

## Special Issue

# New Challenges in Mathematical Finance: From S(P)DEs to Machine Learning

### Message from the Guest Editors

Financial markets are currently characterized by an increasing number of challenging tasks which outperform already-obtained results in terms, for example, of standard credit risk measures, interest rates structures analysis, financial scenario forecasting, and related sub-problems. In particular, the enormous mass of data, spanning from micro-economic to macro-economic frameworks, demands the development of a new stochastic-based holistic vision which can re-establish the right grip between mathematical theory and related applied tools as well as between quantitative tasks and their formally correct description/analysis/forecast. Therefore, this Special Issue will be devoted to collecting contributions aimed at finding a collective approach to the aforementioned challenges. It welcomes papers dealing with concrete financial problems from different perspectives. Contributions related to, for example, the theory of SPDEs, stochastic mean field games, neural networks solutions, and combinations of these will constitute the core of the present Special Issue.

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### Guest Editors

Dr. Luca Di Persio

Dr. Francesco Giuseppe Cordoni

Dr. Immacolata Oliva

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### Deadline for manuscript submissions

closed (15 March 2023)



## Risks

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*Risks* is published in an open access format; research articles, reviews, and other content are released on the internet immediately after acceptance. Specifically, *Risks* welcomes submissions that (a) contribute with insight, outlook, understanding, and overview; (b) show creativity in terms of pedagogical methods and techniques; (c) help the transfer of theoretical and applied research into applications in the public and private domains; and (d) show responsibility for the impact on society. The scientific and the general public have unlimited free access to the content as soon as it is published.

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