

# **NO FREE LUNCH SEMINAR**

## Seminario di Finanza Quantitativa

### giovedì 2 luglio 2015

ore 13:00

Scuola Normale Superiore Pisa (Aula Bianchi)

# **Roberto Casarin**

Department of Economics - Università Ca' Foscari di Venezia

Terrà un seminario dal titolo:

# *"Bayesian Nonparametric Calibration and Combination of Predictive Distributions"*

#### Abstract

We introduce a Bayesian approach to predictive density calibration and combination that accounts for parameter uncertainty and model set incompleteness through the use of random calibration functionals and random combination weights. Building on the work of Ranjan and Gneiting (2010) and Gneiting and Ranjan (2013), we use infinite beta mixtures for the calibration. The proposed Bayesian nonparametric approach takes advantage of the flexibility of Dirichlet process mixtures to achieve any continuous deformation of linearly combined predictive distributions. The inference procedure is based on Gibbs sampling and allows accounting for uncertainty in the number of mixture components, mixture weights, and calibration parameters. The weak posterior consistency of the Bayesian nonparametric calibration is provided under suitable conditions for unknown true density. We study the methodology in simulation examples with fat tails and multimodal densities and apply it to density forecasts of daily S&P returns and daily maximum wind speed at the Frankfurt airport. Joint work with Federico Bassetti and Francesco Ravazzolo.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze Matematiche e Naturali

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