

CONFERENCE PROGRAM

ITACOSM 2019

FLORENCE 5-7 June 2019 | 6th ITALian COncference on Survey Methodology

**Survey &
Data Science**



Scientific Program Committee

Alessandra Petrucci (*chair*), *Università degli Studi di Firenze*

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Maria Francesca Marino, *Università degli Studi di Firenze*

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 CONFERENCE 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.

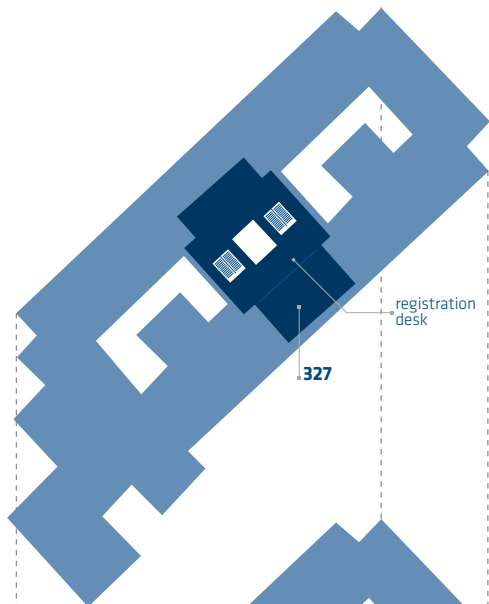
You can check the transportation company web page www.gestramvia.com for directions and timetables.

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



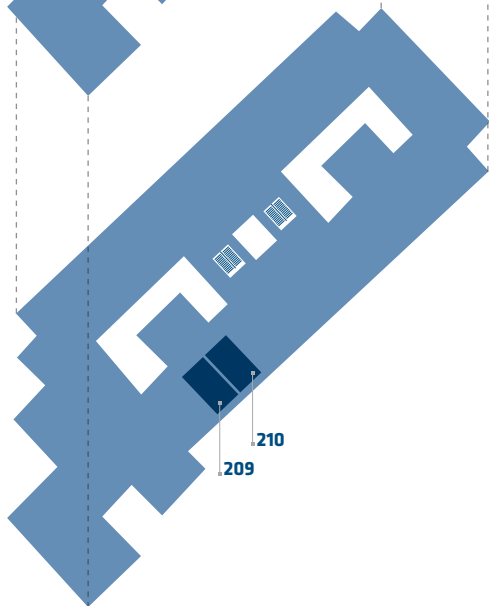
THIRD FLOOR

Learning Center Morgagni



SECOND FLOOR

Learning Center Morgagni



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

Plenary session	45' talk, 15' floor discussion
Specialized sessions (SPE)	25' talks, 15' floor discussion
Contributed session (CON)	15' talks, 10' floor discussion

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.

Taxi

If you need Taxis you can call it by Radiotaxi (phone):

(+39) 0554242

(+39) 0554390

+39) 0554798.

You can also download the APP:

www.apptaxi.it/firenze/

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

- Univesità degli Studi di Firenze
- International Association of Survey Statisticians
- Società Italiana di Statistica

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

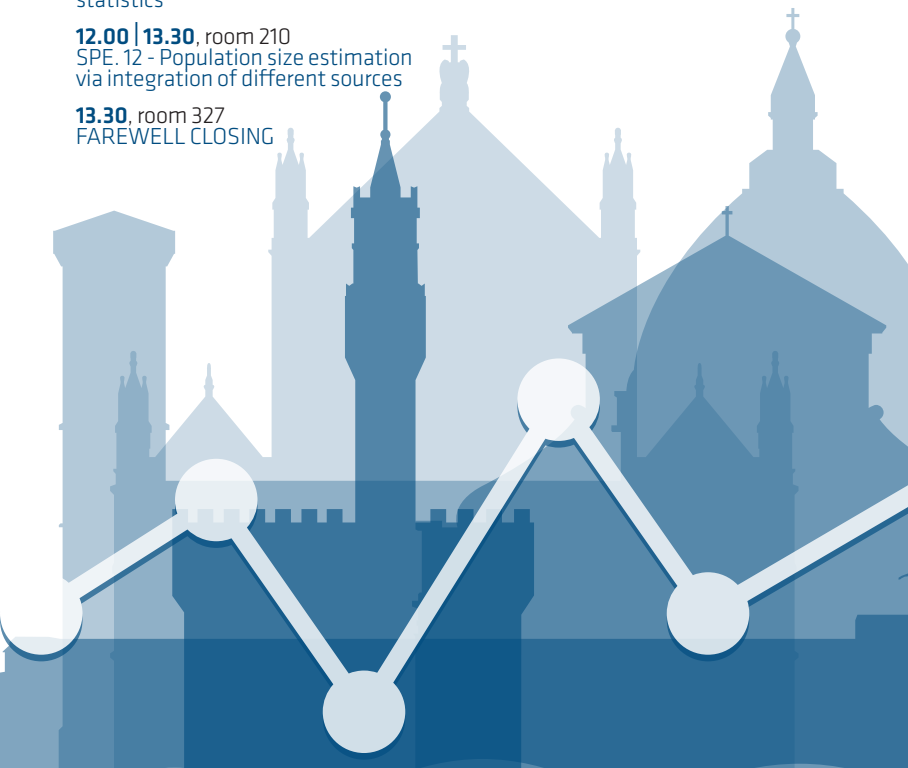
10.30 | 11.30, room 327
PLENARY SESSION

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



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

16.20 | 18.00, room 209

CON. 2 - Issues in complex surveys

chair

Luca Tardella

Improving cube method

Shoaib Ali

Variance estimation for rotating samples: the case of the EU-SILC survey in Luxembourg

Guillaume Osier

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

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

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

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

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 327

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 Wywiat

15.30 | 16.40, room 209

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

15.30 | 16.40, room 210

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

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 Daalman, 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







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