

Special Issue

Statistical Inference for High Dimensional Data

Message from the Guest Editor

Statistical inference is the process of using data analysis to infer the properties of an underlying distribution of probability. The field of high-dimensional statistics studies data whose dimension is larger than typically considered in classical multivariate analysis. The area arose owing to the emergence of many modern data sets in which the dimension of the data vectors may be comparable to, or even larger than, the sample size so that justification for the use of traditional techniques, often based on asymptotic arguments with the dimension held fixed as the sample size increased, was lacking. However, in modern-day analytics, there is an ever-growing need to develop statistical models to study large data sets, i.e., high-dimensional data. Several approaches have been developed so far between dimension reduction, asymptotic-driven methods, and random projection-based methods. Estimation and hypothesis testing for mean and covariance matrices have been extensively studied for high-dimensional parametric models. This Special Issue aims to gather recent methods and results of high-dimensional statistical inference. Both original research and review papers are encouraged.

Guest Editor

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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