# SHORT COURSE

## on
## "Bayesian Variable Selection: Historical Perspective and Recent Developments"

## Marina Vannucci (Rice University)



**Wednesday 15th December 2021**
Lecture 1: 10-12 am
Lecture 2: 2-4 pm

Where: Room 205 (ex 32) The participation on site is restricted and you need to register here
https://labdisia.disia.unifi.it/reserve205/

The Short Course will be available also online.
Please register here to participate
https://us02web.zoom.us/meeting/register/tZclfuuupzwrGdN7O3Wzo5dI8I1SGINEMLYw

**Lecture 1**: Introduce Bayesian methods for variable selection that use spike-and-slab priors (discrete and continuous). Discuss structured priors and nonparametric constructions for applications in applied fields, such as high-throughput genomics and neuroimaging.

**Lecture 2**: Cover extensions to non-Gaussian data and efficient sampling schemes for posterior inference. Show an application to non-homogeneous hidden Markov models. Conclude with a brief outlook on other aspects of variable selection priors, e.g., edge selection in graphical models.