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A particular fully nonlinear degenerate parabolic equation arising in Finance

I will present a monotone and stable approximation of the fully nonlinear degenerate parabolic equation derived recently by Cheridito, Soner and Touzi from the stochastic control problem of super-replicating a contingent claim under gamma constraints. I will show some numerical results that are of practical interest. This equation is nonstandard but the theory of viscosity solutions still provides good methods for solving this type of problem in a robust manner and the convergence of the numerical scheme can be proved.