

Financial Mathematics Seminar

Friday, Sept. 8, 2006

1:30pm–2:30pm

Nelson 1206

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Title: Optimal Anticipative Stopping

Abstract: When an investor has an asset whose price process at any time follows a Brownian motion or a geometric Brownian motion, what is the best time to sell his/her asset? We assume there is a fixed cost in the transaction and also there is a discount rate. This problem has been well-studied in mathematical finance and other fields. Now if we assume that the investor is an insider. Namely he knows more information than the information determined by the market. What is the best time to sell? Mathematically if T is an adapted stopping time, then we know that $E(B_T)=0$. But if T is not adapted, then that may not be true. From this one can see the difficult to solve the anticipative optimal stopping problem. This problem is solved by using the Malliavin calculus. This is joint work with Bernt Oksendal.