



# 北京理工大学

## 数学与统计学院学术报告

### Deep learning-based methods in computational finance

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**时间:** 2024年11月12日(周二)下午16:00-17:00

**地点:** 文萃楼I座303

**摘要:** Computational finance involves applying mathematical models and computer algorithms to analyze financial markets, price financial instruments, manage risk. However, the increasing complexity of financial problems has caused significant challenges for traditional methods, such as slow computation speed and the curse of dimensionality. This presentation will cover our recent work on deep learning-based methods (e.g., Calibration Neural Networks and Seven League Scheme) in computational finance. These methods are designed to address the challenges, particularly within the fields of derivatives pricing, model calibration, and Monte Carlo simulations. Additionally, I will discuss relevant applications of these techniques in improving financial risk management.

**个人简介:** 荷兰代尔夫特理工大学助理教授，同时任职于荷兰ING国际银行全球风险模型管理部。研究领域涵盖金融数学、人工智能和科学计算，主要解决风险管理中的高性能建模和计算问题，2篇期刊最佳论文奖，1篇国际会议最佳报告，提出的方法已被业界证实或采用。在国际学术会议受邀报告十余次，完成译著《金融中的数学模型和计算》校对工作，已毕业和指导多名硕博研究生。