UNIVERSITÀ DEGLI STUDI DI PADOVA
DIPARTIMENTO DI SCIENZE STATISTICHE

UNIVERSITÀ DEGLI STUDI DI PADOVA

PhD SCHOOL IN STATISTICS
Department of Statistical Sciences

Specialist Course

XXVIII cycle

AN OVERVIEW OF OBJECTIVE BAYESIAN ANALYSIS

Jim Berger

Duke University, Durham - USA

Aula Cucconi

Schedule:

March 18, 2013
March 19, 2013 10.00 – 13.00
March 20, 2013

Summary:

www.stat.unipd.it/phd/courses_2013

An Overview of Objective Bayesian Analysis

Jim Berger

Department of Statistical Science, Duke University

Bayesian analysis is often thought of as a subjective approach to analysis of data. This is neither true historically, logically, nor in practice. The goal of this course is to introduce the elements of objective Bayesian analysis, in the context of a wide variety of applications.

After a historical overview, objective Bayesian estimation will be introduced with discussion of various approaches to the development of objective priors.The very strong relationships with frequentist inference and ideas of conditioning will be discussed.

The last half of the course will consider hypothesis testing and the relationship between p-values and Bayesian measures, as well as model selection and issues of multiple testing. The increasingly severe problems with reproducibility of science will be discussed as motivation.

The lectures presume a grounding in statistics but, for the most part, do not presume familiarity with Bayesian analysis.