1120-60-134   **Sylvain Corlay*** (`scorlay@bloomberg.net`). *Branching diffusions for stochastic control.*

Most numerical approaches used to solve the nonlinear PDEs arising in mathematical finance require the computation of conditional expectations, which are approximated with regression methods. In high dimensions, the choice and the fine-tuning of the regression method becomes the crux of the problem. The recently introduced branching diffusion methods provide a completely different approach to the resolution of nonlinear PDEs which does not involve the estimation of conditional expectations or dynamic programming. They are applicable to a large class of nonlinear problems including the computation of Credit Value Adjustment. (Received February 18, 2016)