors in high-dimensional factor modeling is essential but challenging, especially when the data are heavy-tailed. In this paper, we introduce a new estimator based on the spectral properties of Spearman's rank correlation matrix under the high-dimensional setting, where both dimension and sample size tend to infinity proportionally. Our estimator is applicable for scenarios where either the common factors or idiosyncratic errors follow heavy-tailed distributions. We prove that the proposed estimator is consistent under mild conditions. Numerical experiments also demonstrate the superiority of our estimator compared to existing methods, especially for the heavy-tailed case.

讲座时间:

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会议地点: 腾讯会议 会议号: 490 1587 4165

主办单位:

中科院数学与系统科学研究院应用数学所

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