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New Advances in High-Dimensional and Non-asymptotic Statistics

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Message from the Guest Editors

With the appearance of high-throughput data, statistical models of complex data, such as high-dimensional data, have enhanced one of the hot research directions in modern statistical research. Recently, computer scientists in machine learning have renewed interest in analyzing the rigorous error bounds with high probability for the desired learning procedure when the sample size of data is small. These settings motivated modern statisticians and data scientists to shift their interest from asymptotic analysis to non-asymptotic analysis.

The primary goal of this Special Issue is to collect the recent new and novel results on high-dimensional statistics, non-asymptotic inference, concentration inequalities, and small sample learning, in which the theory must be based on the non-asymptotic properties of the proposed estimator. **The purely asymptotic results are not an interest for this Special Issue**. This Special Issue also aims at publishing new advances and applications of small sample inference, exact confidence interval, exact test and uncertainty quantification for statistical models.

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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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