

## Wednesday, September 8, 2010

**8:30 Registration starts**

**9:00-9:30 Opening ceremony**

Room: 0.18

E. Cerbai (Vice-Rector for Research of the University of Firenze), S. Salvini (Head of the Department of Statistics “G. Parenti”), C. Weihs (President of GfKl), F. Palumbo (Vice-President of CLADAG)

**9:30-10:45 Contributed sessions**

### **01 Achievement and research**

Chair: C. Rampichini      Room: 0.04

F. De Battisti, S. Salini

*Bibliometric indicators for statisticians: critical assessment in the italian context*

I. Sulis, M. Porcu

*Measuring the effect of cultural capital on students' achievement*

E. Zavarrone

*Formative measurement model for academic reputation*

### **02 Applications in economics**

Chair: A. Giommi      Room: 0.05

F. Cipollini, C. Ferretti, P. Ganugi, M. Mezzanzanica

*Discrete and continuous time mover-stayer model for labour market in a small northern Italian area*

A. A. Romano, G. Scandurra

*Electricity consumption and gross domestic product in the Italian regions*

### **03 Dimension reduction**

Chair: I. Morlini      Room: 0.18

S. Borra, A. Di Ciaccio

*Variable selection in a predictive approach*

K. Luebke, C. Weihs

*Adaptive linear dimension reduction in a classification setting*

R. Rocci, S. A. Gattone

*Dimensional reduction and clustering of functional data*

**04 Environmental data analysis and classification**

Chair: A. Petrucci      Room: 0.07

E. Di Giuseppe, G. Jona Lasinio, M. Pasqui, S. Esposito

*Functional clustering of temperature and precipitation data for Italian climate zones determination*

E. Nissi, A. L. Sarra, S. Palermi, G. De Luca

*The application of M-function analysis to the geographical distribution of earthquake sequence*

A. Plaia, M. Ruggieri, F. Di Salvo, G. Agro

*From a multivariate spatio-temporal array to a multipollutant - multisite air quality index*

**05 Applications in demography**

Chair: S. Salvini      Room: 0.06

S. Bozza, M. Di Bacco, R. Bigazzi, S. De Iasio

*Analysis of the individual variability of sex ratio with hierarchical models*

S. Korenjak-Cerne, N. Kejzar, V. Batagelj

*Clustering of population pyramids presented as histogram symbolic data*

D. Vignoli, A. Mattei, A. Gottard

*Modeling fertility and education in Italy: time-variant or invariant unobserved heterogeneity component?*

**10:45-11:15 Coffee break**

**11:15-12:45 Specialized sessions**

**A Challenges and advances in statistical spatial data analysis**

Chair: A. Petrucci      Discussant: A. Ultsch      Room: 0.04

M. Behnisch, A. Ultsch

*Urban knowledge discovery – Swiss population development by 15 decades*

B. Cafarelli, A. Pollice, G. Jona Lasinio

*Agronomic field grain property maps by geosadditive models: a comparison of different spatial correlation structures*

M. Pratesi, S. Marchetti, C. Giusti, N. Salvati

*Spatial model in small area estimation: an M-quantile approach*

**B Robust statistical methods for data analysis: methodological innovations and applications**

Chair: L. Grossi Discussant: G. Ritter Room: 0.07

G. Cavaliere, I. Georgiev

*Exploiting infinite variance through dummy variables in an AR model*

D. Ferrari, D. La Vecchia

*On robust estimation via pseudo-additive information*

R. Hable, A. Christmann

*Robustness versus consistency in ill-posed classification and regression problems*

**C Web data mining**

Chair: A. Geyer-Schulz Discussant: F. Palumbo Room: 0.18

F. Camillo, F. Neri

*Monitoring the web sentiment, the Italian Prime Minister's case*

W. Gaul

*Web page importance ranking*

Thai-Nghe Nguyen, Z. Gantner, L. Schmidt-Thieme

*Evaluation metric for learning from imbalanced data based on asymmetric beta distribution*

**12:45-14:15 Lunch**

**14:15-15:30 Contributed sessions**

**06 Handwriting and web analysis**

Chair: W. Gaul Room: 0.05

S. Bozza, F. Taroni, R. Marquis, M. Schmittbuhl

*The evaluation of handwriting evidence: multi-level models for determining authorship*

R. Kenett, S. Salini

*Relative linkage disequilibrium in tracking web search patterns*

K. Silachan, P. Tantatsanawong, C. Lursinsap

*Bayesian classification tree for statistical user web-URL categories navigation pattern model*

**07 Applications to sociology and market**

Chair: R. Decker                      Room: 0.06

M. De Castris, G. Pellegrini

*Integrating the spatial dimension into propensity score matching to evaluate regional impact of capital subsidies*

C. Paccagnella, R. Varriale

*Asset ownership of the elderly across Europe: a multilevel latent class analysis to segment country and households.*

M. T. Santoro, S. Staffieri

*Restructuring and innovations on the survey "capacity of collective tourist accommodation" and their impact on the process quality*

**08 Discrete data**

Chair: C. Rampichini              Room: 0.04

P. A. Ferrari, A. Barbiero

*Generating ordinal data*

P. Giudici, E. Raffinetti

*Gini measure: its decomposition proposal in the discrete case*

**09 Classification methods**

Chair: F. Palumbo                      Room: 0.18

H. Hruschka

*Restricted Boltzmann machines for market basket analysis*

A. Irpino, M. R. Guarracino, R. Verde

*Classification of chunked data using proximal vector machines and singular value decomposition*

N. Louw

*Robust kernel Fisher discriminant analysis with weighted kernels*

**10 Time series and spatial analysis**

Chair: M. Vichi                      Room: 0.07

C. Drago, G. Scepi

*Clustering and forecasting beanplot time series*

M. Mucciardi, P. Bertuccelli

*Local analysis of spatial relationships: a comparison of GWR and OLS method*

L. Spezia

*Classification of spatio-temporal series and hidden Markov models*

## 15:30-16:30 First plenary session

Chair: G. Ritter                      Room: 0.18

M. Weber, S. Röblitz, F. Haack

*Adaptive spectral clustering in molecular simulation*

**16:30-17:00 Coffee break**

**17:00-18:30 Specialized sessions**

### **D Opinion mining and preference analysis**

Chair: R. Decker                      Discussant: P. Giudici                      Room: 0.04

G. Giordano

*On the use of multivariate multiple regression models in the elicitation of consumer preferences*

M. Iannario, D. Piccolo

*A model-based approach for qualitative assessment in opinion mining*

D. Schindler, L. Lüpke

*Preference analysis for durable goods – Some remarks on data consistency and empirical results*

### **E Recent developments in recursive partitioning methods**

Chair: M. Pillati                      Discussant: B. Lausen                      Room: 0.07

H.-H. Bock

*An iterative fuzzy and time-dynamic clustering approach for time series*

C. Conversano

*Evaluating the performance of different sets of classifiers in multiclass learning*

R. Siciliano

*Recursive partitioning of complex data for classification and regression trees*

### **F Statistical signal analysis**

Chair: C. Weihs                      Discussant: R. Verde                      Room: 0.18

M. Eichhoff

*Musical instrument detection based on extended feature analysis*

K. Friedrichs, C. Weihs

*Auralization of auditory models*

E. Romano, A. Irpino

*Spatially constrained curve clustering: a hierarchical approach to signals analysis*

**From 19:30 Welcome at “Palazzo Medici Riccardi”**

## Thursday, September 9, 2010

### 8:30-9:45 Contributed sessions

#### 11 Advances in latent class modelling

Chair: L. Grilli Room: 0.18

F. Bartolucci, F. Pennoni, L. Pieroni

*A latent class version of the inverse probability-to-treatment weighted estimator for dynamic causal effects*

B. Grün, K. Hornik

*Finite mixture modeling of censored longitudinal data*

R. Varriale, J. K. Vermunt

*Determining the number of components in multilevel mixture (factor) models*

#### 12 Clustering and dissimilarities

Chair: G. Soffritti Room: 0.04

L. Cutillo, A. Carissimo, D. di Bernardo

*Optimal length choice in top k ordered lists aggregation*

B. Fichet

*Recognition of ultrametrics and tree-metrics in optimal time*

I. Morlini, S. Zani

*A dissimilarity measure between two hierarchical clusterings*

#### 13 Customer satisfaction and conjoint analysis

Chair: L. Fabbri Room: 0.05

G. Boari, G. Cantaluppi

*Unveiling non-linear relationships between perceived satisfaction and quality*

A. De Luca

*Ordinal logistic regression for the estimate of the response functions in the conjoint analysis*

P. Kurz, A. Sikorski

*Individual self balancing conjoint (ISBC): an adaptive design technique for choice based conjoint*

#### 14 Recent trends in classification

Chair: A. Hardy Room: 0.07

A. Balzanella, R. Verde, Y. Lechevallier

*Clustering highly evolving data streams*

G. Cabanes, Y. Bennani

*Extending SOM with efficient estimation of the number of clusters*

D. C. Porumbel, J. K. Hao, P. Kuntz

*A classification approach for structure discovery in search spaces of combinatorial optimization problems*

**15 Regression and factor analysis**

Chair: R. Siciliano      Room: 0.06

R. Calabrese, S. A. Osmetti

*Generalized extreme value regression in rare events*

J. Ohrvik, G. Schoier

*On the use of bootstrap in factor analysis*

**9:45-10:45 Second plenary session**

Chair: M. Vichi

Room: 0.18

A.-L. Boulesteix

***Critical issues and developments in microarray-based prediction***

**10:45-11:15 Coffee break****11:15-12:45 Specialized sessions****G Classification in systems biology I**

Chair: B. Lausen

Discussant: M. Marchi

Room: 0.18

A. Benner

*Penalized likelihood approaches for high-dimensional model selection*

E. Dreassi

*A shared components model to detect uncommon risk factors in disease mapping*

M. Metodiev

*Making sense of large-scale proteomics datasets: myths, facts, and challenges associated with the analysis and statistical evaluation of protein ID and abundance data*

**H Data stream mining**

Chair: A. Irpino

Discussant: C. Weihs

Room: 0.04

A. Balzanella, R. Verde

*Clustering highly evolving data streams*

F. Clerot, P. Gouzien

*Information-based data stream summary*

K. Tschumitschew, F. Klawonn

*Tests for change detection based on incremental quantile estimation*

**I Data visualization**

Chair: R. Rocci   Discussant: C. Hennig   Room: 0.07

A. Gribov, A. Unwin

*Visualization of clustering comparisons with confusion matrices in Seurat*

J. Mucha, H.-G. Barte

*Visualisation of cluster analysis results*

L. Scrucca

*Some recent advances on dimension reduction for high-dimensional data*

**12:45-14:15 Lunch****14:15-15:30 Contributed sessions****16 Biomedical applications**

Chair: T. R. Lee   Room: 0.18

D. De March, I. Poli

*Evolutionary neural networks to design synthetic proteins*

M. Ouedraogo, F. Lecerf, S. Lê

*Understanding co-expression of co-located genes using a PCA approach*

I. Rocchetti

*Modeling delay to diagnosis for amiotrophic lateral sclerosis: under reporting and incidence estimates*

**17 Developments in archetypal analysis**

Chair: F. Palumbo   Room: 0.04

S. Corsaro, M. Marino

*Archetypal analysis for interval valued data*

M. R. D'Esposito, F. Palumbo, G. Ragozini

*Archetypal analysis for prototype identification*

M. Eugster, F. Leisch

*New features for archetypal analysis in R*

**18 Model selection**

Chair: H.-H. Bock   Room: 0.07

B. Bertaccini, F. Polverini

*Automatic detection of outliers in linear regression models: the forward search approach*

D. Facchinetti, S. A. Osmetti

*Estimating the gap of the forward search via censored sampling*

R. Savona, M. Vezzoli

*Assessing model accuracy using a two-dimensional loss function*

**19 Proximity data and hierarchies**

Chair: I. Morlini                      Room: 0.06

L. Bocci

*Multi-objective genetic algorithm based clustering for dissimilarity data*

M. Cadoret, S. Lê, J. Pagès

*A new approach for analyzing a set of hierarchies*

A. Geyer-Schulz, M. Ovelgönne

*Extensions of modularity clustering*

**20 Professional profiles**

Chair: L. Grilli                      Room: 0.05

M. Civardi, F. Crippa, V. Bagnardi

*University graduate's job hunting: what helps to get the good one?*

L. Fabbris, G. Boccuzzo

*The detection of criticalities of graduates' jobs through importance-performance analysis*

C. Martini

*Statistical methods to describe professional profiles through competences and activities*

**15:30-16:30 Third plenary session**

Chair: A. Giusti                      Room: 0.18

V. Esposito Vinzi, M. Zargoush

*Knowledge extraction by investigating model uncertainty through predictive path modeling and probabilistic networks*

**16:30-17:00 Coffee break****17:00-18:30 Specialized sessions****J Classification in systems biology II**

Chair: B. Lausen                      Discussant: A. Biggeri                      Room: 0.18

M. Göker

*Phylogenomics as a standard technique for microbial taxonomy*

H. Kestler

*Boolean networks for modeling gene regulation*

F. Stefanini

*Graphical models for eliciting structural information*

**K Social networks and classification**

Chair: M. R. D'Esposito    Discussant: A. Geyer-Schulz    Room: 0.04

U. Brandes, J. Lerner, M. J. Lubbers, C. McCarty, J. Luis Molina, U. Nagel  
*Classification of personal networks using latent roles*

A. Ferligoj

*Developments in blockmodeling*

G. Giordano, M. P. Vitale

*Clustering social actors by using auxiliary information on relational data*

**L Statistical matching: theory and applications to data mining and official statistics**

Chair: N. Torelli    Discussant: V. Esposito Vinzi    Room: 0.07

M. D'Orazio, M. Di Zio, M. Scanu

*Matching two different topics: ecological inference and data fusion*

F. Meinfelder, S. Rässler

*Displaying uncertainty in data fusion by imputation*

P. Van der Putten

*Data fusion for direct marketing*

**From 20:00 Gala dinner at “Biblioteca delle Oblate”**

## Friday, September 10, 2010

### 8:30-9:45 Contributed sessions

#### 21 Correspondence analysis and related methods I

Chair: J. Blasius      Room: 0.04

A. Iodice D'Enza, F. Palumbo

*Adaptive factorial clustering for binary data*

M. Greenacre

*Measuring subcompositional incoherence in contingency tables and compositional data*

A. Langovaya, H. Chouikha, S. Kuhnt

*Correspondence analysis in the case of outliers*

#### 22 Estimation problems

Chair: A. Mattei      Room: 0.05

G. Mellace, R. Rocci

*Principal stratification in sample selection problems with non normal error terms*

M. Montinaro, I. Sciascia

*Some considerations on two-stage calibration estimators*

N. Solaro

*Automatic strategies of analysis for handling structurally missing occasions*

#### 23 Issues in classification and clustering

Chair: D. Vicari      Room: 0.18

J. Dias

*Model-based clustering of multistate data with latent change. An application with DHS data*

J. Heikkonen, D. Perrotta, M. Riani, F. Torti

*Issues on clustering and data gridding*

C. Hennig

*How to find the best clustering method for social stratification with mixed type variables*

#### 24 Multivariate analysis for relational data

Chair: G. Giordano      Room: 0.07

V. Batagelj

*Cluster analysis of multivariate relational data*

D. De Stefano, G. Ragozini

*Multiple correspondence analysis for relational data*

J. Lerner

*Analysis of multivariate event networks*

**25 Rankings and preferences**

Chair: D. Piccolo      Room: 0.06

B. Arpino, R. Varriale

*A Monte-Carlo study to evaluate value-added models for institutions' rankings*

P. Cerchiello, P. Giudici

*Ordinal models to assess media reputation*

L. Deldossi, R. Paroli

*Inference on the CUB model: a MCMC approach*

**9:45-10:45 Fourth plenary session**

Chair: C. Hennig

Room: 0.18

R. Rocci

***Mixing mixtures of Gaussians***

**10:45-11:15 Coffee Break****11:15-12:30 Contributed Sessions****26 Correspondence analysis and related methods II**

Chair: M. Greenacre      Room: 0.04

S. Balbi, M. Misuraca, E. Zavarrone

*Comparing mental maps: Obama vs. McCain*

J. Blasius

*Assessing the response quality in ordered categorical data*

S. Camiz, G. Coelho Gomes

*Joint correspondence analysis vs. multiple correspondence analysis: a solution to an undetected problem*

**27 Methodology and applications of latent class and mixture models**

Chair: C. Rampichini      Room: 0.18

R. Arboretti Giancristofaro, S. Bonnini, E. Grossule, S. Ragazzi, L. Salmaso  
*Statistical cognitive survey on Passito wine in Veneto region (Italy) from the consumer's point of view*

S. Bianconcini, S. Cagnone, P. Monari

*Covariate effects in multivariate latent growth models for the analysis of undergraduated student performances*

M. Matteucci, S. Mignani, B. P. Veldkamp

*On using item features to estimate parameters in IRT models*

**28 Markov and graphical modelling**

Chair: A. Gottard                      Room: 0.07

M. Costa, L. De Angelis

*Model selection in latent Markov models: a simulation study*

S. Pandolfi, F. Bartolucci, A. Farcomeni

*Bayesian analysis of longitudinal categorical data via latent Markov models*

E. Stanghellini, B. Vantaggi

*On the identification of discrete graphical models with hidden nodes*

**29 Variable structures**

Chair: F. Palumbo                      Room: 0.05

C. Davino, R. Romano

*Sensitivity analysis of composite indicators through mixed model anova*

K. Sahmer

*A model for the clustering of variables taking into account external data*

**30 Risk analysis**

Chair: D. Perrotta                      Room: 0.06

S. Facchinetti, P. Giudici, S. A. Osmetti

*The distribution of the stochastic dominance index for risk measurement*

S. Figini, P. Giudici, P. Uberti

*Concentration measures for risk analysis*

S. Figini, L. Grossi

*Robust estimation and prediction for credit risk models*

**31 Miscellanea**

Chair: A. Giommi                      Room: 0.15

F. Benassi, C. Bocci, A. Petrucci

*Spatial clustering for local analysis*

T. R. Lee, D. G. Jeon, E. Diday

*Symbolic tree for prognosis of localized osteosarcoma patient*

**12:30-13:00 Closing ceremony**

Room: 0.18

G. Ritter and A. Giusti (Co-Chairs of the S.P.C.), A. Giommi (Chair of L.O.C.)