



## Stochastic Modelling in Financial Mathematics

Guest Editor:

**Prof. Dr. Anatoliy Swishchuk**  
Department of Mathematics and  
Statistics, University of Calgary,  
Calgary, AB T2N 1N4, Canada

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### Message from the Guest Editor

Dear Colleagues,

Financial mathematics (also known as mathematical finance and quantitative finance) is a field of applied mathematics, concerned with mathematical and stochastic modelling of financial markets.

In financial mathematics, modelling entails the development of sophisticated mathematical and stochastic models, and one may take, for example, the share price as a given and attempt to use stochastic calculus to obtain the corresponding value of derivatives of the stock. Thus, many problems, such as derivative pricing, portfolio optimization, risk modelling, etc., are generally stochastic in nature, and hence, such models require complex stochastic analyses.

This current Special Issue is exactly devoted to modern trends in financial mathematics associated with stochastic modelling, including modelling of big data.

Topics from many areas, such as high-frequency and algorithmic trading (limit order books), energy finance, regime-switching, and stochastic volatility modelling, among others, are shown to have deep applicable values which are useful for both academics and practitioners.

Prof. Dr. Anatoliy Swishchuk  
*Guest Editor*





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Faculty of Actuarial Science and Insurance, Bayes Business School, City University of London, 106 Bunhill Row, London EC1Y 8TZ, UK

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*Risks* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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