ΚΥΚΛΟΣ ΣΕΜΙΝΑΡΙΩΝ ΣΤΑΤΙΣΤΙΚΗΣ - ΑΠΡΙΛΙΟΣ 2015

Παντελής Μπάγκος

Department of Computer Science and Biomedical Informatics, University of Thessaly.

Integration of data from multiple sources: meta-analysis and synthesis analysis

ΤΡΙΤΗ 28/4/2015
12:15

**ΑΙΘΟΥΣΑ 607, 6^{ος} ΟΡΟΦΟΣ,
ΚΤΙΡΙΟ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΣΠΟΥΔΩΝ
(ΕΥΕΛΠΙΔΩΝ & ΛΕΥΚΑΔΟΣ)**

ΠΕΡΙΛΗΨΗ (ΣΤΑ ΑΓΓΛΙΚΑ)

Meta-analysis constitutes a particular procedure for synthesizing the results from multiple studies that address similar research questions Although in medical research literature meta-analysis was initially applied in the field of randomized clinical trials, it is nowadays considered a valuable tool for the combination of observational studies as well as for gene-disease association studies. Recently, the multivariate meta-analysis is becoming popular, as a tool for synthesizing simultaneously more than one effect sizes offering several advantages over univariate approaches. Multivariate meta-analysis finds applications in genetics as well as in observational and clinical studies (multiple treatments, multiple outcomes and so on). On the other hand, the so-called synthesis analysis, aims at combining in a single predictive model, information from different variables. The aim of the method is to build the multivariate model that relates all predictors, using however, not the individual data, but rather the information arising from the pairwise relationships among the variables. The method finds applications in constructing multivariate risk models in epidemiology and preventive medicine. In this talk, the author will present some recent results concerning the statistical methodology for multivariate meta-analysis and synthesis analysis and will discuss some possible extensions that will allow the methods to be used with complementarity.

Pantelis Bagos

Department of Computer Science and Biomedical Informatics, University of Thessaly.

Integration of data from multiple sources: meta-analysis and synthesis analysis

TUESDAY 28/4/2015
12:15

**ROOM 607, 6th FLOOR,
POSTGRADUATE STUDIES BUILDING
(EVELPIDON & LEFKADOS)**

ABSTRACT

Meta-analysis constitutes a particular procedure for synthesizing the results from multiple studies that address similar research questions Although in medical research literature meta-analysis was initially applied in the field of randomized clinical trials, it is nowadays considered a valuable tool for the combination of observational studies as well as for gene-disease association studies. Recently, the multivariate meta-analysis is becoming popular, as a tool for synthesizing simultaneously more than one effect sizes offering several advantages over univariate approaches. Multivariate meta-analysis finds applications in genetics as well as in observational and clinical studies (multiple treatments, multiple outcomes and so on). On the other hand, the so-called synthesis analysis, aims at combining in a single predictive model, information from different variables. The aim of the method is to build the multivariate model that relates all predictors, using however, not the individual data, but rather the information arising from the pairwise relationships among the variables. The method finds applications in constructing multivariate risk models in epidemiology and preventive medicine. In this talk, the author will present some recent results concerning the statistical methodology for multivariate meta-analysis and synthesis analysis and will discuss some possible extensions that will allow the methods to be used with complementarity.