



JOINT MEETING  
of the **International Biometric Society (IBS)**  
Austro-Swiss and Italian Regions  
**15-19 June 2015**

[www.ibs-roes.org/iroes-2015/](http://www.ibs-roes.org/iroes-2015/)



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15 June – Monday

TIME TABLE

	U7-LAB732	U7-LAB714	U7-LAB712
09:00-13:00	<b>Course 1:</b> Temporal and spatio-temporal modelling and monitoring of infectious diseases	<b>Course 2:</b> Analyzing latent times and competing risks in survival data	
<b>Lunch</b>			
14:00 – 17:30	<b>Course 1:</b> Temporal and spatio-temporal modelling and monitoring of infectious diseases	<b>Course 2:</b> Analyzing latent times and competing risks in survival data	<b>Course 3:</b> RNA-Seq: From analysis workflows to high-dimensional modeling

16 June – Tuesday

	Aula Martini	U6-A10	U6-A11
09:00-09:30	<b>Welcome Session</b>		
09:30-11:00	<b>Invited session</b> Does Size really not matter? Evaluation of Treatment Effects in Subgroups and other small Populations	<b>Invited session</b> Recent Advances in Health Impact Evaluation	
<b>Coffee break</b>			
11:30- 12:50	<b>Contributed</b> Flexible and Adaptive Designs	<b>Contributed</b> Methods in Epidemiology	<b>Contributed</b> Methods and Applications in Genetics/Omics (1)
<b>Lunch</b>			
14:00 - 15:30	<b>Invited session</b> Statistical Methods for Omics Data Integration	<b>Invited session</b> Innovative Study Designs and Analysis Issues in Epidemiology	
<b>Coffee break</b>			
16:00 - 17:20	<b>Contributed</b> Survival Analysis (1)	<b>Contributed</b> Regression	<b>Contributed</b> Clinical Trials
18:00	<b>Poster Reception</b>		

# 17 June – Wednesday

	Aula Martini	U6-A10	U6-A10
09:00-10:30	<b>Invited session</b> Recent Advances in ROC Methodology (Invited Session of the Italian-Spanish-ERM Regions)	<b>Invited session</b> Evidence Synthesis and the Use of co-data (CEN Invited Session)	
<b>Coffee break</b>			
11:00- 12:00	<b>Contributed</b> Methods and Applications in Genetics/Omics (2)	<b>Contributed</b> Analysis of Registries and Administrative Databases	<b>Contributed</b> Statistical Methods in Infectious Disease
<b>Lunch</b>			
12:15	Italian Regional Meeting	ROeS Regional Meeting	
<b>SOCIAL ACTIVITIES</b>			

# 18 June - Thursday

	Aula Martini	U6-A10	U6-A10
09:30-11:00	<b>Invited session</b> Recent Developments to tackle time-dependent Covariates in Clinical Research	<b>Invited session</b> Robust Methods in Biostatistics	
<b>Coffee break</b>			
11:30- 12:50	<b>Contributed</b> Survival Analysis (2)	Young Statistician Session	<b>Contributed</b> Other Topics
<b>Lunch</b>			
14:00 - 15:30	<b>Invited session</b> Adaptive Clinical Trials with Subpopulation Selection	<b>Invited session</b> Statistical Methods in Environmental Sciences, Agriculture and Forestry	
<b>Coffee break</b>			
16:00 - 17:00	<b>Contributed</b> Missing Data Analysis	<b>Contributed</b> Studies in Veterinary, Agricultural and Environmental Research	<b>Contributed</b> Diagnostic Studies and Meta-Analysis
19:30	<b>SOCIAL DINNER</b>		

Sala Napoleonica	
09:30-12:30	<b>Invited Session</b>
<b>Lunch</b>	
14:00 – 16:30	<b>Round Table</b>

# **INTERNATIONAL PROGRAMME COMMITTEE**

## **Scientific Program Committee**

Held Leonhard (University of Zurich) Co-chair  
Valsecchi Maria Grazia (University of Milano-Bicocca) Co-chair  
Ambrogi Federico (University of Milan)  
Baccini Michela (University of Florence)  
Berghold Andrea (Medical University of Graz)  
Bretz Frank (Novartis)  
Castrignanò Annamaria (Agricultural Research Council Research, Bari)  
Farcomeni Alessio (University of Rome)  
Finos Livio (University of Padua)  
Hothorn Torsten (University of Zurich)  
Posch Martin (Medical University of Vienna)  
Schemper Michael (Medical University of Vienna)

## **Local Organizing Committee**

Galimberti Stefania (University of Milano-Bicocca) Chair  
Antolini Laura (University of Milano-Bicocca)  
Biganzoli Elia (University of Milan)  
Bonetti Marco (Bocconi University)  
Di Serio Clelia (VS San Raffaele University)  
Rebora Paola (University of Milano-Bicocca)  
Solari Aldo (University of Milano-Bicocca)  
Miglio Rossella (University of Bologna, Treasurer IBS-ITR)  
Hsu Shu-Fang (University of Bern, Treasurer IBS-ASR)

## **Satellite Meeting Program Committee**

Decarli Adriano (University of Milan) Chair  
Ulmer Hanno (Medical University of Innsbruck) Co-Chair  
Edefonti Valeria (University of Milan)  
Ferraroni Monica (University of Milan)  
Krogh Vittorio (Fond. IRCCS - Istituto Nazionale dei Tumori, Milano)

## GENERAL INFORMATION

### VENUE

#### Pre-conference courses (15 June)

Università degli Studi Milano-Bicocca  
Via Bicocca degli Arcimboldi 8 - Milano  
**U7 Building**

#### IROeS Joint Meeting (16-18 June)

Università degli Studi Milano-Bicocca  
Piazza Ateneo Nuovo 1 - Milano  
**U6 Building**

#### Satellite Meeting (19 June)

Università degli Studi di Milano  
Via Sant'Antonio 12 - Milano  
**Sala Napoleonica**

### Name Badges

All participants and accompanying persons must wear the Conference identification badge in a visible place.

### Registration Desk

#### Location:

MONDAY	15 June	8:15-9:30:	U7 Building, first floor, AULA LAB714
		9:30-1600:	U6 building, Floor -1, in front of AULA MARTINI
TUESDAY	16 June	8:15-16:00:	U6 building, Floor -1, in front of AULA MARTINI
WEDNESDAY	17 June	8:15-14:00:	U6 building, Floor -1, in front of AULA MARTINI
THURSDAY	18 June	8:15-16:00:	U6 building, Floor -1, in front of AULA MARTINI
FRIDAY	19 June	8:15-16:00:	Sala Napoleonica, via S. Antonio 12, Milano

### Lunch and Coffee Break:

Lunch buffet and Coffee Break will be available in the hall in front of AULA MARTINI, U6 building, Floor -1.

### Wireless Connection:

Free wireless connection will be provided in all University buildings.

For those who don't have an EDUROAM certificate, a guest account will be provided upon request.



## JOINT MEETING

of the International Biometric Society (IBS)  
Austro-Swiss and Italian Regions

15 JUNE

### PROGRAMME

#### 15 JUNE – MONDAY

##### U7 Building

Universita' Milano-Bicocca – Via Bicocca degli Arcimboldi 8, Milano

##### AULA LAB732 (Third Floor)

9:00am - 17:30pm

##### **Temporal and spatio-temporal modelling and monitoring of infectious diseases**

**Michael Höhle**, Department of Mathematics, Stockholm University, Sweden;

**Sebastian Meyer**, Epidemiology, Biostatistics and Prevention Institute, University of Zurich, Switzerland;

##### AULA LAB714 (Ground Floor)

9:00am - 17:30pm

##### **Analyzing latent times and competing risks in survival data**

**Laura Antolini, Paola Rebora, Maria Grazia Valsecchi**, Department of Health Science, University of Milano-Bicocca, Italy;

##### AULA LAB712 (Ground Floor)

14:00pm - 17:30pm

##### **RNA-Seq: From analysis workflows to high-dimensional modeling**

**Harald Binder**, IMBEI, Mainz University, Germany;



## 16 JUNE – TUESDAY

## AULA Martini (Floor -1)

9:00am - 9:30am

**Welcome Session**Chair: **Leonhard Held**, University of Zurich, Switzerland;Chair: **Maria Grazia Valsecchi**, University of Milano-Bicocca. Italy;

Welcome from the Dean of the University Milano-Bicocca, Prof.ssa Maria Cristina Messa, Italy;

## AULA Martini (Floor -1)

9:30am - 11:00am

**Invited Session: Does Size Really not Matter? Evaluation of Treatment Effects in Subgroups and Other Small Populations**Chair: **Martin Posch**, Medical University of Vienna, Austria;Discussant: **Willi Maurer**, Novartis Pharma AG, Switzerland;**Identifying subgroups of treatment responders: A meta-analytic approach**

Tim Friede, University Medical Center Göttingen, Germany;

**Depersonalising medicine**

Stephen Senn, Luxembourg Institute of Health, Luxembourg;

**Exploratory subgroup analyses in confirmatory trials**

Gerd Rosenkranz, Novartis Pharma AG, Switzerland;

## AULA U6-10 (Ground Floor)

9:30am - 11:00am

**Invited Session: Recent Advances in Health Impact Evaluation**Chair: **Annibale Biggeri**, University of Florence, Italy;Discussant: **Fabrizia Mealli**, University of Florence, Italy;**Short term impact of PM10 exposure on mortality: A propensity score approach**

Alessandra Mattei, University of Florence, Italy;

**A potential outcomes approach to documenting the public health impact of the introduction of PCV13 for the prevention of invasive pneumococcal disease**

Elizabeth Zell, Stat-Epi Associates, Inc, United States of America;

**Managing different sources of uncertainty in long-term impact of heat on population health: the case of the city of Skopje**

Michela Baccini, University of Florence, Italy;

## AULA Martini (Floor -1)

11:30am - 12:50pm

**Contributed: Flexible and Adaptive Designs**Chair: **Stephen Senn**, Luxembourg Institute of Health, Luxembourg Institute of Health, Luxembourg;**Evaluation of possible designs for a three-arm clinical trial: Comparing a closed-testing design to potential alternatives**

Kaspar Rufibach, F. Hoffmann-La Roche AG, Switzerland;

**Estimation after blinded sample size reassessment**

Florian Klinglmueller, Medical University of Vienna, Austria;  
**An intensive care unit trial on melatonin reinterpreted according to an urn model**

Maria Giovanna Scarale, Università degli Studi di Milano, Italy;

#### AULA U6-10 (Ground Floor)

11:30am - 12:50pm

**Contributed: Methods in Epidemiology**

Chair: **Adriano Decarli**, Università degli Studi di Milano, Italy;

**Dichotomizing biomarkers for failure time outcome: from classification probabilities to predictive values based methods**

Matteo Rota, Istituto di Ricerche Farmacologiche Mario Negri, Italy;

**Combining individual and aggregated data to investigate the role of socio-economic disparities on cancer burden in Italy**

Maura Mezzetti, Università "Tor Vergata", Italy;

**A different class-assignment rule to build classification trees for ordinal outcomes**

Matteo Di Maso, Università degli Studi di Milano, Italy;

#### AULA U6-11 (Ground Floor)

11:30am - 12:50pm

**Contributed: Methods and Applications in Genetics/Omics (1)**

Chair: **Livio Finos**, Università di Padova, Italy;

**Different notions of false discovery rate under the logic regression model**

Magdalena Zebrowska, Medical University of Vienna, Austria;

**Statistics for nucleomics**

Volker J. Schmid, Ludwig-Maximilians-Universität München, Germany;

**Combinatorial mixtures of multiparameter distributions: an application to microarray data**

Valeria Edefonti, Università degli Studi di Milano, Italy;

**Identification of patient subgroups in high-throughput omics data**

Maike Ahrens, Ruhr-University Bochum, Germany;

#### AULA Martini (Floor -1)

2:00pm - 3:30pm

**Invited Session: Statistical Methods for Omics Data Integration**

Chair: **Clelia Di Serio**, Vita-Salute San Raffaele University, Italy;

Chair: **Michael G. Schimek**, Medical University of Graz, Austria;

Discussant: **Giuseppe Jurman**, Fondazione Bruno Kessler, MPBA Italy;

**Integrative genomics: a rapid overview and some new approaches**

Arnoldo Frigessi, University of Oslo / Oslo University Hospital, Norway;

**Ridge estimation of Gaussian graphical models from high-dimensional data**

Wessel N. van Wieringen, VU University Medical Center, Netherlands, The;

**Statistical inference, stochastic aggregation, and visualization of multiple omics ranked lists**

Michael G. Schimek, Medical University of Graz, Austria;

## AULA U6-10 (Ground Floor)

2:00pm - 3:30pm

### **Innovative Study Designs and Analysis Issues in Epidemiology**

Chair: **Maria Grazia Valsecchi**, University of Milano-Bicocca, Italy;

Discussant: **Antonella Zambon**, University of Milano-Bicocca, Italy;

#### **Advanced nested case-control and case-cohort approaches in hospital epidemiology**

Martin Wolkewitz, University of Freiburg, Germany;

#### **Extensions to the analysis and interpretation of nested case-control data**

Marie Reilly, Karolinska Institutet, Sweden;

#### **Two-phase cohort designs with survival outcome: estimation of incidence in the presence of competing risks**

Paola Rebora, University of Milano-Bicocca, Italy;

## AULA Martini (Floor -1)

4:00pm - 5:20pm

### **Contributed: Survival Analysis (1)**

Chair: **Federico Ambrogi**, Università degli Studi di Milano, Italy;

#### **Flexible regression models in survival analysis for dynamic prediction with non-reversible time-varying treatment**

Davide Paolo Bernasconi, University Milano-Bicocca, Italy;

#### **Estimating relapse free survival as a net probability: regression models and graphical representation**

Annalisa Orenti, University of Milan, Italy;

#### **Statistical approaches in mediation analysis: a comparison of methods for survival data**

Josef Fritz, Medical University of Innsbruck, Austria;

#### **A simple to implement algorithm for natural direct and indirect effects in survival studies with a repeatedly measured mediator**

Susanne Strohmaier, University of Oslo, Norway;

## AULA U6-10 (Ground Floor)

4:00pm - 5:20pm

### **Contributed: Regression**

Chair: **Marco Alfo**, Sapienza Università di Roma, Italy;

#### **Approximate conditional percentiles for non-linear mixed effects models with continuous responses**

Aziz Chaouch, University Hospital Lausanne (CHUV), Switzerland;

#### **Variable selection uncertainty in regression models**

Aldo Solari, University of Milano-Bicocca, Italy;

#### **New insights on resampling-based variable selection for multivariable regression in the presence of correlation between covariates**

Riccardo De Bin, Ludwig-Maximilians-Universität of Munich, Germany;

#### **Variable selection with the change-in-estimate criterion: a bluff package?**

Georg Heinze, Medical University of Vienna, Austria;

**AULA U6-11 (Ground Floor)**

4:00pm - 5:20pm

**Contributed: Clinical Trials**

Chair: **Heinz Schmidli**, Novartis, Switzerland;

**Model-based recursive partitioning for subgroup analyses**

Heidi Seibold, University of Zurich, Switzerland;

**Assessment of responsiveness for instruments capturing patient-reported outcomes**

Cornelia Dunger-Baldauf, Novartis Pharma AG, Switzerland;

**A simulation study to compare estimate of event-free rate at a given time and operating characteristics between different frequentist and Bayesian analysis approaches in oncology single-arm phase II clinical trials using a double criteria design**

Shu-Fang Hsu Schmitz, Novartis Pharma AG, Switzerland;

**AULA Martini (Floor -1)**

6:00pm - 7:30pm

**Poster Reception**

## 17 JUNE – WEDNESDAY

## AULA Martini (Floor -1)

9:00am - 10:30am

**Invited Session: Recent Advances in ROC Methodology (Invited Session of the Italian-Spanish-ERM Regions)**Chair: **Laura Antolini**, Università Milano Bicocca, Italy;Chair: **Benjamin Reiser**, University of Haifa, Israel;**Identification of high-order interactions using the likelihood-ratio score optimal ROC curve**

M.Luz Calle, University of Vic - Central University of Catalonia, Spain;

**Categorization of continuous predictors in the development of prediction models by maximization of the AUC**

Irantzu Barrio, Universidad del País Vasco UPV/EHU, Spain;

**Developments in ROC surface analysis**

Christos T Nakas University of Thessaly, Greece;

**Measuring prediction improvement of additional markers: strengths and limitations of the commonly used indexes**

Laura Antolini, Università Milano Bicocca, Italy;

## AULA U6-10 (Ground Floor)

9:00am - 10:30am

**Invited Session: Evidence Synthesis and the Use of Co-Data (CEN Invited Session)**Chair: **Leonhard Held**, University of Zurich, Switzerland;Chair: **Tim Friede**, University Medical Center Göttingen, Germany;**Robust meta-analytic-predictive priors in clinical trials with historical control information**

Heinz Schmidli, Novartis, Switzerland;

**The use of secondary outcomes in meta-analysis**

John Brian Copas, University of Warwick, United Kingdom;

**Meta-analysis of few small studies in small populations and rare diseases**

Christian Röver, University Medical Center Göttingen, Germany;

**Improvements in meta-analysis of diagnostic test accuracy in the absence of a perfect reference test**

Ulrike Held, Horten Centre, University of Zurich, Switzerland;

## AULA Martini (Floor -1)

11:00am - 12:00pm

**Contributed: Methods and Applications in Genetics/Omics (2)**Chair: **Wessel N. van Wieringen**, VU University Medical Center, The Netherlands;**A conditional multivariate score test for RNA-seq data**

Livio Finos, University of Padua, Italy;

**A PLS model for the meet-in-the-middle approach using metabolomics**

Nada Assi, International Agency for Research on Cancer, France;

**Integration of somatic mutation, expression and functional data reveals potential driver genes predictive of breast cancer survival**

Stefano Calza, Università di Brescia, Italy;

## AULA U6-10 (Ground Floor)

11:00am - 12:00pm

**Contributed: Analysis of Registries and Administrative Databases**Chair: **Michela Baccini**, University of Florence, Italy;**Combining information from multiple routine data collections to estimate the prevalence of chronic kidney disease among diabetic patients in Austria**

Angelika Geroldinger, Medical University of Vienna, Austria;

**Model-based recursive partitioning applied to the Emilia-Romagna Region Hospital Discharge data.**

Federico Banchelli, University of Bologna, Italy;

**Challenges when analyzing large registry based data - Results from the IBSEN (Inflammatory Bowel South-Eastern Norway) study.**

Milada Cvanarova Småstuen, University of Oslo, Norway;

## AULA U6-11 (Ground Floor)

11:00am - 12:00pm

**Contributed: Statistical Methods in Infectious Disease**Chair: **Arnoldo Frigessi**, University of Oslo / Oslo University Hospital, Norway;**Deterministic modelling of infectious diseases: monitoring H1N1 virus in UK**

Alice Corbella, MRC Biostatistics Unit, Cambridge, UK;

**Can mathematical models help to improve sample size calculations for infectious disease trials?**

Sereina A. Herzog, Institute for Medical Informatics, Statistics and Documentation, Medical University of Graz, Austria;

**Estimating age specific HIV incidence using back-calculation**

Francesco Brizzi, MRC Biostatistics Unit, Cambridge, United Kingdom;

## AULA Martini (Floor -1)

12:15pm - 1:30pm

**Italian meeting: General Assembly of IBS Italy**Chair: **Maria Grazia Valsecchi**, University of Milano-Bicocca, Italy;

## AULA U6-10 (Ground Floor)

12:15pm - 1:30pm

**ROeS General Assembly**Chair: **Leonhard Held**, University of Zurich, Switzerland;

## 18 JUNE – THURSDAY

## AULA Martini (Floor -1)

9:30am - 11:00am

**Invited Session: Recent Developments to Tackle Time-Dependent Covariates in Clinical Research**Chair: **Martina Mittlboeck**, Medical University of Vienna, Austria;Discussant: **Per Kragh Anderson**, University of Copenhagen, Denmark;**Multiple time scale models for the evaluation of time-dependent treatments**

Paola Rebora, University of Milano-Bicocca, Italy;

**Baseline covariate adjustment for generalised pseudo-values when the effect of a time dependent intervention is assessed**

Ulrike Pötschger, Children's Cancer Research Institute, Vienna, Austria;

**Predicting optimal chemotherapy dosages for breast cancer via multi-state regression models with time-dependent covariates**

Giuliana Cortese, University of Padua, Italy;

## AULA U6-10 (Ground Floor)

9:30am - 11:00am

**Invited Session: Robust Methods in Biostatistics**Chair: **Alessio Farcomeni**, Università Sapienza di Roma, Italy;Discussant: **Marco Alfò**, Università Sapienza di Roma, Italy;**A tutorial on the weighted likelihood methodology**

Luca Greco, University of Sannio - Benevento, Italy;

**Monitoring robust regression**

Domenico Perrotta, European Commission, Joint Research Centre, Italy;

**A joint application of trimming and constraints for robustifying the estimation of mixtures of factor analyzers**

Agustin Mayo-Iscar, Universidad de Valladolid, Spain;

## AULA Martini (Floor -1)

11:30am - 12:50pm

**Contributed: Survival Analysis (2)**Chair: **Michael Schemper**, Medizinische Universität Wien, Austria;**Competing risks regression with high dimensional covariates**

Federico Ambrogi, Università degli Studi di Milano, Italy;

**Modelling quantiles of survival in register-based epidemiological studies**

Chiara Chiavenna Karolinska Institutet, Sweden;

**Regularized estimation of survival regression models through Bayesian P-splines**

Giuseppe Marano, Istituto Nazionale dei Tumori di Milano, Italy;

## AULA U6-10 (Ground Floor)

11:30am - 12:50pm

**Young Statistician Session**Chair: **Andrea Berghold**, Medical University of Graz, Austria;**Sparse Bayesian modeling of underreported count data**

Michaela Dvorzak, JOANNEUM Research, Austria;

**Some quantile-based proposals for detecting differential expression in genomic studies**

Lorenzo Maragoni, University of Padua, Italy;

**Properties of the log-rank type test for the comparison of net survival curves**

Klemen Pavlič, University of Ljubljana, Slovenia;

**Combining social contact data with spatio-temporal models for infectious diseases**

Sebastian Meyer, University of Zurich, Switzerland;

**Applying a modified Potts model on Hungarian healthcare data**

Miklós Tivadar Mályusz, ELTE, Hungary;

## AULA U6-11 (Ground Floor)

11:30am - 12:50pm

Contributed: Other Topics

Chair: **Tim Friede**, University Medical Center Göttingen, Germany;**On the probability for a research finding to be true when the null hypothesis is impossible**

Valentin Rousson, University Hospital Lausanne, Switzerland;

**Evidence, eminence and extrapolation - adjusted levels of evidence in small populations**

Gerald Hlavin, Medical University of Vienna, Austria;

**Parametric and nonparametric approaches for multimodal emotions recognition**

Chiara Brombin, University Vita-Salute S. Raffaele, Italy;

**Including H, K and J transformations into the Box-Cox formula: an application to the distribution of serum immunoreactive trypsinogen levels in the neonatal screening for cystic fibrosis.**

Elena Spada, University of Milan, Italy;

**The effects of chronic diseases on physical and mental well-being: a multilevel quantile regression analysis.**

Giulia Cavrini, Free University of Bolzano, Italy;

## AULA Martini (Floor -1)

2:00pm - 3:30pm

**Invited Session: Adaptive Clinical Trials with Subpopulation Selection**Chair: **Dominik Heinzmann**, Roche, Switzerland;Chair: **Kaspar Rufibach**, F. Hoffmann-La Roche AG, Switzerland;**Problems and solutions for adaptive enrichment designs**

Gernot Wassmer, University of Cologne, Germany;

**Optimal subgroup selection rules for a targeted therapy in oncology**

Johannes Krisam, University of Heidelberg, Germany;

**Comparison of clinical development plans for a confirmatory trial with subpopulation selection**

Kaspar Rufibach, F. Hoffmann-La Roche AG, Switzerland;



## AULA U6-10 (Ground Floor)

2:00pm - 3:30pm

**Invited Session: Statistical Methods in Environmental Sciences, Agriculture and Forestry**Chair: **Karl Moder**, University of Natural Resources and Life Sciences, Austria;Chair: **Annamaria Castrignanò**, Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia agraria, Italy;**Statistics in plant breeding - From field trials to genomic selection**

Heinrich Grausgruber, University of Natural Resources and Life Sciences, Vienna, Austria;

**Seeing the trees despite the forest**

Arne Nothdurft, University of Natural Resources and Life Sciences, Vienna, Austria;

**Application of geophysical methods in agriculture: a protocol of measurement and data analysis for estimating soil water content**

Daniela De Benedetto, Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia agraria, Italy;

**Estimation of soil and crop variables using linear mixed models and remote sensing data in the context of precision agriculture**

Fabio Castaldi, UNITUS, Italy;

## AULA Martini (Floor -1)

4:00pm - 5:00pm

**Contributed: Missing Data Analysis**Chair: **Valentin Rousson**, University Hospital Lausanne, Switzerland;**Mixture models for multiple imputation of missing data in longitudinal settings**

Paolo Eusebi, Department of Medicine, University of Perugia, Italy;

**Improving data imputation in survival tree analysis using Bayesian networks**

Paola M.V. Rancoita, Vita-Salute San Raffaele University, Italy;

## AULA U6-10 (Ground Floor)

4:00pm - 5:00pm

**Contributed: Studies in Veterinary, Agricultural and Environmental Research**Chair: **Arne Nothdurft**, University of Natural Resources and Life Sciences, Vienna;**On the design of closed recapture experiments**

Danilo Alunni Fegatelli, Sapienza - University of Rome, Italy;

**Influence of the calibration set size on the prediction of soil organic carbon through Vis-NIR spectroscopy**

Federica Lucà, CNR - ISAFOM, Rende, Italy;

**Comparison between generalized linear models and additive bayesian networks. Analysing risk factors for leptospira incidence in meat workers in New Zealand.**

Marta Pittavino, University of Zurich, Switzerland;

## AULA U6-11 (Ground Floor)

4:00pm - 5:00pm

**Contributed: Diagnostic Studies and Meta-Analysis**Chair: **John Brian Copas**, University of Warwick, UK;**A flexible statistical-bioinformatic strategy for the development of a volatile classifier discriminating the exhaled breath of breast cancer patients and healthy volunteers.**

Elena Landoni, University of Milan, Italy;

**ROC analysis developments in a multistate diagnostic setting: a new threshold estimation method**

Giuseppe Rossi, CNR, Pisa, Italy;

**Small-sample bias of limits of agreement in method comparison meta-analyses**

Michael Vock, University of Bern, Switzerland;

## 19 JUNE – FRIDAY

## Statistical Methods in Nutritional Epidemiology – Satellite Meeting

University of Milan, Sala Napoleonica, Via S. Antonio, 12, Milano

Chairs: <b>Adriano Decarli</b> and <b>Carlo La Vecchia</b> , Dept. of Clinical Sciences and Community Health, UNIMI	
09:30	<b>The VIDAL Trial: a cluster randomised comparison of open v. placebo-controlled allocation of high-dose vitamin D in healthy adults.</b> Julian Peto, Department of Non-Communicable Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, UK.
09:55	<b>Are complex models in nutritional epidemiology always worth the trouble?</b> Pietro B. Ferrari, Nutrition and Metabolism Section, IARC, Lyon, France.
10:20	<b>More than just hazard ratios: using flexible parametric survival models to comprehensively investigate associations in prospective cohort studies.</b> David C. Muller, Genetic Epidemiology Group, IARC, Lyon, France.
10:45	<b>The effect of diet on human milk composition – is it relevant for public health?</b> Frank Wiens, Nutricia Research, Utrecht, Netherlands.
11:10	<b>Statistical methods to assess the association between food intake and childhood obesity.</b> Iris Pigeot-Kübler, Leibniz-Institut für Präventionsforschung und Epidemiologie, Bremen, Germany.
11:35	<b>Nutritional epidemiology of cancer in case-control studies: from dietary assessment to a metagenomics approach.</b> Marta Rossi, DISCCO, UNIMI, Italy.
12:00	<b>The hygiene hypothesis revisited: Role of Microbiota and Mycobiota in Immune regulation.</b> Duccio Cavalieri, Mach Foundation, S.Michele all' Adige, Italy.

12:30	<b>Lunch Break</b>
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14:00	<p><b>Round Table</b></p> <p><i>In an integrated picture of different points of view, the speakers will bring to the attention of the participants their ideas on the available evidence on healthy dietary habits and on the open issues that researchers need to address for a deeper understanding of the relationship between foods, nutrients and health.</i></p> <p>Chairs: <b>Franco Berrino</b>, IRCCS-INT Foundation, Milan, Italy and <b>Hanno Ulmer</b>, Department of Medical Statistics, Informatics and Health Economics, Innsbruck Medical University.</p> <p>Speakers:</p> <ul style="list-style-type: none"> <li>• Wolfgang Ahrens, Leibniz-Institut für Präventionsforschung und Epidemiologie,</li> </ul>
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Bremen, Germany.

- Pietro B. Ferrari, Nutrition and Metabolism Section, IARC, Lyon, France.
- Vittorio Krogh, Fondazione IRCCS- Istituto Nazionale dei Tumori, Milan, Italy.
- Julian Peto, Department of Non-Communicable Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, UK.
- Iris Pigeot-Kübler, Leibniz-Institut für Präventionsforschung und Epidemiologie, Bremen, Germany.
- Michael Themessl-Huber, Section for Medical Statistics, Medical University of Vienna, Austria.

## POSTER LIST

**1 Raw data maximum likelihood estimation for principal component analysis and two types of common principal component model: A state space approach**

Fei Gu<sup>1</sup>, Yiu-Fai Yung<sup>2</sup>

<sup>1</sup>McGill University, Canada; <sup>2</sup>SAS Institute Inc., USA;

**2 The attractiveness of network meta-analysis**

Teresa Greco<sup>1,2</sup>

<sup>1</sup>Department of Anesthesia and Intensive Care, IRCCS San Raffaele Scientific Institute, Milan, Italy;  
<sup>2</sup>Laboratorio di Statistica Medica, Biometria ed Epidemiologia "G. A. Maccacaro", Dipartimento di Scienze Cliniche e di Comunità, University of Milan, Milan, Italy;

**3 Effect of one-patient clusters on power in cluster-randomized trials**

Stefanie Hayoz, Dirk Klingbiel

Swiss Group for Clinical Cancer Research (SAKK) Coordinating Center, Statistics Unit, Bern, Switzerland;

**4 Reproducibility probability estimation for common nonparametric testing**

Daniele De Martini, Lucio De Capitani

Università di Milano-Bicocca, Italy;

**5 The evaluation of the Austrian's Disease Management Program in patients with diabetes mellitus type 2 - An application of propensity score matching**

Regina Riedl, Andrea Berghold

Institute for Medical Informatics, Statistics and Documentation, Medical University of Graz, Austria;

**6 The use of a generalized measure of imbalance to allow the use of the big stick randomization procedure for more than two treatment groups and unequal allocation rates: a simulation study**

Petra Ofner-Kopeinig, Maximilian Errath, Andrea Berghold

University of Graz, Austria;

**7 Confidence intervals for fractional polynomials**

Daniela Dunkler, Mariella Gregorich, Georg Heinze

Medical University of Vienna, Austria;

**8 The evaluation of the activities and decisions in health systems: a new methodological approach**

Valentina Rosato<sup>1</sup>, Anita Andreano<sup>2</sup>, Antonio Russo<sup>3</sup>, Adriano Decarli<sup>1,4</sup>

<sup>1</sup>Department of Clinical Sciences and Community Health, University of Milan; Milan, Italy; <sup>2</sup>Center of Biostatistics for Clinical Epidemiology, Department of Health Sciences, University of Milan-Bicocca; Monza, Italy; <sup>3</sup>Epidemiology Department, Local Health Authority; Milan, Italy; <sup>4</sup>Unity of Medical Statistics, Biometry and Bioinformatics, Fondazione IRCCS Istituto Nazionale Tumori; Milan, Italy;

- 9 Bivariate model with non parametric random effects for diagnostic meta-analyses**  
Paolo Eusebi<sup>1,2</sup>  
1Department of Medicine, University of Perugia, Italy; 2Department of Epidemiology, Regional Health Authority of Umbria, Perugia, Italy;
- 10 Spatial mixed effect models to investigate relationships between trees and soil in an alluvial plain**  
Chiara Ferré<sup>1</sup>, Annamaria Castrignanò<sup>2</sup>, Roberto Comolli<sup>1</sup>  
1Milano Bicocca University, Italy; 2CRA-SCA Consiglio per la Ricerca e la Sperimentazione in Agricoltura, Italy;
- 11 Discrimination of alluvial fan depositional processes through a statistical approach (Calabria, S. Italy)**  
Federica Lucà<sup>1</sup>, Gaetano Robustelli<sup>2</sup>  
1CNR - Institute for Agricultural and Forest Systems in the Mediterranean (ISAFOM), Rende (Cosenza), Italy; 2Department of Biology, Ecology and Earth Sciences (DIBEST), University of Calabria, Rende (Cosenza), Italy;
- 12 Flexible behavioral capture-recapture modelling**  
Danilo Alunni Fegatelli, Luca Tardella  
Sapienza – University of Rome, Italy;
- 13 Confidence intervals for a partially identified parameter with bounds estimated by the minimum and the maximum of two correlated and normally distributed statistics**  
Aleksandar Pramov, Marco Bonetti  
Università Commerciale Luigi Bocconi, Italy;
- 14 A weighted form of the estimator for the cause-specific cumulative incidence function can be computationally more efficient using R**  
Alessandro Gasparini  
Università degli Studi di Milano-Bicocca, Italy;
- 15 Use of mixed effect models to investigate the relationships of hyperspectral and fluorescence data with plant variables**  
Anna Maria Stellacci<sup>1</sup>, Matteo Stelluti<sup>1</sup>, Pasquale Losciale<sup>1</sup>, Roberta Rossi<sup>1</sup>, Daniela De Benedetto<sup>1</sup>, Luigi Tarricone<sup>2</sup>, Laura D'Andrea<sup>1</sup>, Matteo Tomaiuolo<sup>1</sup>, Pasquale Campi<sup>1</sup>, Luisa Giglio<sup>1</sup>, Francesco Fornaro<sup>1</sup>, Carolina Vitti<sup>1</sup>, Vittorio Vonella<sup>1</sup>, Annamaria Castrignanò<sup>1</sup>  
1Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia agraria, Research Unit for Cropping System in Dry Environments, CRA-SCA; 2Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia agraria, Research Unit for Viticulture and Enology in Southern Italy, CRA-UTV;
- 16 Aggregating epidemiological evidence through multivariate syndromic surveillance: methodological challenges with a particular focus on animal health data**  
Wei Wei<sup>1</sup>, Flavie Vial<sup>2</sup>, John Berezowski<sup>2</sup>, Leonhard Held<sup>1</sup>

1Epidemiology, Biostatistics and Prevention Institute, University Zurich, Switzerland; <sup>2</sup>Veterinary Public Health Institute, University of Bern, Switzerland;

**17 Characterising the provision of SeHCAT services in the United Kingdom: A multi-centre prospective survey**

Jennifer Ann Summers<sup>1,2</sup>, Bola Coker<sup>2,3</sup>, Viktoria McMillan<sup>2</sup>, Mercy Ofuya<sup>1,2</sup>, Stephen Keevil<sup>2,3</sup>, Cornelius Lewis<sup>2,4</sup>, Janet Peacock<sup>1,2</sup>, Fiona Reid<sup>1,2</sup>

<sup>1</sup>King's College London, United Kingdom; <sup>2</sup>KiTEC (King's Technology Evaluation Centre), London, UK; <sup>3</sup>Guy's & St Thomas' NHS Foundation Trust; <sup>4</sup>King's College Hospital NHS Foundation Trust;

**18 Comparison of design options for phase IB clinical trials in oncology: simulation results.**

Martin Bigler, Stefanie Hayoz, Alexandros Xyrafas, Dirk Klingbiel

Swiss Group for Clinical Cancer Research (SAKK) Coordinating Center, Statistics Unit, Bern, Switzerland;

**19 Research protocol for a multi-centre study to investigate the diagnostic accuracy of the SeHCAT test in measuring bile acid malabsorption**

Fiona Reid<sup>1,2</sup>, Janet Peacock<sup>1,2</sup>, Bola Coker<sup>2,3</sup>, Viktoria McMillan<sup>1,2</sup>, Cornelius Lewis<sup>2,4</sup>, Stephen Keevil<sup>1,2,3</sup>, Roy Sherwood<sup>4</sup>, Gill Vivian<sup>4</sup>, Robert Logan<sup>4</sup>, Jennifer Summers<sup>1,2</sup>

<sup>1</sup>King's College London, United Kingdom; <sup>2</sup>King's Technology Assessment Centre (KiTEC), London, United Kingdom; <sup>3</sup>Guy's & St Thomas' NHS Foundation Trust, London, United Kingdom; <sup>4</sup>King's College Hospital NHS Foundation Trust, London, United Kingdom;

**20 Prevalence and determinants of overweight and obesity in Europe**

Alessandra Lugo<sup>1</sup>, Carlo La Vecchia<sup>1</sup>, Adriano Decarli<sup>1</sup>, Silvano Gallus<sup>2</sup>

<sup>1</sup>Università degli Studi di Milano, Italy; <sup>2</sup>IRCCS - Istituto di Ricerche Farmacologiche Mario Negri;

**21 Influence of different level of haemolysis on microRNAs for the early diagnosis of colorectal cancer**

Chiara Maura Ciniselli<sup>1,2</sup>, Sara Pizzamiglio<sup>1</sup>, Stefano Bottelli<sup>1</sup>, Susanna Zanutto<sup>3,4</sup>, Antonino Belfiore<sup>5</sup>, Manuela Gariboldi<sup>3,4</sup>, Paolo Verderio<sup>1</sup>

<sup>1</sup>Unit of Medical Statistics, Biometry and Bioinformatics, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy; <sup>2</sup>Department of Clinical Science and Community Health, University of Milan, Milan, Italy; <sup>3</sup>Department of Experimental Oncology and Molecular Medicine, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy; <sup>4</sup>Molecular Genetics of Cancer, Fondazione Istituto FIRC di Oncologia Molecolare, Milan, Italy; <sup>5</sup>Department of Pathology, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy;


**22 Assessing reproducibility in the microRNA circulating biomarkers identification workflow**

Stefano Bottelli<sup>1</sup>, Sara Pizzamiglio<sup>1</sup>, Chiara Maura Ciniselli<sup>1,2</sup>, Susanna Zanutto<sup>3,4</sup>, Manuela Gariboldi<sup>3,4</sup>, Paolo Verderio<sup>1</sup>

<sup>1</sup>Unit of Medical Statistics, Biometry and Bioinformatics, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy; <sup>2</sup>Department of Clinical Science and Community Health, University of Milan, Milan, Italy; <sup>3</sup>Department of Experimental Oncology and Molecular Medicine, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy; <sup>4</sup>Molecular Genetics of Cancer, Fondazione Istituto FIRC di Oncologia Molecolare, Milan, Italy;

- 23 Prevalence and trends of different type of alcoholic beverages in Italy**  
Alessandra Lugo<sup>1</sup>, Rosario Ascitto<sup>2</sup>, Carlo La Vecchia<sup>1</sup>, Adriano Decarli<sup>1</sup>, Silvano Gallus<sup>3</sup>  
1Università degli Studi di Milano, Italy; <sup>2</sup>University of Palermo, Italy; <sup>3</sup>IRCCS - Istituto di Ricerche Farmacologiche Mario Negri, Italy;
- 24 MFMM – Modified Fuzzy Mortality Model based on C\*-Banach algebra**  
Andrzej Szymański, Agnieszka Rossa  
University of Lodz, Poland;
- 25 Risk factors for reduced pulmonary function in European cystic fibrosis patients**  
Anna Zolin<sup>1</sup>, Anna Bossi<sup>1</sup>, Kris De Boeck<sup>2</sup>  
1Department of Clinical Sciences and Community Health, Laboratory of Medical Statistics and Biometrics, University of Milan, Italy; <sup>2</sup>Department of Pediatrics, University of Leuven, Belgium;
- 26 Comparison of age-period-cohort models for the analysis of mortality rates**  
Tiziana Rosso<sup>1</sup>, Matteo Malvezzi<sup>1,2</sup>, Adriano Decarli<sup>1</sup>  
1Department of Clinical Sciences and Community Health, Università degli Studi di Milano, Milan, Italy; <sup>2</sup>Department of Epidemiology, IRCCS - Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy;
- 27 Prognostic evaluation in palliative care: testing for improvement in prediction model performance**  
Manuela Giangreco<sup>1</sup>, Giulia Barbati<sup>2,4</sup>, Micol Mazzer<sup>3</sup>, Paola Ermacora<sup>3</sup>, Giuseppe Aprile<sup>3</sup>, Giorgia Gregoraci<sup>1</sup>, Cosimo Stanislao Sacco<sup>3</sup>, Fabio Puglisi<sup>1,3</sup>, Gianpiero Fasola<sup>3</sup>, Miriam Isola<sup>1</sup>  
1Department of Medical and Biological Sciences, University of Udine, Italy; <sup>2</sup>Cardiovascular Department, "Ospedali Riuniti" and University of Trieste, Italy; <sup>3</sup>Department of Oncology, University Hospital 'S Maria della Misericordia', Udine, Italy; <sup>4</sup>Cardiovascular Center, A.S.S.1, Trieste, Italy;
- 28 Impact of maternal nutrition on breast milk composition: a systematic review**  
Francesca Bravi<sup>1</sup>, Alessia Dal Pont<sup>2</sup>, Frank Wiens<sup>3</sup>, Carlo Agostoni<sup>1</sup>, Adriano Decarli<sup>1</sup>, Monica Ferraroni<sup>1</sup>  
1Università degli Studi di Milano, Milan, Italy; <sup>2</sup>Università degli Studi di Milano-Bicocca, Milan, Italy; <sup>3</sup>Nutricia Research, Utrecht, the Netherlands;
- 29 Evaluating prognostic accuracy of multiple longitudinal predictors in a standard time-dependent Cox model framework**  
Giulia Barbati<sup>1</sup>, Marco Merlo<sup>2</sup>, Andrea Di Lenarda<sup>3</sup>, Gianfranco Sinagra<sup>4</sup>  
1University of Trieste, Italy; <sup>2</sup>Cardiovascular Department, "Ospedali Riuniti", Italy; <sup>3</sup>Cardiovascular Center, Health Authority no. 1, Trieste, Italy; <sup>4</sup>Cardiovascular Department, "Ospedali Riuniti" and University of Trieste, Italy;
- 30 Safety analysis for individualized treatment**  
Cornelia Dunger-Baldauf  
Novartis Pharma AG, Switzerland;





31 **A comparison of the logistic regression model and the random coefficients linear mixed model for analysis of disease progression**

Maria Neubauer, Georg Heinze

Medical University of Vienna, Austria;

32 **Chances and challenges of using routine data collections for health care research**

Christine Wallisch, Georg Heinze

Medical University of Vienna, Austria;

## SOCIAL ACTIVITIES INFORMATION

### SOCIAL DINNER

The social dinner will take place on **Thursday 18<sup>th</sup> June at 19:30** at Ristorante Botto. It is walking distance from the conference site in via Ernesto Breda 29, Milan.

### SOCIAL ACTIVITIES

The social activities will take place on **Wednesday 17<sup>th</sup> June**, in the afternoon, after the Italian and ROeS Regional Meetings.

#### **1- Trip to the Basilica of San Pietro al Monte, Civate (LC).**

Individual cost of the trip: 25 € (max). The cost includes the entrance and guide to the Basilica and the bus transfer. The costs could vary depending on the number of participants.

A bus will take the participants from the conference venue to Civate (40 min.). An easy 1 hour mountain walk (suitable shoes and clothing are required) is necessary to reach the Basilica of San Pietro al Monte, where a guide of the "Amici di San Pietro" association will illustrate this beautiful romanian church. Departure will be around 1.30 pm and return to Milan around 7.30 pm.

#### **2 - Visit to the EXPO2015.**

Cost of one ticket for a single day entrance: 21 €. The transfer to EXPO is not included (but there is cheap public transportation).

The EXPO2015 exhibitions and food stalls will be open until 23:00 in the evening.

#### **By underground railway (metro)**

To reach the Exposition Site by underground (metro), purchase an extra-urbano (extra-urban) ticket, and take Linea 1 (Red line 1) to Rho Fiera Milano metro station. Take the Lilla-line 5 Bicocca, then change at Zara and take the yellow-line 3. Change at Centrale and take the Green-2 line to Cadorna.

Exiting the Rho Fiera Milano underground station, which is close to the Fiorenza Ovest - San Carlo access point, visitors take the steps (currently under construction) to the Security Plaza. Once through the security checks, visitors cross the Expo-Fiera pedestrian footbridge (PEF) to reach the Expo Site.

#### **With Trenord, regional and suburban train services**

To reach the Exhibition Site by train simply follow signs to Rho Fiera Milano EXPO 2015 train station. Suburban train lines S11 line from Bicocca railway Station provide direct connections to Rho Fiera Milano EXPO 2015 train station.

For more information, please visit the EXPO Milano 2015 web-site.

#### **3 - Visit to the Last Supper of Leonardo da Vinci.**

There is the possibility to visit the Last Supper of Leonardo da Vinci for a limited number of persons participating to "The Last Supper - Guided Tour".

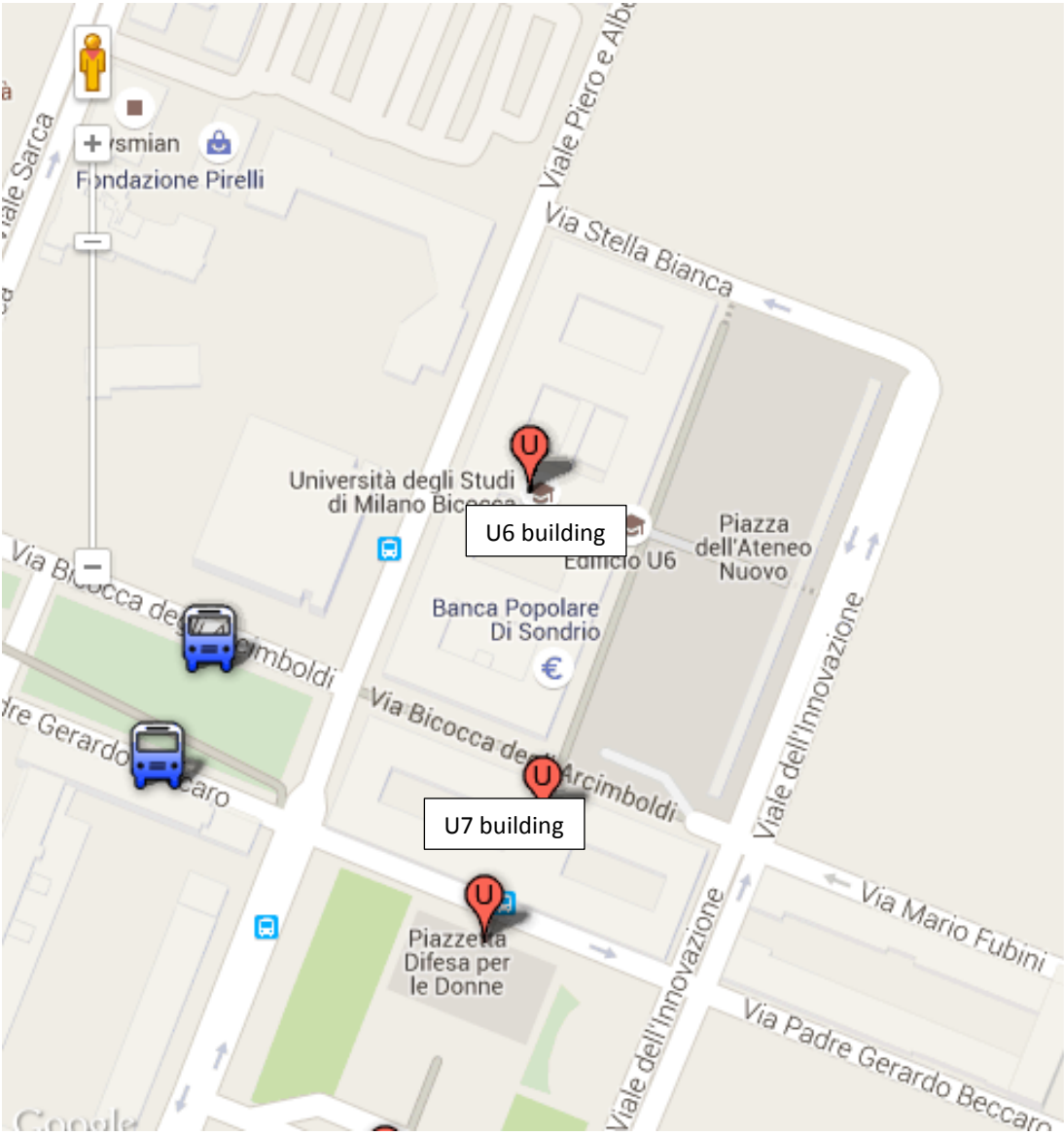
Individual cost: 40 €

Starting time of the tour: 17:30. Total duration of the tour: 45 min.

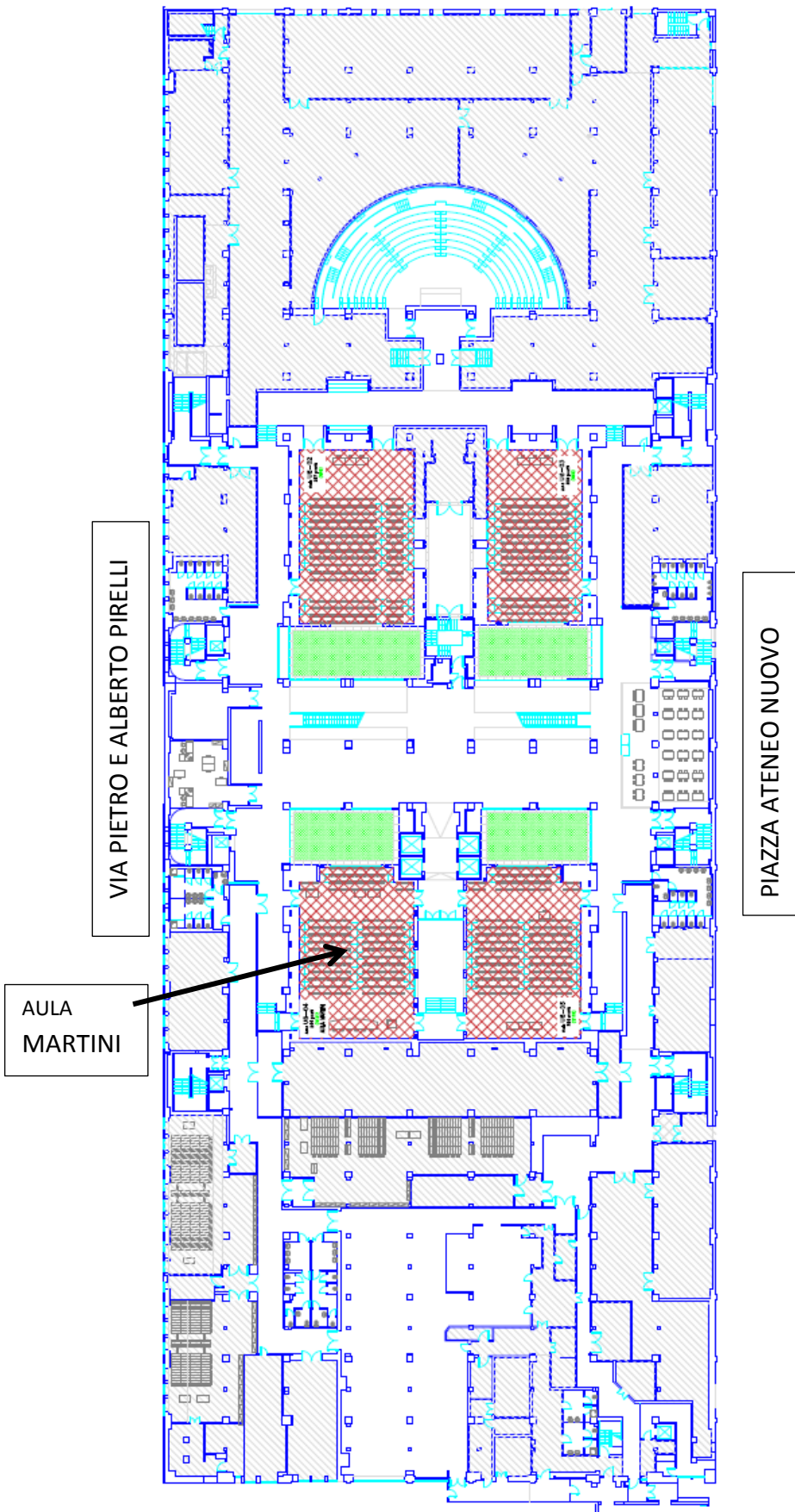
The guide of MUSEMENT agency, will be waiting for the participants at 17:30 in Piazza Santa Maria delle Grazie, which is close to CADORNA underground station (Green and Red line) please take the voucher with you.

# VENUE MAPS

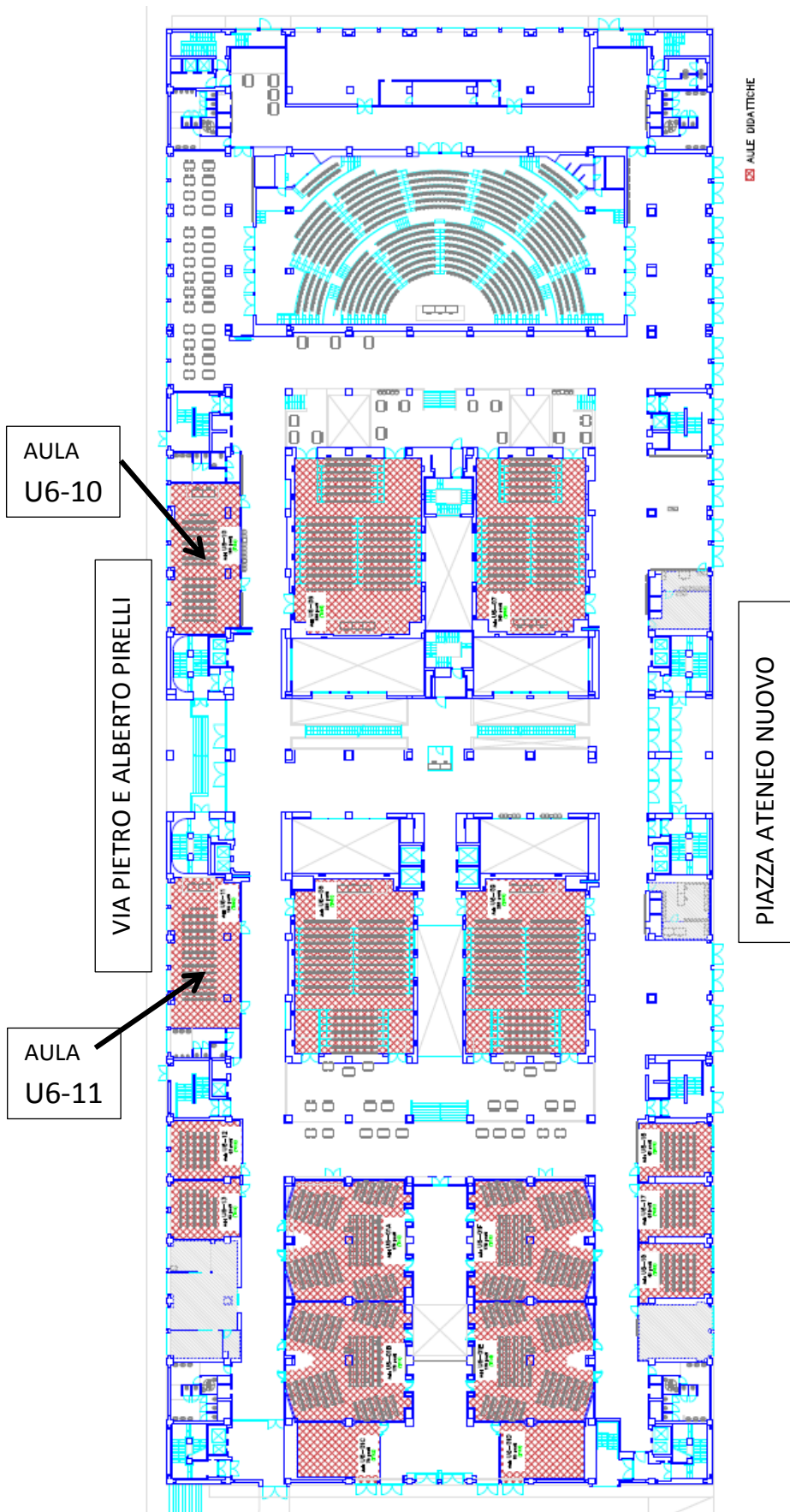
## U6 and U7 Building Location



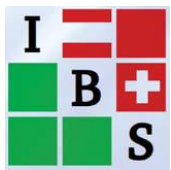
ED U6 – Piazza ateneo nuovo 1, FLOOR -1



# ED U6 – Piazza ateneo nuovo 1, GROUND FLOOR



## SPONSORS



JOINT MEETING

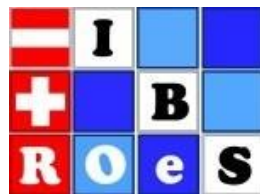
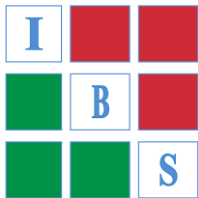
of the International Biometric Society (IBS)

Autro-Swiss and Italian Regions

The Meetings are grateful of the support of the following organizations:



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