



UNIVERSITA' DEGLI STUDI di MESSINA

Dipartimento di Economia

Corso di laurea Magistrale in Scienze Economiche e Finanziarie – LM56

Scuola di Dottorato in Economics, Management and Statistics

AVVISO DI SEMINARIO

Mercoledì, 5 Dicembre 2018 ore 9,00 - Aula 12, Edificio C

Il prof. Luca Greco

Dipartimento di Diritto, Economia, Management e Metodi Quantitativi (DEMM)

UNIVERSITÀ DEGLI STUDI DEL SANNIO - BENEVENTO

terrà un Seminario di approfondimento didattico dal titolo:

“Robust multivariate methods based on the weighted likelihood”

abstract:

Standard data reduction techniques, such as principal component analysis, discriminant analysis, cluster analysis, exhibit lack of robustness with respect to the occurrence of outliers, anomalous values that can completely break down classical procedures, hence leading to unreliable conclusions. This unpleasant behavior stems from the fact that they rely on the sample mean vector and sample covariance matrix. Then, robust data reduction methods can be defined by supplying robust estimates of multivariate location and scatter. Furthermore, formal rules for the purpose of outlier detection can be obtained. The interest focuses on those techniques driven by the employ of weighted likelihood multivariate estimates. Weighted likelihood estimation is characterized by the evaluation of unit specific data dependent weights lying in the interval $[0,1]$ aiming at downweighting the effect of anomalous observations. The weights depend on the so called Pearson residuals, that are meant to compare the data, summarized by a non-parametric density estimate, and the model. In a multivariate setting Pearson residuals are obtained from the univariate distribution of Mahalanobis distances. Then, the effect of large residuals is bounded by a suitable residual adjustment function in the estimation process.

Dottorandi e Studenti (in particolare dei Corsi di Laurea LM-56 e dei Corsi di Master) sono invitati a partecipare.