**FORECASTING TIME SERIES**

**Homework 2**

**Respond to the following questions by groups. Send your answers in a “Word file” to lpascual@faculty.ie.edu before midnight on Saturday, March 17, 2018.**

For this homework, students must solve the IE case “Ibex”, already available on Campus in the Documents section.

To facilitate its solution, please follow the next steps:

1. Find the best time series model for the variable “ibex”
2. Find the best regression model for the dependent variable “ibex”.
   1. do we have multicollinearity with these explanatory variables?
   2. Are the residuals White Noise?
3. Find the best regression model with time series errors for the dependent variable “ibex”
   1. does this model maintain the same number of lags as the model found in question 1, and the same number of regressors as those found in question 2?
   2. Derive the final equation for the selected model
4. Choose among the three previous models the best one to explain variable “ibex” using the “estimate of the residual variance” as the in-sample criterion
5. For the best model found in question 4, compute the one step ahead point prediction and confidence interval for the “ibex” given the values indicated in the case for all the explanatory variables