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**Jari Toivanen\*** (toivanen@stanford.edu). *Operator splitting methods for pricing options under jump-diffusion models.*

The price of a European option can be obtained by solving a partial integro-differential equation (PIDE) under a jump-diffusion model like Merton's model or Kou's model. For an American option the price can be obtained by solving a linear complementarity problem (LCP) with the same one-dimensional parabolic partial integro-differential operator.

Here we discuss operator splitting methods for PIDEs and LCPs. We describe a second-order accurate implicit-explicit (IMEX) method for efficiently treat the integral operator. For American options an easy-to-implement operator splitting method is described for LCPs. Numerical experiments are presented to illustrate the efficiency of the discussed splitting schemes. (Received August 26, 2014)