

March 2nd

Title:

Insider Trading Models and Enlargements of Filtration.

Abstract:

In this talk I will present two models of insider trading: Back (1992) and Campi and Cetin (2007). In these models the market consists of a risk-neutral informed agent who observes a static signal which is either final value of the firm (Back (1992)) or time of firm's default (Campi and Cetin (2007)), noise traders, and competitive market makers who set share prices using the total order flow as a noisy signal of the insider's information. I will derive the optimal insider trading strategies and optimal market makers' pricing rule and demonstrate that in these models the presence of an insider on the market does not lead to arbitrage, and that it provides higher information efficiency of the equilibrium price process. Moreover, I will provide the connection between the obtained solution and enlargement of filtration theory, with a particular focus on the relationship between the optimal insider's trading strategy and Jacod's information drift.

March 4th:

Title:

Stock Market Insider Trading in Continuous Time with Imperfect Dynamic Information.

Abstract:

This talk is based on the joint work with Luciano Campi and Umut Cetin. I will present the solution to the insider trading model in the presence of dynamic private information. Differently from the previous literature, we assume that a) the insider's signal is dynamic, i.e., rather than observing the final value of the firm, the insider observes the stochastic process of the firm's fundamental value, and b) that the signal received by the insider is not necessarily Gaussian.

I will present the derivation of the optimal insider trading strategy and its connection with the information drift. I will also demonstrate that in the dynamic case, as in the static one, the presence of the insider does not lead to arbitrage and increases market efficiency.

Moreover, in the particular case of the Gaussian signal (Danilova (2009)) I will provide a characterization of all optimal strategies, and prove existence of both Markovian and non Markovian equilibria by deriving closed form solutions for the optimal order process of the informed trader and the optimal pricing rule of the market maker.