

# the Survey Statistician

The Newsletter of the International Association of Survey Statisticians

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## Letter from the Editors



Dear Readers,

May the New Year bring you more peace and health!

The current issue of TSS includes information about the latest events of the last half-year: World Statistics Congress 2023 (WSC2023) and workshops having international significance; the recent awards; as well as traditional and new TSS sections.

Two award recipients are honoured in this issue: Professor Richard Valliant who received the Joseph Waksberg award by *Survey Methodology* journal for 2024; and Professor C.R. Rao who was awarded the 2023 International Prize in Statistics by the ISI. Unfortunately, he could not rejoice long with it as he passed away at almost 103 years old. The issue includes a tribute to him written by renown professors who were among his former students and who knew him well and had the chance to work with him. These are Arni S.R. Srivastava Rao, T. Krishna Kumar and Pramod Kumar Pathak. Their paper describes the scientific life of Professor Rao who was key in the history of statistics.

This issue continues with the two papers devoted to the 50<sup>th</sup> anniversary of the IASS. First, Carl-Erik Särndal recalls a number of ideas, concepts and lines of thought that influenced theory and practice in survey statistics. Then, Annamaria Bianchi presents testimonials of 15 former IASS presidents.

Our Association is very lively, as a young generation continues the traditions started by elders and predecessors. To reflect this, *The Survey Statistician* is introducing a new section called *Early Career Survey Statistician*. It will be edited by Dr. Veronica Ballerini from the University of Florence, Italy.

The 2021-2023 IASS Executive Committee (EC) of IASS completed its work. We thank President Monica Pratesi (University of Pisa, ISTAT) and IASS Scientific Secretary Giovanna Ranalli (University of Perugia) for their regular *Letters to TSS* and interesting articles organized in the *New and Emerging Methods* section. We wish them success in their activities.

The IASS Executive Committee (EC) for 2023-2025 was elected before the WSC 2023. You can see the list of EC members at the end of this issue. The new IASS EC president is Natalie Shlomo, Professor of Social Statistics at the University of Manchester, UK. The scientific secretary is Dr. Annamaria Bianchi from the University of Bergamo, Italy. They start to contribute to the current issue in those capacities. The co-editor of *TSS* Eric Rancourt was elected vice-president and so this issue will be his last one as an editor. He passes on this editorial role to Alina Matei, Titular Professor of Statistics at the University of Neuchâtel, Switzerland. Alina is currently the *Book and Software Review* section editor. Her responsibilities go to Dr. Gaia Bertarelli from Ca' Foscari University of Venice.

The *Ask the experts*, *New and Emerging Methods*, *Book and Software Review* sections all happen to contain articles written by Italian statisticians. Taking also into account two Italian section editors and their inputs to this *TSS* issue, one could almost call it an Italian issue. This comment is simply to illustrate the highly and widely developed interest in research in survey statistics in Italy and to wish the Italian statisticians (and all others!) to follow this successful path in the future.

Finally, should you wish to contribute to any section of *TSS*, please write to the editors or to the section editors about your proposals, and you will be welcomed.

**Danutė Krapavickaitė and Eric Rancourt**

TSS editors



## Letter from the President

Dear IASS Members,

My first letter as President of the IASS appeared in the August 2023 newsletter here: [[July-August Newsletter](#)] where I introduced the new 2023-2025 Executive Committee members and thanked the outgoing 2021-2023 Executive Committee members, particularly the outgoing President Monica Pratesi, for their dedication in promoting IASS and expanding its activities. I also thanked the ISI Permanent Office for their continuing support in maintaining IASS operations and administration.

The 2023-2025 Executive Committee will be continuing with the successful and impactful current activities: the monthly webinar series, the monthly newsletters (with a reading of the month) and the twice-yearly *The Survey Statistician*, the Hukum Chandra prize in 2024 and the Cochran-Hansen prize in 2025, financial support for survey statistics-related conferences and finally maintaining our website and increasing social media presence. We will also continue to promote the IASS and expand our membership, as well as enlist more institutional membership, through the help of our over 65 IASS country representatives.

There are also exciting new initiatives to watch out for:

- There will be a new section in *The Survey Statistician* dedicated to the *Early Career Survey Statistician* under the leadership of the Editor-in-Chief, Danutė Krapavickaitė and the new Section Editor: Veronica Ballerini. We are also exploring the idea of dedicating a section of *The Survey Statistician* to one specific topic in survey statistics with contributions from the country representatives.
- We are increasing our presence at more regional workshops, for example we delivered a presentation at the online Asia-Pacific Stats Café held on October 30<sup>th</sup>, 2025, and sponsored a session titled: Machine Learning Methods in Survey Statistics, at the Second Workshop on Methodologies for Official Statistics held at ISTAT in Rome December 6<sup>th</sup> - 7<sup>th</sup>, 2025.
- We aim to host a bespoke IASS satellite conference prior to the 2025 65<sup>th</sup> WSC taking place in The Hague, July 13<sup>th</sup> - 17<sup>th</sup>, 2025. The satellite conference will be held in Manchester July 9<sup>th</sup> - 11<sup>th</sup>, 2025 so please save these dates. The conference will include all areas of research and development related to survey statistics and survey methodology.

A new Strategy Document 2023-2025 will be out soon for consultation to be ratified at the July 17<sup>th</sup>, 2024, IASS General Assembly (GA) at 2 pm ECT to be held virtually. More details will follow. Please put this date in your calendar to attend the GA.

In this January 2024 issue of *The Survey Statistician*, we are continuing to celebrate our 50 year jubilee of the IASS with more articles and input from past IASS Presidents. This is a momentous occasion. It shows the ever-increasing importance of survey statistics, particularly as it evolves to include new forms of data and administrative data into our statistical systems. Research in the areas of data integration, compensating for measurement and coverage errors, introducing new tools offered by machine learning and AI, all demonstrate more than ever the need for high-quality unbiased survey data collections to be used as reference samples. These samples can assess the quality and compensate for errors in new sources of data, as well as continue to collect data that are not available in administrative data or other sources of data.

We are now at the crucial point of the calendar year where we ask all IASS members to renew their IASS membership. We will also carry out a recruitment drive through the help of our country representatives, focusing on inviting institutional members as well. Please spread the news of IASS to all your networks so that we can increase our membership and allow funding for all the important activities that we do to benefit survey statisticians around the world. The website for membership of

the IASS is here: [[Join IASS](#)]. The membership fees are 50 euros/25 euros a year depending on your country of residence. Please download our brochure here: [[Brochure](#)] to help recruit new members from your networks.

Please get in touch with me at [natalie.shlomo@manchester.ac.uk](mailto:natalie.shlomo@manchester.ac.uk) if you have ideas, suggestions, comments, improvements, or criticisms, regarding IASS activities and strategic priorities.

With best wishes,

**Natalie Shlomo**

President IASS, 2023-2025



## Report from the Scientific Secretary

I have been appointed Scientific Secretary of IASS during the first meeting of the newly elected IASS Executive Committee (EC) in July during the WSC in Ottawa. I am very grateful to the members of the EC for their trust, and I am indebted to Maria Giovanna Ranalli for her legacy on this role.

As my first duty, I had to choose a topic for the **New and emerging methods** section of this issue of *The Survey Statistician*. I decided to give space to the use of big data in the context of small area estimation. This is a rather recent topic, that I believe needs more exploration in order to fully develop the potential of using big data sources for enhancing estimation at small domain level. I am very grateful to Professors Stefano Marchetti (University of Pisa) and Francesco Schirripa-Spagnolo (University of Pisa) for having accepted my invitation to write a paper on **Social big data to enhance small area estimates**. This contribution provides a discussion about the opportunity to use big data in small area estimation. The Authors also show an application where data mined from Twitter are used to improve small area estimates of consumption expenditures for leisure at local level in Italy.

To celebrate the 50th jubilee of the IASS, I have also prepared the contribution **Past Presidents Testimonials on IASS** where past Presidents of the IASS share their experience and involvement with the Association as well as their view on its future. I started this work with our Past President Monica Pratesi and continued it with our current President Natalie Shlomo. We were able to collect testimonials from fifteen past Presidents. I would like to thank all of them for their contribution to this section.

The organization of the monthly **Webinar series** has continued, and we are particularly thankful to Andrés Gutiérrez for his engagement in organizing the webinars. We have now reached Webinar number 35 and we are happy to have made it a monthly event that has attracted an audience of over two **hundred registered participants**. Please, visit the IASS events page for upcoming webinars: <http://isi-iass.org/home/events/>. Also visit the webinar section of our website <http://isi-iass.org/home/webinars/> for slides of past webinars, and that of ISI [https://isi-web.org/courses-webinars-workshops?type=2&field\\_type\\_courses=All](https://isi-web.org/courses-webinars-workshops?type=2&field_type_courses=All) for recorded past webinars. Contact Andrés ([andres.gutierrez@cepal.org](mailto:andres.gutierrez@cepal.org)) if you have suggestions for topics and/or speakers for an upcoming webinar. Those webinars held in the last six months of 2023 have covered the role of the Inter-Secretariat Working Group on Household Surveys by Haoyi Chen, the Production of Small Area Estimates for Labor Market Indicators in Latin America by Andrés Gutiérrez, the Weight Share Method when using a Continuous Sampling Frame by Guillaume Chauvet, Missing Voices in Household Survey Data by Cheryl Doss, Recent Developments in Unit-Level Models for Small Area Estimation by Emily Berg and Enhancing the Credibility of Survey Data: Old Tricks and New Techniques in Improving the Respondent Experience by Barbara Rater.

The IASS EC supported three conferences/workshops in 2023: the 8th ITALian COncference on Survey Methodology – ITACOSM2023 – "New Challenges for sample surveys: innovation through tradition" held at the University of Calabria, Italy, on June 7-9; the Sixth Baltic-Nordic Conference on Survey Statistics - BaNoCoSS-2023 - held on August 21-25 in Helsinki, Finland; and A Day Survey Researchers Conference on the theme "Good design and proper conduct of surveys – Key determinants of reliable data for planning", held on July 13 at the Department of Statistics, Federal University of Agriculture, Abeokuta, Ogun State, Nigeria. The new **Call for Conference Support for 2024** is now out. We will consider providing financial support for workshops, conferences and similar events that promote the study and development of the theory and practice of statistical surveys and censuses and associated subjects, and foster interest in these subjects among statisticians, organizations, governments, and the general public in different countries of the world. To apply for

support, please send a document project, including a budget sheet, to IASS President Natalie Shlomo (natalie.shlomo@manchester.ac.uk) and in cc to IASS President-Elect Partha Lahiri (plahiri@umd.edu) **before June 30th**. More details can be found here: <http://isi-iass.org/home/wp-content/uploads/Call-for-Conference-Support-2024.pdf>.

Turning to our social media activity, during these past months I have continued posting about webinars, conferences, books, articles, prizes, the newsletter release and its contents, and the recent recruitment drive. The number of followers to the pages are increasing: Since July, X followers increased from 365 to 392, LinkedIn followers from 1075 to 1434 and Facebook followers from 133 to 178. Thus, please, follow the updates on the life of IASS via **social media** and reading our **monthly Newsletter**. Other than webinars, information on conferences, on the recipients of awards and on call for nominations, it now features a **reading of the month** section in which we suggest monographs, special issues or edited books on topics of interest to the members of IASS. Please, feel free to contact us for news and information to be added in the Newsletter by the 15th of each month.

**Annamaria Bianchi**

annamaria.bianchi@unibg.it

IASS Scientific Secretary 2023-2025

## **Promoting good survey theory and practice around the world**

The International Association of Survey Statisticians (IASS) aims to promote the study and development of the theory and practice of sample surveys and censuses.

It also aims to increase the interest in surveys and censuses among statisticians, governments and the public in the different countries of the world.

Dear statistician,

**Join the IASS** and become a member of an association of 350+ survey statisticians!

To become a member (never before a member of the IASS nor of the ISI):

You have to register first at Login ([isiwebshop.org](https://www.isiwebshop.org)), an activation link will be sent to the email address you entered. Note that you must activate the account by selecting the activation link in the email you receive. If you don't see the email in your Inbox, please check your SPAM box or your other email boxes. After activation, you can log in to <https://www.isiwebshop.org/> using the username (email address) and the password you entered during registration.

Current members can renew their membership/s and update their contact details via the [webshop](#). The username is the email address you used for your contact details and the password is your membership number, that is if you haven't customized it.

Should you require any assistance in becoming a member, renewing your membership/s, or forgotten your membership number please send an email to [isimembership@cbs.nl](mailto:isimembership@cbs.nl).



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## News and Announcements

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### The 2024 Waksberg Award goes to Richard Valliant



Richard Valliant is the recipient of the 2024 Waksberg Award. Professor Valliant who is Research Professor Emeritus at the University of Michigan as well as at the Joint Program in Survey Methodology of Maryland will deliver the Waksberg address at Statistics Canada's Methodology Symposium in the fall of 2024 and write a paper for the December issue for *Survey Methodology*.

Richard Valliant wrote several books, including *Finite Population Sampling and Inference: A Prediction Approach* in 2000 with A. H. Dorfman and R. M. Royall and he produced numerous articles contributing to advance survey sampling. He was an Associate editor in *Survey Methodology* and has also refereed many papers.

The Waksberg Award is given each year to an eminent survey statistician who has made a contribution in an area of theory and / or practice in relation to the work of Joseph Waksberg who was an icon in survey sampling. Joseph Waksberg worked at the U.S. Census Bureau and Westat where he was chairman of the board for over 25 years. The winner of the Waksberg award is selected to write a paper on developments related to the work of Waksberg and receives an honorarium from Westat.

The selection committee appointed by *Survey Methodology* and the American Statistical Association was composed of M. Giovanna Rannali (Chair), Jae-Kwang Kim, Kristen Olsen and Denise Silva.

More information on the Award can be found at:

<https://www.isi-web.org/article/richard-valliant-wins-2024-waksberg-award>



## **World Statistics Congress 2023 in Ottawa, a great success**

The 64<sup>th</sup> World Statistics Congress of the International Statistical Institute (ISI) took place from July 16<sup>th</sup> to 20<sup>th</sup> in Ottawa, Canada. The event attracted much of the statistics and data world's attention. Opening remarks were provided by an Ottawa Canadian Parliamentarian, The Honorable Jenna Sudds as well as by the Chief Statistician of Canada, Anil Arora. ISI President Stephen Penneck officially opened the congress.

The World Statistics Congress 2023 (WSC23) attracted close to 1600 people from 110 countries and included 310 invited paper, contributed and poster sessions that included a total of 967 presentations. As part of the WSC23, there were short courses attended by 76 people and booth from many organizations.

During the WSC23, the ISI recognized many people through a number of awards. Highest in this list was the International Prize in Statistics that was awarded to Dr. C.R. Rao for his immense contribution to our field. His son Veerendra Rao was present at the event to proudly accept the prize. At the time of the WSC23, Dr. Rao was 102 years old and regrettably passed away the following month.

The WSC23 took place in Ottawa 60 years after it had first been held there in 1963. During the event, delegates had the privilege to welcome Dr. Ivan P. Fellegi, Chief Statistician Emeritus from Canada who was present at the ISI congress in 1963! The WSC23 provided a forum for practitioners, academics and business statistician to nurture and expand their network. While many were longtime ISI members having participated in many congresses, many new faces, students took part of the event.

As part of the WSC, 35 delegates also had the chance to take part in a city tour of Ottawa in which they were provided historical information about the Ottawa and Canada. Delegates appreciated the tour and more generally had very good words about their overall experience of Ottawa and the WSC23.

Following five days of presentations, meetings, networking and friends making, the WSC23 was concluded and Canadian Senator, the Honourable Colin Deacon provided closing remarks.

### **Eric Rancourt**

## **IASS Highlights from the 64th ISI World Statistics Congress, Ottawa, Canada, July 16th – July 20th, 2023**

The International Association of Survey Statisticians (IASS) is one of seven associations of The International Statistical Institute (ISI) and therefore has an important role in the organization of the ISI World Statistics Congresses.

The IASS aims to promote the study and development of the theory and practice of sample surveys and censuses around the world. Besides statistical and methodological research and development in surveys and censuses, including small area estimation, there is now large demand for timely, more detailed, less burdensome and costly statistics, with wider coverage. Therefore, survey statisticians are also working in innovation, for example investigating new sources of data, such as Administrative Data and Big Data (mobile phones, social media interactions, electronic commercial transactions, sensor networks, smart meters, GPS tracking devices, satellite imagery), that can potentially be included in statistical systems. New forms of data also require developing new tools, such as

algorithms arising from Machine Learning and AI, for enabling analyses and predictions. Moreover, given these new forms of data, there is more urgency on developing statistical methods to ensure the validity, measurement and representativeness of these data, typically carried out through the use of reference data coming from high-quality and representative survey data.

At the 64th WSC, the IASS sponsored 14 Invited Papers Sessions (IPS) covering both traditional statistical research in survey statistics and new developments related to new forms of data and innovation. The IPS were:

- Better ways to address nonresponse in social surveys
- Longitudinal observation of human populations
- Measurement Error Modelling: Advances and Applications
- Recent Advances in Data Anonymization and Data Modelling for Education and Poverty Research
- Unlocking Microdata: Experience from International Organizations
- Inference under Informative Sample Designs
- Harnessing data by citizens for public policy and SDG monitoring: a conceptual framework and what is next?
- Monitoring Progress towards Sustainable Development Goals with Small Area Estimation over Space and Time
- The use of alternative data through modelling in Official Statistics
- Innovative statistical methods for large-scale surveys
- Developments in Small Area Statistics Leveraging Non-Random Sampling
- Sample surveys in the era of Big Data and Machine Learning
- Advanced inference on mixed effects models for SAE
- Data Integration in Survey Sampling

There were also three Special Invited Paper Sessions (SIPS) sponsored by the IASS:

- SIPS Waksberg Award with a presentation by the 2023 Waksberg Award Winner, Prof. Ray Chambers. The title of Ray's talk was 'The Missing Information Principle - A Paradigm For Analysis Of Messy Sample Survey Data'. In this talk, Ray discussed alternative approaches to inference from multiple data sources that can compensate for coverage errors, measurement errors and response errors in the statistical modelling process embedded in a Missing Information Principle (MIP) framework.
- SIPS IASS President's Invited Speaker session was delivered by Prof. Fulvia Mecatti. The title of her talk was: "Bridging Big Data and Sampling Methodology: A Sampling Statistician Perspective". In her talk, Fulvia focused on survey sampling methods and big data for the production and analysis of survey data. In particular, the talk focused on the multifaceted relationship connecting Big Data to statistical and to sampling methodology.
- SIPS Cochran-Hansen Prize session with presentations by our two Cochran-Hansen prize winners: Alejandra Arias-Salazar (Costa Rica) with her paper: "Small Area Estimates of Poverty Incidence in Costa Rica under a Structure Preserving Estimation (SPREE) Approach" and Ziqing Dong (China) with his paper: "Linearization and Variance Estimation of the Bonferroni Inequality Index". The session was chaired by Nikos Tzavidis, chair of the Cochran-Hansen prize committee, with the help of the committee members: Bernard Baffour and Maria Giovanna Ranalli. The Cochran-Hansen prize winners were also awarded with a certificate presented at the ISI and Associations Awards Ceremony.

The General Assembly of the IASS was also held at the 64<sup>th</sup> WSC and it was a great opportunity to meet face-to-face with IASS members attending the WSC and to promote discussion on the state of our society. The presentation included an overview of IASS activities and the 2022 IASS budget. The final 2022 report and budget were approved by the IASS members. It was also an opportunity to thank the outgoing Executive Committee (Monica Pratesi, Nikos Tzavidis, Jairo Arrow and Andrea Diniz da Silva) as well as welcome the incoming Executive Committee (Natalie Shlomo, Partha Lahiri, Annamaria Bianchi, Jiraphan Suntornchost and Andres Gutierrez Rojas).

One feature of the WSC is that ISI Associations hold a satellite conference adjacent to the WSC. The IASS however has generally taken a different approach over the years in that it supports survey statistics-related conferences around the world. This past year, IASS supported conferences and workshops in Italy, Pakistan, Nigeria and Finland. For the 65<sup>th</sup> WSC to be held in the Hague on July 13<sup>th</sup> – 17<sup>th</sup>, 2025, the IASS Executive Committee is supporting the idea of holding an IASS satellite conference (possibly combined with the annual Small Area Estimation conference) in the city of Manchester, United Kingdom on July 9<sup>th</sup> – 11<sup>th</sup>, 2025. Please save the dates!

**Natalie Shlomo**

**Annamaria Bianchi**

### **ENBES Workshop, 20-22 September 2023**

The eighth *European Establishment Statistics Workshop* (EESW23) was held in Lisbon, hosted by Statistics Portugal. The workshop was spread over three days and preceded by a day with short courses. The programme, papers and an extended report can be found at <https://sites.google.com/enbes.org/home>. The leading theme was “traditional and new data sources for establishment statistics”. The workshop is designed to promote discussion on the topics presented.

The first day of the workshop began with a session on innovation in data collection. We discussed the use of cognitive testing on an international scale. While it is very useful, time constraints sometimes prevent us from applying cognitive testing. We discussed the use of paradata dashboards for monitoring responses, which is essential for enhancing the quality of the collected data. Finally, there was an application of system-to-system data collection in an agricultural survey as a form of automatic data collection that helps us to with the challenge to collecting more data in a faster and more secure manner while keeping respondents or data providers motivated.

The next session was dedicated to redesigning and optimizing sample designs. The first paper was on the UK Business Enterprises Research and Development survey, whose sample was increased approximately tenfold in order to cover a wider range of businesses and improve quality. It also changed to electronic data collection with improved guidance to businesses. The second paper was on the Producer Price index design: a two-phase probabilistic sample has been applied in the UK and was considered for Ireland. The authors discussed the change of method for calculating sample variances (model-based) and the way to move from the current towards the new sample design.

The final presentation session that day covered different approaches on linking households and establishments, looking into household consumption and income. A wide variety of sources was used in the three studies: survey data, bank transaction data and card issuers, tax authority business data, administrative micro-data on personal expenses and social security register data. Some common objectives were: Improving the quality of the statistics, promoting replacement of survey variables with administrative data, increasing the timeliness and level of detail of statistics, and reducing costs and the statistical burden on respondents.

On the first day we also had a general ENBES meeting on the history of ENBES and on how we can best continue, and we had a session with three small discussion groups: on improving response rates, statistics for rare populations, and making business surveys resilient to future shocks.

The second day started with a session on the use of alternative data sources to achieve earlier estimates in short-term statistics. The papers explored different ways in which new data sources can be incorporated through modelling approaches, including use of machine learning (ML). One paper considered the use of aggregate credit card data either as an early estimate or as a replacement for retail turnover data for the smaller retail. Another paper considered using scanner data, though accessing the data is a serious challenge. The last paper considered the use of e-invoices in Italy for small and medium-sized businesses, but with some challenges with GDPR.

Then followed a poster session. Topics were a new method using real time shipping data to produce timelier data, outlier treatment in seasonal adjustment handling the effects of COVID-19, new data infrastructure with analytical capabilities and an agile and multisource approach to business surveys.

The following session looked into the use of new data sources in business statistics. The first paper focused on using multilingual web scraping to generate a business register. The second paper showed how we can define a new classification of enterprises by mixing survey data with information from websites. In the third paper administrative data was used to improve the accuracy of monthly construction estimates using ML. The session concluded that in official statistics, transparency and the ability to explain how decisions are made are critical for accountability and trust of novel data sources and techniques.

The fourth session was on analysis and quality evaluation of complex business statistics. Three very different examples of complexity were given. The first paper proposed new ways to measure differences in trade values as measure by the exporting versus the importing country. The second paper explained a bootstrap method to estimate variances of an estimator that combined administrative data with a survey using unequal sampling probabilities. The final paper gave a short overview of recent research on networks of buyer-supplier ties among businesses.

The final session of day two was dedicated to respondent management. It began with the use of permanent random numbers when drawing samples in order to estimate changes over time, to balance response burden and to account for stratum changers. Further, we discussed changes in data collection for the IAB Establishment Panel in times of the COVID-19 pandemic showing results of a multimodal survey since face-to-face interviews face were no longer possible. The final paper proposed ways to reduce the number of companies that receive multiple surveys. It was focused on the smaller businesses, but we also discussed options for larger businesses.

The first session on day three was on infrastructure for data integration. The first paper showed ways to achieve consistency across different statistics by using manual and automatic multisource editing at Statistics Netherlands. We discussed that in the long run it might be desirable to integrate the data collection in one large survey. Next, a multimode data collection system for tourism statistics was presented, supporting XML, electronic forms and paper and pencil. Special attention was needed for data confidentiality so different users could access the data. The final paper analysed investments of Italian enterprises, using a system of integrated registers (ISSR) developed by Istat. The ISSR allows Istat to do all kinds of new analyses without the need for dedicated surveys.

Then we dealt with measuring and documenting process and output quality of multisource statistics. It started with a method to automatically detect errors in registered NACE codes, using a ML model with scraped website texts. It requires extensive website information and innovative methods for data processing. The second paper presented a generalized way to produce process and output quality estimates from Istat's ISSR without defining the exact output in advance. The third paper illustrated the use of different small area estimators for the production of land use statistics by exploiting surveys and auxiliary sources. We discussed that not only the variance but also the bias of the different estimators should be evaluated.

In the closing session, there was some discussion of developments in establishment statistics. Since we have many sources available nowadays, are we going to ask respondents for their data, or do we ask them to verify the data that we have? Do we want to focus on which sources can be used for our regular output, or are we also going to explore new outputs? Finally, if our output is based on non-probability samples, how are we going to evaluate output quality? We might need to draw audit samples for quality estimation specifically for that purpose.

ENBES gratefully acknowledges financial support from the IASS and EFTA towards holding this workshop.

**Arnout van Delden** and **Paul Smith** on behalf of ENBES.

## **Second Workshop on Methodologies for Official Statistics, Rome, December 6-7, 2023**

The Italian National Statistical Institute (Istat) organized and hosted the Second Italian Workshop on Methodologies for Official Statistics, that was held in Rome on 6 and 7 December, 2023 at Istat premises. The workshop was by invitation, and it was possible to follow it online as well. The event had the objective to gather researchers on statistical methodologies applied in the official statistics context, in order to promote the exchange of ideas and best practices. The workshop was mainly focused on understanding the impact on methodologies and quality of new data sources (big data and in general non- probability data) for the official statistics production.

The workshop was organized into four sessions, each one consisting of a master class and invited speakers from many universities and statistical agencies across the US, Canada and Europe.

The workshop opened with a welcome and opening session with addresses by Francesco Maria Chelli (Istat President, Italy), Massimo Fedeli (Head of Department for Development of Methods and Technologies for Production and Dissemination of Statistical Information, Istat) and Monica Pratesi (Head of Department for Statistical Production, Istat).

During the first morning of the workshop, the first session was entitled “Methodologies and Designs for Multi-source Processes with Non-probability Data”. It entailed a master class given by Changbao Wu (University of Waterloo, Canada) on “Challenges and Strategies in Dealing with Non-probability Samples”. This was followed by three invited talks by Danila Filippini (Istat, Italy), Aurélien Lavergne (INSEE, France), J. David Drown (U.S. Census Bureau, U.S.A.), and a discussion by Maria Giovanna Ranalli (University of Perugia, Italy).

The second session on the first day was entitled “Innovative Data for Official Statistics: Methodological Challenges”. It started with a master class given by Stefano M. Iacus (Harvard University and IQSS, U.S.A.) on “Limits and Challenges of Incorporating Innovative Data in Official Statistics”. This was followed by three invited talks by Claudia De Vitiis (Istat, Italy), Fabrizio De Fausti (Istat, Italy), and Maurizio Naldi (LUMSA University, Italy). The session concluded with a discussion by Li-Chun Zhang (Statistisk Sentralbyrå, Norway and University of Southampton, U.K.).

The second day started in the morning with the third session titled “Quality for Non-traditional Sources” with a master class given by Fabio Ricciato (Eurostat) on “Quality for Innovative Data Sources: Progress, Challenges and Directions of Work for the European Statistical System”. This was followed by three invited talks by Gabriele Ascari (Istat), Magdalena Six and Alexander Kowarik (Statistik Austria, Austria), and Anthony Dawson and Calvin O’Brien (Ireland Central Statistical Office - An Phríomh-Oifig Staidrimh, Eire). The discussant for the session was Natalie Shlomo (University of Manchester, U.K., IASS President).

The final session on the second day was sponsored and organized in collaboration with the International Association of Survey Statisticians (IASS). The title of the session was “Machine Learning Methods in Survey Statistics”. The session started with an introduction by the IASS President Natalie Shlomo (University of Manchester, U.K.) entitled “Overview of Machine Learning in Survey Research”. This was followed by three invited talks by David Haziza (University of Ottawa, Canada) on “Machine Learning Procedures for the Treatment of Unit Non-response in Surveys”, Marco Di Zio (Istat, Italy) on “State of Play and Perspectives on Machine Learning at Istat”, and Petrus J.H. Daas (Centraal Bureau voor de Statistiek, The Netherlands) on “Machine Learning in Official Statistics: towards Statistical Based Machine Learning”. Below are photos of the Italian representatives of the IASS along with the IASS President and the invited speaker David Haziza.

The details of the programme, all abstracts and presentations are available here: <https://www.istat.it/en/archivio/288564> [istat.it]



Photos from the International Association of Survey Statisticians (IASS) sponsored session: “Machine Learning Methods in Survey Statistics” at the Second Italian Workshop on Methodologies for Official Statistics, Rome, December 6-7, 2023

The closing session entailed an address by Orietta Luzi (Head of Directorate for Methodology and Statistical Process Design, Istat, Italy) thanking the speakers and audience participation.

The event was a great success with around 70 people in presence in the audience and other people following online. Papers presented will be published in a Proceedings produced by Istat at the beginning of 2024.

Reported by: **Annamaria Bianchi**, IASS Executive Committee 2023-2025