

# Defining ad-hoc sampling designs for small area estimation

# PROGRAMMA

The master class sketches a proper statistical setting necessary to define the sampling design for Small Area Estimation (SAE). Since SAE techniques are commonly used in official statistics, relying on appropriate sampling designs to improve the quality of estimates becomes crucial. The sampling design is based on both allocation and sampling selection. The allocation step solves a non-standard problem necessary for finding the minimum-cost solution that controls the accuracy of the model-based small area estimator. The sampling selection ensures the planned sample sizes for each level of random effects affecting the variables of interest.

## 11:30 - 11:35

**Orietta Luzi:** Greetings and introductions to the Master class

#### 11:35 - 12:35

**Piero Demetrio Falorsi**: Defining ad-hoc sampling designs for small area estimation

**12:35 – 13:00** Discussion

#### Finalità

Researchers will learn how to design samples permitting accurate estimates for small domains

#### DESTINATARI

Experts on statistical methodology and Survey Managers.

#### DOCENTI

**Piero D. Falorsi**, formerly affiliated with Istat, served as the director of the Istat Directorate for Methodology and Statistical Process Design. Throughout his career, he has published extensively on survey sampling, survey design, and estimation from finite populations. Currently, he works as an international consultant and collaborates with the Department of Methods and Models for Economics, Territory, and Finance of University "La Sapienza", Rome.

#### DATA

6 Giugno 2025

#### Luogo

Aula Magna – Via Cesare Balbo 16

Teams

## INFO

Angela Rosa – Lucia Mazzucco

webinar@istat.it

Master class is promoted by the Advisory Committee for Statistical Methodologies in collaboration whit DCRU/CRS