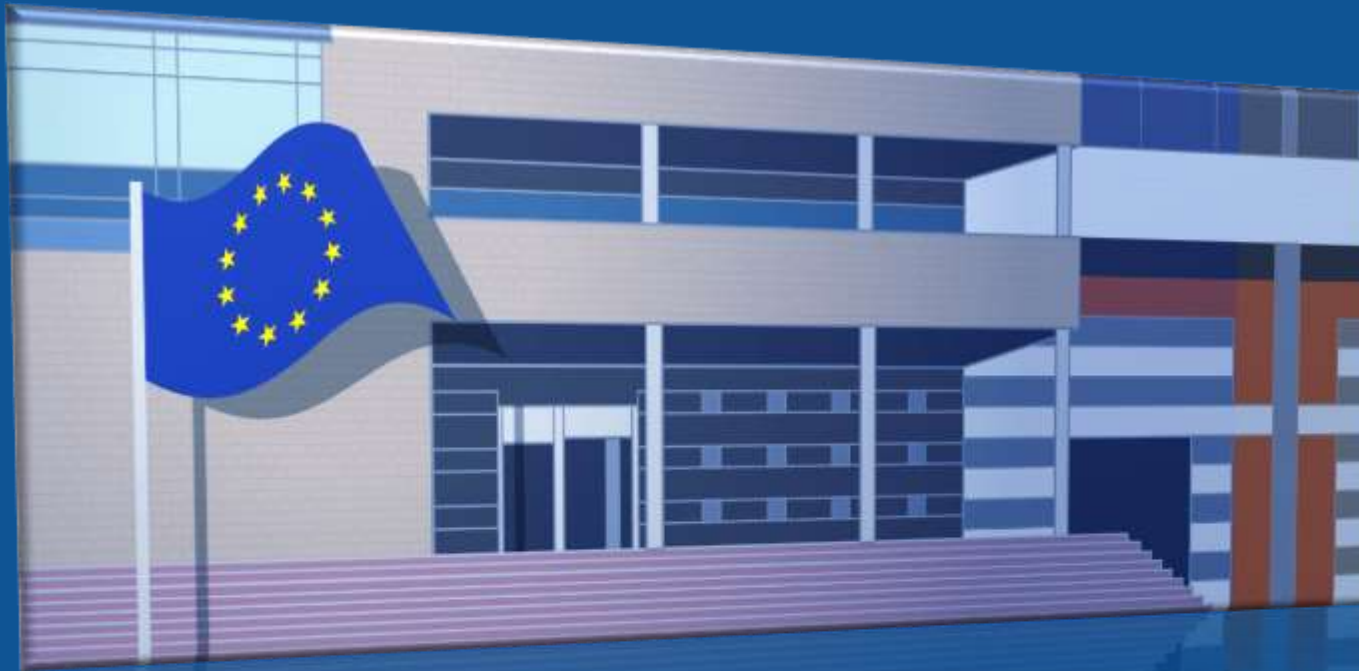# EUROSTAT : Statistical Training

High Level Seminar on integrating non-traditional
data sources in the National Statistical Systems

Santiago, Chile, October 1-2, 2018

Three main components

1. *The European Statistical Training Programme*

2. *The European Masters in Official Statistics*

3. *NTTS New Techniques and Technologies for Statistics*

1. The European Statistical Training Programme

ESTP: what?

- ***The purpose of the ESTP is*** to provide European statisticians with continuous training in new methods, techniques. best practices, new (European) concepts and definitions

- The programme is tailored to meet the specific needs of the European Statistical System (***ESS***)

- The programme is ***managed*** by Eurostat

- The ESTP ***complements*** national training schemes and meets the challenges of comparable statistics at European and international level

ESTP: the target group

- Officials and employees of NSIs or corresponding ONAs of EU Member States, EFTA countries, candidate countries and Eurostat can apply.

- In general, places are limited. The maximum number of places available depends upon the nature of the course. The majority of courses provide 24-30 places.

- Hands-on courses and IT courses are usually limited to 12-16 places due to the equipment requirements or specific training needs.

ESTP: 2018 ESTP programme

- based on training needs expressed by European NSIs and Eurostat

- in fields like data collection, survey methodology, economic and social statistics, data analysis, quality, dissemination and publication, IT applications etc.

- And to meet the professional needs of today, the 2018 programme includes courses on use of administrative data for statistical purposes, big data, visualisation and social data mining.

Some of the courses linked to using non-traditional data sources

- Introduction to Big Data and its tools
- Big Data Sources - Web, Social Media and Text Analytics
- Advanced Big Data Sources - Mobile Phone and other sensors
- Hands-on immersion on Big Data tools
- Social Data Mining
- Machine Learning Econometrics

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Introduction to Big Data and its tools

Main objectives of the course are:

- To introduce statisticians and managers to the concepts of Big Data, the challenges and opportunities, and the statistical methods and IT tools needed to make their use effective in official statistics.

- analyse in detail statistical methods and IT tools available for Big Data usage in Official Statistics

Big Data Sources - Web, Social Media and Text Analytics

Main objectives of the course:

- Learn how to apply web scraping and other techniques to collect texts from the web;

- Learn how to analyse and mine texts in order to determine their content and sentiment;

- Learn how to deal with privacy and personal data

Advanced Big Data Sources: mobile phone and other sensors

- Main objectives:

    Learn how to explore and analyse mobile phone and other sensor data and its metadata.

    Learn how to extract relevant information for statistical purposes from huge amounts of sensor data.

Social Data Mining

- Course objectives:
- To introduce students to the basic concepts of Social Media and Web technologies.
- To introduce students to the basic concepts and techniques of Data Mining and Machine Learning applied to Social Media analysis.
- To develop skills of using R as programming language for solving practical problems.
- To gain experience of in independent analysis and research.

Machine Learning Econometrics

- The objective of the course is to present and demonstrate innovative algorithm-based techniques for data analysis, with application to datasets from official statistics as well as from other sources (Big Data, text data)

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How much does it cost?

- Participation to all ESTP training courses is free-of-charge.
- Travel expenses and daily allowances are to be paid by the participant's home organisation

Can statisticians from non-EU/EFTA countries participate in the ESTP courses?

- Exceptionally, if there are places remaining, applicants from other administrations, international organisations and Statistical offices of non-European countries may be admitted. This is decided on an individual basis.

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ESTP more information

ESS Website

http://ec.europa.eu/eurostat/web/ess/about-us/estp

For countries outside the EU/EFTA, please address all applications to the ESTP contact point in Eurostat:

ESTAT-ESTP-Contacts@ec.europa.eu

EMOS

2. The European Masters in Official Statistics

EMOS: European Master in Official Statistics

EMOS is a network of Master programmes providing post-graduate education in the area of official statistics at the European level.

EMOS is a joint project of universities and data producers in Europe.

The network comprises 23 programmes in 15 countries.

Objectives of EMOS

- To strengthen collaboration between academics and producers of official statistics
- To help develop professionals able to work with European official data at different levels
- To familiarise graduates with the system of official statistics, production models, statistical methods and dissemination
- To reduce the gap between statistical theory and practice

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EMOS decision-making

- The ESS Committee is the highest decision making body:

  - awards the **EMOS Label** to Master programmes providing higher education in the area of official statistics

  - Label valid 4 years – renewable

  - appoints members to the EMOS Board.

EMOS learning outcomes

1. System of official statistics	• Official statistics: relevance and sources • International and European institutions • European Statistics Code of Practice
2. Production models and methods	• Different kinds of data sources! • Quality dimensions
3. Specific themes	• Economy & finance, population & social conditions, international trade, environment & energy, science & technology …
4. Statistical methods	• Statistical methods: sampling & estimation, index theory, econometrics … • Statistical programmes
5. Dissemi-nation	• Effective communication with different audiences • Confidentiality and disclosure control
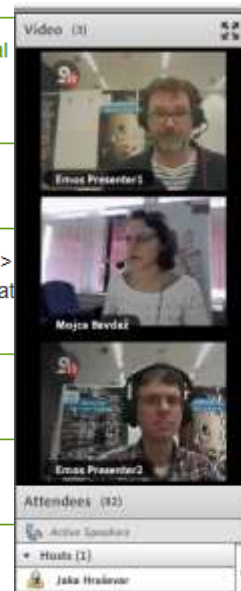
Webinars January-June 2018

7	4 April	How to integrate information from different data files? An introduction to statistical matching More >>> Eva Endres & Thomas Augustin, University of Munich
8	11 April	Introduction to statistical data editing More >>> Rudi Seljak, Statistical Office of the Republic of Slovenia
9	18 April	From books to social media, from general public to specific user groups More >>> Maja Pekeč, Croatian Bureau of Statistics, & Ewelina Konarska – Michalczyk, Stat Poland
10	16 May	Experimental statistics: new methods for new data More >>> Martin Karlberg, Eurostat, & Pierre Lamarche, INSEE
11	23 May	Statistical analysis of incomplete data More >>> Susanne Rässler, University of Bamberg
12	6 June	Reflections about the role of official statistics More >>> Walter J. Radermacher, University La Sapienza, Rome

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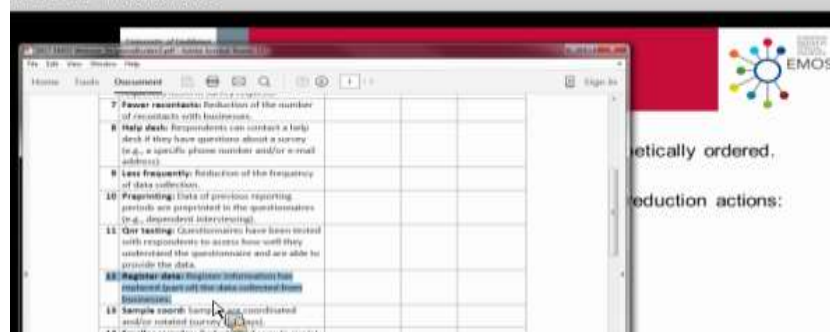# Some of the Universities involved

Complutense University Madrid

https://ec.europa.eu/eurostat/cros/content/complutense-university-madrid_en

University NOVA Lisbon

https://ec.europa.eu/eurostat/cros/content/university-nova-lisbon_en

University of Southampton

https://ec.europa.eu/eurostat/cros/content/university-southampton_en

More information

EMOS homepage

https://ec.europa.eu/eurostat/cros/content/emos_en

e-mail estat-emos@ec.europa.eu

NTTS Conference

3. NTTS Conference: New Techniques and Technologies for Statistics

NTTS Conference

- An international scientific conference on new techniques and methods for official statistics and the impact of new technologies on statistical collection, production and dissemination systems.

- Held every two years: next March 2019

- Organised by Eurostat

NTTS Conference

The purpose of the conference:

- To present results from research and innovation projects in official statistics

- to stimulate and facilitate the preparation of new innovative projects

- to enhance the quality and usefulness of official statistics

NTTS 2019

The 2019 NTTS conference will take place from **12 to 14 March 2019** in **Brussels, Belgium** (with satellite events taking place on 11 and 15 March).

- **Participation is free and open to all interested NSIs or researchers from any country, including Latin American and the Caribbean countries**

Topics

Track A. Data collection and integration

Track B. Estimation and analysis

Track C. Dissemination and visualisation

Track D. Statistics and Society – stakeholder relations

Track E. New methods for new (and existing) data sources

Track F. Enablers of modernisation

Track G. Environments, software and tools

Submission of Abstracts

The NTTS 2019 Scientific Committee welcomes the submission of abstracts (2-4 pages) for any of the conference topics.

Deadline: 15 October 2018

More information

https://ec.europa.eu/eurostat/web/ess/-/new-techniques-and-technologies-for-statistics-ntts-

Registration is expected to open in January 2019.

Thank you for your attention