Journal of Probability and Statistics

Special Issue on
Nonparametric Statistics and Finance: Present and Future

Call for Papers

Recently, nonparametric statistical methods have found a wide range of applications in finance. Applications include, but are not limited to, financial time series analysis and forecasting, volatility modeling and estimation, risk management, valuation of derivatives, model calibration, and portfolio selection. A key advantage of nonparametric statistical methods is their flexibility in incorporating various features of financial data without imposing stringent parametric assumptions. At the practical level, the fields of financial econometrics, quantitative finance, and empirical finance have greatly benefitted from various nonparametric statistical methods; kernel density estimation and model reduction techniques, for instance, are now popular among market practitioners. At the theoretical level, nonparametric methods give rise to interesting challenges owing to their typically high-dimensional nature and issues related to smoothness. Inspired by these practical and theoretical considerations, we deem it appropriate to have a special issue devoted to nonparametric statistics in finance. Nonparametric statistics provide an important link between statistics and finance and we hope that this special issue would stimulate and enhance the continuing interplay between these two important fields of research.

Authors are invited to submit original research articles as well as review articles that would motivate further research in nonparametric statistics and finance. We are particularly interested in manuscripts that report current advances in nonparametric statistics and its practical applications to any area of finance. As semiparametric statistics is very much related to the theme of this special issue, contributions in this field may also be submitted. Reviews that summarize and synthesize the results of latest developments on nonparametric and semiparametric statistics and their applications are welcome.

Potential topics include but are not limited to:

- Nonparametric time series and volatility modeling
- Semiparametric models and the related fields
- Functional and high-dimensional data analysis and model reduction techniques
- Kernel methods and mixture models
- Nonlinear smoothing techniques and bootstrap and resampling methods
- Random probability measures and stochastic processes
- Applications in statistics and finance using the above statistical methods and techniques

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First Round of Reviews	June 1, 2010
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