MASTER 2nd year 2019-2020

M2MO Random modelling, Finance & Data science

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

Conventions

Laboratoires d'appui

Fondamental Courses

S. Péché	Stochastic calculus and diffusion models	**M. Merle**	Markov Chains
A. Fischer	Data modelling: founding principles	**S. Gaiffas**	Introduction to Machine learning

Group Quantitative Finance

P. Tankov, S. Scotti	Random modelling in finance
B. Bruder	Financial products
P. Tankov	Model risk and model validation for pricing
Z. Grbac	Advanced modelling in interest rate
R. Aïd, O. Féron	Energy markets

Group Assets management

B. Bruder	Quantitative assets management
H. Pham	Stochastic control in finance
M.C. Quenez	Non linear methods in finance
O. Guéant	Algorithmic trading

Group Risk management

H. Pham, A. El Alami	Risks: regulation, measure and management
R. Rouge	Credit risk modelling
J.D. Fermanian	Copulas and financial applications

Group Numerical and approximation methods

N. Frikha	Monte Carlo methods
Y. Achdou & O. Bokanowski	PDE and numerical methods
H. Pham	Asymptotic methods in finance
J.F. Chassagneux	Advanced probabilistic numerical methods in finance

Group Data Science

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

Group Statistics and Finance

J.M. Bardet	Financial time series
A. Gloter	Statistics of diffusion
E. Löcherbach	Point processes and application in finance
J.Y. Audibert	Prediction and sequential investments
C. Cuchiero	Machine Learning in finance

Group Computer science

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

Required level : Master 1 with strong mathematical background, Engineering school

Direction: Jean-François CHASSAGNEUX, Huyên PHAM (Paris 7), Eva LOCHERBACH Fabrice ROSSI (Paris 1)

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

Registration : website E-Candidat, https://candidaturescaprod.app.univ-paris-diderot.fr

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En 2019, les universités Paris Descartes, Paris Diderot et l'institut de physique du globe de Paris forment l'Université de Paris.