Special Issue

Analytical Methods and Convergence in Probability with Applications, 2nd Edition

Message from the Guest Editors

As was noted in the famous book *Limit Distributions for Sums of Independent Random Variables* by B.V. Gnedenko and A.N. Kolmogorov, "actually, the cognitive value of probability theory is revealed only by limit theorems". The significance of limit theorems of probability theory—particularly, the central limit theorem—cannot be overestimated. In applied probability there is a convention, according to which a model distribution can be regarded as reasonable and/or justified enough only if it is an asymptotic approximation. That is, there exist a more or less simple setting and the corresponding limit theorem in which the model under consideration is a limit distribution. Limit theorems suggest theoretic models for many real processes arising, for example, in physics, financial mathematics, risk theory, control theory, and many others. In this Special Issue, we collect papers that produce or improve various limit theorems of probability theory and convergence rate estimates, as well as those that develop analytical methods of probability theory and apply stochastic models produced by limit theorems to the solution of applied and theoretical problems in various fields.

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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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