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Local Organizing Committee

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Alessandra Petrucci, Università degli Studi di Firenze
Dear colleagues,
on behalf of the Scientific Program Committee and of the Local Organizing Committee, we welcome you to Florence and to the 6th ITAlian COntference on Survey Methodology – ITACOSM 2019 “Survey and Data Science”. ITACOSM is a bi-annual international conference organized by the Survey Sampling Group (S2G) of the Italian Statistical Society (SIS) whose aim is promoting the scientific discussion on the developments of theory and application of survey sampling methodologies in the fields of economics, social and demographic sciences, of official statistics and in the studies on biological and environmental phenomena.
Fundamental changes in the nature of data, their availability, the way in which they are collected, integrated and disseminated are a big challenge for all those working with designed data from surveys as well as organic data. ITACOSM 2019 tries to give a response to the increasing demand from researchers and practitioners for the appropriate methods and right tools to face these changes.
The Conference is scheduled in 5 plenary sessions, 12 specialized sessions on specific topics and 6 contributed sessions.
The Scientific Program Committee and the Local Organizing Committee and many volunteers have contributed substantially to the organization of this conference. We acknowledge their work and the support of the University of Florence, the International Association of Survey Statisticians (IASS) and the Italian Statistical Society (SIS).
We wish you a productive and stimulating conference and a pleasant stay at the University of Florence.

Alessandra Petrucci
chair of the Scientific Program Committee

Emilia Rocco
chair of the Local Organizing Committee
The Venue

The main venue of the Conference (registration desk, plenary and parallel sessions, S2G members’ assembly) will be located in the rooms of the Learning Center Morgagni of the University of Florence, Viale G.B. Morgagni 40-44.

The Learning Center Morgagni can be reached by tram from the Florence Train Central Station (Santa Maria Novella): line T1 - Direction Careggi-Ospedale. The Learning Center is right next to the stop ‘Morgagni - Università’.

The tram goes into service at 5 am and ends its run at 00.30 am. Throughout the day, there is a run every 5 minutes from 7am to 8pm and every 10 minutes the rest of the day.

You can check the transportation company web page www.gestramvia.com for directions and timetables.

If you arrive to Rifredi station, the conference venue can be reached in about 10 minutes walk.
Social Events

The **Welcome Cocktail** will be held at the conference venue, **Learning Center Morgagni**, Viale G.B. Morgagni 40-44, starting at 19.00 on **Wednesday June 5th**.

The **Social Dinner** will take place at the **Caffè del Verone** of the **Istituto degli Innocenti**, Piazza Santissima Annunziata 12, in the center of Florence, starting at 20.30 on **Thursday June 6th**.

The cost of the Social Dinner is 35€ and is not included in the conference fees. Dinner tickets can be purchased at the registration desk subject to availability. Be aware that the number of participants to the Social Dinner is limited to 60 people.

## Organization of sessions

<table>
<thead>
<tr>
<th>Type</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Plenary session</td>
<td>45’ talk, 15’ floor discussion</td>
</tr>
<tr>
<td>Specialized sessions (SPE)</td>
<td>25’ talks, 15’ floor discussion</td>
</tr>
<tr>
<td>Contributed session (CON)</td>
<td>15’ talks, 10’ floor discussion</td>
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Other information

Coffee breaks and lunch
Coffee breaks will take place in the foyer of the Conference venue, Learning Center Morgagni.
A lunch ticket usable at the University Canteen on Thursday June 6th is included in your Conference kit.

Internet WiFi
EDUROAM Internet connection is available: don’t forget to bring your EDUROAM credentials.
If you don’t have an EDUROAM account, you can ask to the registration desk for a temporary UniFi account. Please bring your ID document in order to facilitate the account registration.

Abstracts
The Conference abstracts are available on the Conference website.

Visiting Florence
You can find useful information for visiting Florence on the Official Florence Tourism website (www.firenzeturismo.it/en) or on the Visit Florence website (www.visitflorence.com/it/).

Organizer
• Survey Sampling Group of the Italian Statistical Society
• DISIA - Dipartimento di Statistica, Informatica, Applicazioni "Giuseppe Parenti"

Partners and Sponsors
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• International Association of Survey Statisticians
• Società Italiana di Statistica

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(+39) 0554390
+39) 0554798.
You can also download the APP: www.apptaxi.it/firenze/
**WEDNESDAY JUNE, 5**

13.00 | **13.30**, room 327  
**WELCOME ADDRESS**

13.30 | **14.30**, room 327  
**PLENARY SESSION**

14.30 | **16.00**, room 209  
SPE. 1 - Small area estimation using integrated and big data sources

14.30 | **16.00**, room 210  
SPE. 2 - Optimal sampling design

16.00 | **16.20**  
**COFFEE BREAK**

16.20 | **18.00**, room 327  
CON. 1 - Small area estimation

16.20 | **18.00**, room 209  
CON. 2 - Issues in complex surveys

16.20 | **18.00**, room 210  
CON. 3 - Methods for the analysis of survey data

18.00 | **19.00**, room 327  
**PLENARY SESSION**

19.00 | **20.30**, foyer  
**WELCOME COCKTAIL**

**THURSDAY JUNE, 6**

9.00 | **10.30**, room 209  
SPE. 3 - Machine learning for socio-economic surveys

9.00 | **10.30**, room 210  
SPE. 4 - Small area estimation methods: innovations and applied issues

10.30 | **11.30**, room 327  
**PLENARY SESSION**

11.30 | **12.00**, foyer  
**COFFEE BREAK**

12.00 | **13.30**, room 209  
SPE. 5 - Analysis of Official Statistics for decision making

12.00 | **13.30**, room 210  
SPE. 6 - Environmental surveys: theoretical and practical issues

13.30 | **14.30**  
**LUNCH**

14.30 | **15.30**, room 327  
**PLENARY SESSION**

15.30 | **16.40**, room 327  
CON. 4 - Advances in survey data analysis

15.30 | **16.40**, room 209  
CON. 5 - Non sampling error

15.30 | **16.40**, room 210  
CON. 6 - Real survey data analysis issues

16.40 | **17.00**, foyer  
**COFFEE BREAK**

17.00 | **18.30**, room 209  
SPE. 7 - Inference from informative and non-probability survey samples

17.00 | **18.30**, room 210  
SPE. 8 - Spatial sampling and applications

18.30 | **19.00**, room 327  
**S2G MEMBERS’ ASSEMBLY**
FRIDAY JUNE, 7

9.00 | 10.30, room 209
SPE. 9 - Record linkage and statistical matching techniques

9.00 | 10.30, room 210
SPE. 10 - Sample surveys for sensitive data

10.30 | 11.30, room 327
PLENARY SESSION

11.30 | 12.00, foyer
COFFEE BREAK

12.00 | 13.30, room 209
SPE. 11 - Quality of multi-source statistics

12.00 | 13.30, room 210
SPE. 12 - Population size estimation via integration of different sources

13.30, room 327
FAREWELL CLOSING
WEDNESDAY JUNE, 5

13.00 | 13.30, room 327
WELCOME ADDRESS

13.30 | 14.30, room 327
PLENARY SESSION
chair
Monica Pratesi
Targeting key survey variables at the nonresponse treatment stage
David Haziza

14.30 | 16.00, room 209
SPE. 1 - Small area estimation using integrated and big data sources
chair
Nicola Salvati
Measuring well-being and poverty at local level using remote sensing data
Ralf Münnich, Christopher Caratiola, Hanna Dieckmann, Max Gerhards, Thomas Udelhoven
Alternative spatial data sources for small area estimation in developing countries
Nikos Tzavidis, Angela Luna, Kristine Nilsen, Jessica Steele
Small area poverty indicators adjusted using local price indexes
Stefano Marchetti, Gaia Bertarelli, Caterina Giusti, Francesco Schirripa Spagnolo, Monica Pratesi

14.30 | 16.00, room 210
SPE. 2 - Optimal sampling design
chair
Roberto Benedetti
Survey design for the estimation of the economic performance of the Italian fisheries sector
Paolo Accadia, Federica Piersimoni, Evelina Carmen Sabatella, Dario Pinello
Enhancing small area estimation through spatially balanced designs?
Maria Simona Andreano, Francesco Pantalone
Optimal spatial sampling design using coupled Gaussian processes
Luigi Ippoliti, Sara Fontanella, Pasquale Valentini

16.00 | 16.20
COFFEE BREAK

16.20 | 18.00, room 327
CON. 1 - Small area estimation
chair
Caterina Giusti
Borrowing strength from larger surveys to improve related estimates from smaller surveys using bivariate small area estimation models
Carolina Franco, William R. Bell
Hierarchical Bayes estimation of unit-level small area log-normal models
Aldo Gardini, Carlo Trivisano, Enrico Fabrizi

On the properties of EBP for a class of models with correlated random effects and longitudinal data
Małgorzata Karolina Krzciuk

Variable and transformation selection for mixed regression models with application to small area estimation
Natalia Rojas-Perilla, María José Lombardía, Esther López Vizcaíno, Cristina Rueda Sabater

Using the entropic distance for large area definition in small area estimation methods
Fabrizio Solari, Livio Fenga

On synthetic median estimator in small area estimation
Tomasz Stachurski

Some topics of sampling and estimation on a bipartite graph: the adaptive estimator
Martina Patone

Functional central limit theorems for stratified single-stage sampling designs
Anne Ruiz-Gazen

On bootstrap for complex sampling designs via sampling scheme modification
Tomasz Żądło

16.20 | 18.00, room 210
CON. 3 - Methods for the analysis of survey data
chair
Andrea Giommi

The marginal impact of auxiliary totals in calibration
Alessio Guandalini, Claudio Ceccarelli

The R-Package ‘surveysd’
Johannes Gussenbauer, Alexander Kowarik, Gregor de Cillia

Mind the mode: lessons from a web survey on household finances
Andrea Neri, Romina Gambacorta, Martina Lo Conte, Manuela Murgia, Roberta Rizzi, Francesca Zanichelli
Big Data for finite population inference: calibrating pseudo-weights
Ali Rafei, Carol Flannagan, Michael R. Elliott

Optimal sampling design with administrative sources for household finance surveys
Tiziana Tuoto, Andrea Neri, Giuseppe Ilardi, Giulio Barcaroli

18.00 | 19.00, room 327
PLENARY SESSION

chair
Giancarlo Blangiardo

The future of Statistics: challenges for understanding new phenomena in a rapidly changing world
Giorgio Alleva

19.00 | 20.30, foyer
WELCOME COCKTAIL
THURSDAY JUNE, 6

9.00 | 10.30, room 209
SPE. 3 - Machine learning for socio-economic surveys
chair
Annamaria Bianchi
Machine learning in survey research: modeling nonresponse and completion conditions from a prediction perspective
Christoph Kern
Producing contingency table estimates integrating survey data and Big Data
Paolo Righi, Giulio Barcaroli, Mariagrazia Rinaldi, Gianpiero Bianchi
Improving data validation using machine learning
Christian Ruiz

Data-driven transformations for the estimation of small area means
Nora Ulrike Würz, Timo Schmid, Nikos Tzavidis

10.30 | 11.30, room 327
PLENARY SESSION
chair
Alessandra Petrucci
Sample designs and geospatial information for monitoring agriculture and agri-environment
Elisabetta Carfagna

11.30 | 12.00, foyer
COFFEE BREAK

12.00 | 13.30, room 209
SPE. 5 - Analysis of Official Statistics for decision making
chair
Giorgio Alleva
Composite indicators for measuring socio-economic phenomena
Matteo Mazziotta
Graphical structural learning for complex survey data
Daniela Marella, Paola Vicard
Civil justice: a method for assessing efficiency
Irene Rocchetti, Maria Filomeno

9.00 | 10.30, room 210
SPE. 4 - Small area estimation methods: innovations and applied issues
chair
Nikos Tzavidis
Small area estimation of entropy inequality measures
Maria Rosaria Ferrante, Silvia Pacei
Small domain estimation with calibration methods
Risto Lehtonen, Ari Veijanen
12.00 | 13.30, room 210
SPE. 6 - Environmental surveys: theoretical and practical issues
chair
Lorenzo Fattorini
Spatial sampling and entropy
Daniela Cocchi
Estimating co-occurrences index in finite populations
Tonio Di Battista, Stefano Antonio Gattone, Francesca Fortuna
Design-based maps for two-phase inventories
Sara Franceschi

13.30 | 14.30
LUNCH

14.30 | 15.30, room 327
PLENARY SESSION
chair
Maria Giovanna Ranalli
Analysis of integrated data for Official Statistics
Li-Chun Zhang

15.30 | 16.40, room 209
CON. 4 - Advances in survey data analysis
chair
Caterina Pisani
Passengers’ perceptions of airport service quality: a case study of airports of Puglia
Rosanna Cataldo, Corrado Crocetta, Maria Gabriella Grassia, Marina Marino
Estimation of population mean under stratified median ranked set sampling using air-quality data
Nursel Koyuncu
Simulated geo-coordinates as a general means for regional analysis: theory and examples
Ulrich Rendtel
On influence of clustering population on accuracy of vector mean estimator
Grzegorz Antoni Sitek, Janusz Leszek Wywiał

15.30 | 16.40, room 327
CON. 5 - Non sampling error
chair
Silvia Pacei
Response burden and data quality in business surveys: the experience of Banca d’Italia
Marco Bottone, Lucia Modugno, Andrea Neri
Evaluation of the impact of mixed mode design on the quality of the estimates of the Aspects of Daily Life social survey
Claudia De Vitiis, Alessio Guandalini, Francesca Inglese, Marco Dionisio Terribili

Parametric estimation and prediction under informative sampling and nonignorable nonresponse
Abdulhakeem A. A. Eideh

Beyond the sampling errors: the effects of Centralised data collection on Total Survey Errors
Pasquale Papa

CON. 6 - Real survey data analysis issues
chair
Paolo Righi

Use of an integrated system of administrative data for the estimation of household features
Antonella Balistreri, Stefano Falorsi, Daniela Pagliuca, Fabrizio Solari

Multilevel time series modeling of mobility trends in the Netherlands for small domains
Sumonkanti Das, Harm Jan Boonstra, Jan van den Brakel

Correcting sample biases: an analysis of teaching evaluations
Shira Fano, Rosanna Cataldo, Tiziana Venittelli

Estimation weights for school longitudinal surveys: the case of Geres
Gabrielle Alves Palermo Cavalcante

16.40 | 17.00, foyer

COFFEE BREAK

17.00 | 18.30, room 209

SPE. 7 - Inference from informative and non-probability survey samples
chair
Jay Breidt

Combining non-probability and probability survey samples through mass imputation
Jae-kwang Kim

Sample matching and double robust estimation with non-probability samples
Changbao Wu

Data integration of probability and nonprobability samples
Jean-François Beaumont
17.00 | 18.30, room 210
SPE. 8 - Spatial sampling and applications

Chair
Luigi Ippoliti

An application of the pivotal method to spatial sampling
Guillaume Chauvet

Spatial sampling for the French Master Sample
Thomas Merly-Alpa

The French National Forest Inventory survey: covering space and time at country level
François Morneau, Cédric Véga, Olivier Bouriaud

18.30 | 19.00, room 327
S2G MEMBERS’ ASSEMBLY
FRIDAY JUNE, 7

9.00 | 10.30, room 209
SPE. 9 - Record linkage and statistical matching techniques
chair
Enrico Fabrizi
Advances in survey estimation with imperfectly-matched auxiliary information
Jay Breidt, Chien-Min Huang, Jean Opsomer
A Bayesian approach for multiple regression with linked and deduplicated data
Brunero Liseo, Rebecca C. Steorts, Andrea Tancredi
Use of record linkage in Official Statistics and feedbacks on research
Marco Fortini, Tiziana Tuoto

9.00 | 10.30, room 210
SPE. 10 - Sample surveys for sensitive data
chair
Pier Francesco Perri
The privacy protection-aspect in surveys for sensitive data
Andreas Quatember
Estimating anti-immigrant sentiment by item count technique
Beatriz Cobo, María del Mar Rueda, Sara Pasadas, Sebastian Rinken
Direct vs Indirect questioning surveys in a cannabis real study
Elvira Pelle

10.30 | 11.30, room 327
PLENARY SESSION
chair
Silvia Biffignandi
Total error frameworks for integrating probability and nonprobability data
Paul P. Biemer

11.30 | 12.00, foyer
COFFEE BREAK

12.00 | 13.30, room 209
SPE. 11 - Quality of multi-source statistics
chair
Li-Chun Zhang
Quality issues in multisource statistics
Giovanna Brancato
Estimating population census tables and their accuracy using Multiple Imputation of Latent Classes (MILC) with multi-source data
Laura Boeschoten, Sander Scholtus, Ton de Waal, Jacco Daalmans, Jeroen Vermunt

An empirical evaluation of latent class models for multisource statistics
Loredana Di Consiglio, Marco Di Zio, Danila Filipponi

12.00 | 13.30, room 210
SPE. 12 - Population size estimation via integration of different sources
chair
Brunero Liseo

Capture-recapture for population size estimation based upon zero-truncated count distributions with one-inflation
Dankmar Böhning

Use of latent class models for estimating population size in multiple record systems in presence of missing data
Davide Di Cecco

Deduplication and population size estimation
Andrea Tancredi, Brunero Liseo

13.30, room 327
FAREWELL CLOSING