MASTER 2nd year 2021-2022

M2MO Random modelling, Finance & Data science

Course 1: statistics & random modelling in finance
Course 2: Data Science

Partner Institutions

FUNDAMENTAL COURSES

S. Péché	**Stochastic calculus & diffusion models**	M. Merle	**Markov Chains**
S. Delattre	**Basics of Data modeling & statistical inference**	S. Gaiffas & A. Fisher	**Introduction to Machine learning**

GROUP QUANTITATIVE FINANCE

S. Crépey	**Derivatives modelling**
B. Bruder	**Financial products**
H. Pham & S. Scotti	**Stochastic control in finance**
O. Guéant	**Algorithmic trading**
B. Bruder	**Quantitative assets management**
S. Crépey	**Quant analysis**
Z. Grbac	**Advanced modelling in interest rate**
M.C. Quenez	**Nonlinear methods in finance**
R. Aid, P. Gruet	**Energy markets**

GROUP RISKS IN FINANCE

S. Scotti & A. El Alami	**Risks: regulation, measure & management**
J.D. Fermanian	**Copulas & financial applications**
P. Tankov, O. Zerbib	**Green finance**

GROUP NUMERICAL & COMPUTATIONAL METHODS

N. Frikha	**Monte Carlo methods**
Y. Achdou, O. Bokanowski	**PDE & numerical methods**
J.F. Chassagneux	**Advanced probabilistic numerical methods in finance**

GROUP DATA SCIENCE

S. Clémençon & E. Chautru	**Statistical learning**
G. Garrigos	**Optimization for learning**
K. Tribouley	**Data science projects: use cases for CRM**
M. Abdel-Sayed & L. Massoulard	**Data science & statistics of industry**
S. Boucheron	**Methods for large data sets**
F. Rossi	**Graphical models for machine learning**
J. Lussange	**Introduction to reinforcement learning**
S. Gaiffas	**Deep learning**

GROUP STATISTICS & MACHINE LEARNING IN FINANCE

J.M. Bardet	**Financial time series**
A. Gloter	**Statistics of diffusion**
J.Y. Audibert	**Prediction & sequential investments**
E. Löcherbach	**Point processes & applications in finance**
H. Pham, J.D. Fermanian	**Machine Learning for finance**

GROUP COMPUTER SCIENCE

O. Carton	**C++**
S. Souchet	**Software in statistics**

REQUIRED LEVEL : Master 1 with strong mathematical background, Engineering school

DIRECTORS: Jean-François CHASSAGNEUX, Huyên PHAM (Université de Paris), Eva LOCHERBACH (Paris 1)

WEBSITE: https://masterfinance.math.univ-paris-diderot.fr

REGISTRATION : website E-Candidat, https://ecandidat.app.u-paris.fr/sciences1/#!accueilView

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