If you are interested in enrolling in this course, you will need to set up an interview with the instructors before January 23rd. Please email gerig@uiuc.edu

Credit Units:  2 Hours or 0.50 Units
Class Times:  Wed 4-5:50     Fri 8:30-10:20     174 Wohlers
(Although two days are allotted, the class will normally meet only on Fridays)
Enrollment:   MBA, MSF, PhD’s from across campus

Statistical Arbitrage – The exploitation of any statistically significant trend or pattern in market price fluctuations, i.e., one can profit (disregarding transaction costs) on the fluctuations in price of any tradable portfolio if those fluctuations are not consistent with a random walk.

Goals:
- To understand how modern futures markets operate
- To learn several different techniques used to analyze trends in market data.
- To work as a team to collect and analyze data, to test and implement a trading strategy, and to present your results to the class. The objective is not to find a profitable strategy, but to learn the process involved in the development and analysis (especially of the risks involved) of an automated trading strategy.

Content:
  The first half of the course is designed to give students a broad but thorough introduction to statistical arbitrage in the futures markets. Students will be given weekly reading assignments and are expected to take part in weekly discussions on these readings. The class will make at least one trip to Chicago to meet with executives from a trading firm.

  During the second half of the course, students will use real market data (in a simulated environment) to analyze, test, and develop a trading strategy. Students will work in teams of 4 people, 2 will be assigned all programming duties (Task 1) and the other 2 will be in charge of analysis (Task 2).

Task 1: Programming. (Pending finalization with TTI), Trading Technologies International will provide access (in a simulated environment) to the four main electronic Futures Exchanges: CBOT, CME, LIFFE, and Eurex. Students are to (1) develop a means of collecting data from these exchanges and to (2) automate their group’s strategy in the simulated environment.

Task 2: Analysis. Students are to (1) propose a trading strategy / market inefficiency that they will statistically analyze and to (2) fully analyze this strategy and work with their fellow team members to automate it. If your group is finding it difficult to collect data, several months of data is available from the instructors for a select number of American equity futures contracts.