

1043-60-135

Ruihua Liu* (ruihua.liu@notes.udayton.edu), Department of Mathematics, University of Dayton, Dayton, OH 45469. *Regime-Switching Recombining Tree for Option Pricing.*

In this talk we present an efficient recombining tree for option pricing when the underlying asset price follows a regime-switching model. The tree grows linearly as the number of steps increases. Thus it enables us to use large number of steps to approximate both European and American option values. As an application, we construct a regime-switching model to approximate the well-known Heston stochastic volatility model and then use the tree to calculate the approximate option prices. Numerical results are provided. (Received August 24, 2008)