



ΠΡΟΣΚΛΗΣΗ ΣΕ ΔΙΑΛΕΞΗ

Την Τετάρτη 20/5/2015 στις 12:15-13:00 θα πραγματοποιηθεί διάλεξη στην Αίθουσα Συνεδρίων του Πανεπιστημίου Πειραιώς με ομιλήτρια την Καθηγήτρια **Marianthi Markatou**, Department of Biostatistics and Institute for Healthcare Informatics, University at Buffalo, The State University of New York (SUNY) με θέμα:

“The Role of Kernels in Data Analysis: A Statistical Perspective”

Abstract

Many problems in data integration can be posed as a single goodness-of-fit question, namely inquiring whether two or more data sets come from the same distribution. The same question is pertinent in comparative effectiveness research (CER), where “balancing” the groups to be compared is required. In this talk, we will discuss the *inferential* potential of kernels and their statistical properties. We will first introduce the quadratic distances framework and discuss its connection with goodness-of-fit. We show that many classical tests are functions of specific kernels.

Given data and a question of interest, the choice of a kernel is a matter of design, and important design factors are the data type, the dimension of the data, the ability to carry out fast, large scale computation explicitly and, in the context of testing, the hypotheses that are of highest interest. We will discuss “optimal” kernel construction for specific alternatives (in the context of data integration) and construct test statistics with desirable power characteristics. Simulation results illustrate the performance of the methods