



Workshop 3rd-4th February 2026 | University of Bergamo

STATISTICAL METHODS TO ADDRESS THE NEXUS BETWEEN MOBILITY AND AIR QUALITY

The event is part of the dissemination activities of the PRIN PNRR 2022 Project "SIGNUM: Study of mobile phone siGNals for the evalUation of the interconnections between Mobility and the environment in Lombardia"*

» Principal Investigator:

Rodolfo METULINI; Department of Economics; University of Bergamo

» Local Unit Coordinators:

Francesco BIANCALANI; AXES Laboratory; IMT School for Advanced Studies, Lucca

Maurizio CARPITA; Department of Economics and Management; University of Brescia

DAY 1 - 3rd February, 2026 |

19.00 Internal meeting for project participants

20.00 Welcome dinner @Il Circolino

DAY 2 - 4th February, 2026 | Aula Fornasa p.le S.Agostino, 2 - Bg

9.00 Welcome and greetings

» **Gianmaria Martini** (Director of the Department of Economics, University of Bergamo)

9.30 SESSION 1: Mobility and forecasting

Chair: » **Lorenzo Tedesco** (University of Bergamo)

» **Arianna Burzacchi** (Fondazione Bruno Kessler)
From mobility data to urban insights: building models of socio-technical systems for policy evaluation (Invited)

» **Mattia Cefis** (University of Brescia)

Statistical estimation and assessment of the risk of extreme traffic loads (co-author: Maurizio Carpita)

» **Sara Selvaggia Guerini** (University of Milano-Bicocca)
Forecasting traffic flow time series with Vine-Transform ARMA Copula models
(co-author: Rodolfo Metulini)

10.45 Coffee Break

11.15 SESSION 2: Mobility and air quality

Chair: » **Alessandro Fassò** (University of Bergamo)

» **Michela Cameletti** (University of Bergamo)
A spatio-temporal analysis of NO₂ concentrations in the case of policy interventions (Invited)

» **Francesco Biancalani** (IMT School, Lucca)
Measuring the effect of traffic on pollutants with ARIMA models: the case study of a city in Lombardia (co-authors: Roxana Adam, Rodolfo Metulini)

» **Muhammad Haroon Shaukat** (University of Bergamo)
Statistical models and algorithms for the analysis of human mobility data from smartphone applications

12.30 Lunch

14.00 SESSION 3: Environment and policy evaluations

Chair: » **Roberto Patuelli** (University of Bologna)

» **Giulio Grossi** (University of Firenze)

Direct, spillover and spatial effects of the tramway in Florence using panel data methods
(Invited)

» **Rodolfo Metulini** (University of Bergamo)

Eigenvector Spatial Filters Nuclear Norm Matrix Completion with Application to Air Quality Data

» **Paola Zuccolotto** (University of Brescia)

Interpreting water scarcity and flooding events in Scotland via the spatial clustering of catchments based on tail dependence
(co-authors: Giovanni De Luca, Luigi Spezia)

15.30 Greetings

Organizing Committee:

» **Rodolfo Metulini** (University of Bergamo)

» **Francesco Biancalani** (IMT School, Lucca)

» **Maurizio Carpita** (University of Brescia)

» **Francesco Finazzi** (University of Bergamo)

