



ΠΡΟΣΚΛΗΣΗ ΣΕ ΔΙΑΛΕΞΗ

Την Πέμπτη 10/12/2015 στις 3 μ.μ. θα πραγματοποιηθεί διάλεξη στην Αίθουσα Β002 του νεοκλασσικού κτηρίου με ομιλητή τον υποψήφιο διδάκτορα κ. Γεώργιο Μπάρτζη (Dept. of Medical Statistics and Bioinformatics, Leiden University Medical Center) με θέμα:

“Analysing complex relationships using network analysis: The MIMOmics experience”

Abstract

MIMOmics (Methods for Integrated analysis of Multiple Omics datasets) is a FP7-HEALTH-2012 Innovation project funded by the European Commission, running from October 2012 until October 2017, coordinated by the Leiden University Medical Center. It primary focuses on the development of statistical methodology to integrate heterogeneous omics datasets to predict biomarkers. There is a strong demand for powerful and transparent statistical methods for combining and analysing heterogeneous datasets since various technological platforms are being developed to enable high-throughput data acquisition for omics techniques such as metabolomics, glycomics, and proteomics. MIMOmics project can be divided in several Work Packages one of which is modelling pathways and structures of biological networks. Statistical network analysis became really famous in biology since it analyses, visualises and models complex relationships between variables of interest. Classical methods do not match by far the complexity of the biological problem. In this presentation we will use the Graphical LASSO method for estimating the penalised Gaussian log-likelihood as a mean for learning the connections in a network of metabolites coming either from plants or humans. The data used for network estimation are not based on the original values of the metabolites but after decomposing them in three parts only the informative part is kept.