A Dual algorithm for stochastic control problems: Applications to Uncertain Volatility Models and CVA

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Abstract

We derive an algorithm in the spirit of Rogers and Davis, Burstein that leads to upper bounds for stochastic control problems. Our bounds complement lower biased estimates recently obtained in Guyon, Henry-Labordere. We evaluate our estimates in two numerical examples motivated from mathematical finance.
Joint work with Christian Litterer and Zhenjie Ren.

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