Special Issue

Applications and Mathematical Foundations of Machine Learning in Investments

Message from the Guest Editors

Machine learning (ML) methods have been applied to all steps of investment processes: to include alternative and often unstructured data for selecting single securities, to make the asset allocation process robust against instable return and covariance estimations, to actively time the market in the tactical allocation step, to estimate and manage risk and to generate transparent backtests with a reduced risk of overfitting. Driven by market competition, the adopted methods are often based on the experience of market practitioners and use innovations from scientific fields beyond finance. This market-driven adoption often leads to heuristic approaches not yet as rigorously tested as those from academic financial econometrics or financial mathematics. Diverging and unstructured data present an additional challenge, especially in the field of sustainable investments.   With this Special Issue, we would like to invite an academic and practitioner audience to investigate ML and AI applications for investment and portfolio management, and to advance the field through mathematical and econometrical contributions.

Guest Editors

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Deadline for manuscript submissions

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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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