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INSPEM'S ONLINE
WEEKLY SEMINAR

DATE : 9 OCTOBER 2020 | TIME : 3.15 PM
MEDIUM : VIDEO CONFERENCE (GOOGLE MEET)

https://meet.google.com/xhw-pfaj-gua

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Topic : A Modified Monte Carlo Simulation to Evaluate American Style of Asian Option with Jump-Diffusion Process

ABSTRACT

American style of Asian options is a financial derivative with the payoff depends on the average price of an underlying asset over the time interval. This study presents the valuation of Asian option with early exercise boundary where the payoff function depends on the continuous geometrical average price of its underlying asset. The pricing formula has been derived by using partial integral differential equation (PIDE) in the form of a linear complementary problem when the dynamics of the underlying asset follows a jump-diffusion process. In this study, we employ modified Monte Carlo simulation to price American style of Asian Option with jump-diffusion process. Monte Carlo simulation is an important mathematical tool to price options due to its flexibility and well-suited method for complex option pricing problem. By applying stopping strategy and simulating the Monte Carlo path, then the value of the option can be estimated.

Keywords: Asian options, Jump-diffusion process, Monte Carlo Simulation, Option pricing.

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