Ryan Hynd

Option pricing in the large risk aversion, small transaction cost limit

We study the asymptotic analysis of solutions of a sequence of PDE with gradient constraint arising in an option pricing model with transaction costs. The limit of these solutions satisfies a nonlinear Black-Scholes type equation. An interesting feature of this work is that the nonlinearity in the Black-Scholes type equation comes about as a solution of a nonstandard eigenvalue PDE problem.