2SC7190 – Risk Management on financial markets

Instructors: Gaoyue Guo
Department: DOMINANTE - MATHÉMATIQUES, DATA SCIENCES
Language of instruction: ANGLAIS
Campus: CAMPUS DE PARIS - SACLAY
Workload (HEE): 80
On-site hours (HPE): 48,00

Description
Students enrolled in this course are asked to study a quantitative method in a financial risk management setting. Subjects are proposed by an industrial or academic partner.

Quarter number
ST7

Prerequisites (in terms of CS courses)
Stochastic Finance and Risk Modelling (ST7 MDS)

Syllabus
Each project deals with a quantitative method for risk management, e.g., pricing or hedging of a financial product, or asset allocation, portfolio management, client portfolio analysis, etc. Real financial or client data is provided by the project partner. Each project requires the coding of the method investigated.

List of 2021 subjects (may differ in 2022):
- Optimal portfolio allocation (in partnership with BNP Paribas)
- Optimization for insurance products (in partnership with Generali)
- Hybrid portfolio optimization (in partnership with Volga Technologies)
- Heuristic portfolio construction (in partnership ODDO BHF)

Class components (lecture, labs, etc.)
Project with regular supervision. Short lectures if needed.

Grading
Source code, technical report and oral presentation