

## Homework #2 Into to Auto Trading Systems

Due date: February 19, 2019 (in class)

**Important Note:** All home works should be handed in hard copies. No late homework will be accepted. *Answers should contain both the Matlab program, PLUS screen snap shots to demonstrate correct running of the program.*

**Problem 1 (Strategy Implementation).** Download 1 minute bar historical data using IB-Matlab for as far as you can (you may need to combine more downloads due to IB restrictions). Then write a function that can generate buy and sell signals using two moving averages  $MA(m)$  and  $MA(n)$  ( $m < n$ ) of different window length. Run your function on the historical data (you can choose  $m$  and  $n$  values) and display your trading profit and loss curve.

**Problem 4 (Optimization).** Can you find the "best" strategy by back testing for  $m = 1, 2, 3, \dots, n - 1$ , where  $n = 20$ .

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### Reading Assignments (Important!)

**Problem 6.** Read the complete article cited in the Topics and Notes.