

# NUMERICAL METHODS IN PROBABILITY FOR MATHEMATICAL FINANCE

E. TANRÉ

Probabilistic numerical methods are widely used in mathematical finance for pricing financial derivatives and computing strategies. The course will present the basic methods used for simulating random variables and implementing the Monte-Carlo method. Simulation of stochastic processes used in mathematical finance, such as Brownian motion and solutions to stochastic differential equations, will be discussed as well.

Prerequisites: Probability theory with measure theory,  
Stochastic calculus.  
First trimester.