2nd ITALIAN CONFERENCE ON ECONOMIC STATISTICS

STATISTICAL ANALYSIS OF COMPLEX ECONOMIC DATA: RECENT DEVELOPMENTS AND APPLICATIONS

7th February 2024

13:00 — **Welcome and Registration – Novoli Campus, D6**

14:00 — **Opening and Institutional Greetings – Novoli Campus, D6/0.18**

- **LUIGI BIGGERI**, Emeritus Professor, University of Florence
- **ALESSANDRA PETRUCCI**, Rector of the University of Florence
- **CORRADO CROCETTA**, SIS President
- **CARLA RAMPICHINI**, Head of the Department of Statistics, Computer Science, Applications "G. Parenti", University of Florence
- **ANDREA PACI,** President of the School of Economics and Management, University of Florence

14:30 — **Keynote speech – Novoli Campus, D6/0.18**

Chair: **LAURA GRASSINI**, University of Florence

ANNA GOTTARD, University of Florence
Florence Center for data science: rethinking data science

MATTEO MARIA PELAGATTI, University of Milano-Bicocca
The Bicocca Data Science Lab

15:30 — **Coffee break**

16:00 — **Invited session, Novoli Campus, D6/0.18**
Economic complexity in time series

Chair: **FABRIZIO CIPOLLINI**, University of Florence
Discussant: **GIAMPIERO GALLO,** Corte dei Conti and New York University in Florence

Optimal forecasts for multivariate Markov switching autoregressive models
MADDALENA CAVICCHIOLI, University of Modena and Reggio Emilia

Combining value-at-risk and expected shortfall measures
ANTONIO NAIMOLI, University of Salerno
ALESSANDRA AMENDOLA, University of Salerno
VINCENZO CANDILA, University of Salerno
GIUSEPPE STORTI, University of Salerno

Illiquidity tail risk and its economic determinants
DEMETRIO LACAVA, University of Messina
PAOLO SANTUCCI DE MAGISTRIS, Luiss University

17:15 — **Session of contributed papers (1) – Novoli Campus, D6/0.18**
Data complexity and digitalization

Chair: **DANIELE VIGNOLI**, University of Florence

Natural selection or strategic adaptation? Entrepreneurial digital technologies and survival of the species
DAVID B. AUDRETSCH, MARTINA ARONICA, MAKSIM BELITSKI, DAVIDE PIACENTINO

Analysis of the digital divide through Facebook data: a finite mixture approach
DALILA FAILLI, BRUNO ARPINO, MARIA FRANCESCA MARINO, EMILIO ZAGHENI

Probabilistic networks for bankruptcy risk prediction: a pilot study on Italian farms
ALESSANDRO MAGRINI, FEDERICO MATTIA STEFANINI

Business digitalization in Italy: a comprehensive analysis using supplementary fuzzy set approach
ILARIA BENEDETTI, FEDERICO CRESCENZI, TIZIANA LAURETI

Data and models: the role of statistical information systems
GIORGIO GARAU, FABRIZIO ANTOLINI, LUCIA SCHIRRU, GIANCARLO ONNIS, ADRIANO COLOSIMO

17:15   **Session of contributed papers (2) – Novoli Campus, D6/0.13**
Spatial data complexity

Chair: EMILIA ROCCO, University of Florence

Economic fitness of municipalities
ALESSANDRO BELLINA, ALESSIO BUMBEA, GIUSEPPE ESPA, ANDREA MAZZITELLI, MATTEO STRACCAMORE, ANDREA TACHELLA

Evaluating bias in spatial big data using H3 spatial indexing
VINCENZO NARDELLI, NICCOLÒ SALVINI, GIUSEPPE ARBIA

Using scanner data and the multisource approach in estimating Italian spatial price indices
ALESSANDRO BRUNETTI, ANNA DI FRANCO, BARBARA DRAMIS, TIZIANA LAURETI, FEDERICO POLIDORO, AGOSTINA ZANOLI

The spatio-temporal Fay-Herriot model using the state-space method: an application to Italian Lombard agrarian sub-regions
FELICETTA CARILLO, PAOLO MARANZANO, LAURA MARCIS, MARIA CHIARA PAGLIARELLA, RENATO SALVATORE

18:30   **Round-Table Talks – Novoli Campus, D6/0.18**
Statistical Measures for Economic Analysis: innovation, technology, methods

Moderator: ANDREA CICCARELLI, University of Teramo
Participants: ALESSANDRO FARAMONDI, Istat and ALESSANDRO RINALDI, G. Tagliacarne Research Center

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8th February 2024

8:30   **Registration – Novoli Campus, D6**

9:00   **Opening – Novoli Campus, D6/0.18**

- **FRANCESCA ADELE GIAMBONA**, University of Florence
- **PAOLO MARIANI**, University of Milano-Bicocca
- **VITTORIO NICOLARDI**, University of Bari

9:30   **Plenary session – Novoli Campus, D6/0.18**
Small area estimation approach and penalized power mean composite indicators to assess multidimensional poverty at local level

CHIARA GIGLIARANO, LIUC Cattaneo University

10:00   **Coffee break**

10:30   **Invited session, Novoli Campus, D6/0.18**
Application of large and complex data in spatial data analysis

Chair: ROSALIA CASTELLANO, Parthenope University of Naples
Discussant: LUCA SALVATI, Sapienza University of Rome

Adjusting for neighbouring effects in measuring industry coagglomeration
MARIA MICHELA DICKSON, University of Trento
GIUSEPPE ESPA, University of Trento
DIEGO GIULIANI, University of Trento
FRANCESCO SANTI, University of Trento

Exploring the complexities of modelling innovation spillovers: geographical contiguity vs economic proximity
EMMA BRUNO, Parthenope University of Naples
ROSALIA CASTELLANO, Parthenope University of Naples
GENNARO PUNZO, Parthenope University of Naples

Minimum income scheme in Italian regions. Evaluation of direct impacts and spatial spillovers
MARTINA ARONICA, University of Palermo
VALERIO GENOVESE, University of Palermo
DAVIDE PIACENTINO, University of Palermo

11:45   **Session of contributed papers (3) – Novoli Campus, D6/0.13**
             Big data applications

Chair: **GIOVANNI DE LUCA**, Parthenope University of Naples

Dimensions of corruption risks and profiles of winning companies over emergency periods
SIMONE DEL SARTO, NICCOLÒ SALVINI, MICHELA GNALDI

Initial coin offerings: can ESG mitigate underpricing?
ALESSANDRO BITETTO, PAOLA CERCHIELLO

Assessing food affordability in Italy: a spatial-temporal analysis using web-scraped data
 ILARIA BENEDETTI, FEDERICO CRESCENZI, TIZIANA LAURETI, LUIGI PALUMBO

Group detection in energy commodity markets through manifold-informed Wasserstein barycenter
CRISTIANO BALDASSARI, TIZIANA LAURETI, CARLO MARI

Saving food surplus or a new marketing tool? Exploring "Too Good To Go" at territorial level
TIZIANA LAURETI, LUIGI PALUMBO, LUCA SECONDI, MENGTING YU

11:45   **Session of contributed papers (4) – Novoli Campus, D6/0.18**
             Data complexity in the tourism sector

Chair: **FABRIZIO ANTOLINI**, SISTUR President

Mobile network data for exploring tourism length of stay in the municipalities of Lombardy
FRANCESCO SCOTTI, ANDREA FLORI, PIERCESARE SECCHI, MARIKA ARENA, GIOVANNI AZZONE

Tourism sustainability in news media data
CARLA GALLUCCIO, FRANCESCA ADELE GIAMBONA, ALESSANDRA PETRUCCI

Reconstructing an integrated data system for tourism: a case study of Italian regions
FABRIZIO ANTOLINI, IVAN TERRAGLIA, SAMUELE CESARINI

Navigating uncertainty: unveiling the key levers of financial sustainability as a resilience strategy in the luxury industry
FABIO DEMARIA, MADDALENA CAVICCHIOLI

Does browsing behaviour and buying attitude change on the basis of access device? The case of Sunweb.nl
FURIO URSO, NICOLA ARGENTINO, ANTONINO ABBRUZZO, MARIA FRANCESCA CRACOLICI, REZA MOHAMMADI, KEVIN PAK

11:45   **Session of contributed papers (5) – Novoli Campus, D6/0.14**
             Data complexity for environmental sustainability

Chair: **CATERINA MARINI**, University of Bari

A nonparametric three-variate regression analysis with application to circular economy
STEFANO BONNINI, MICHELA BORGHESI

Cluster analysis of climate change awareness across countries
GIANPAOLO ZAMMARCHI, CLAUDIO CONVERSANO

Modelling the topics of Italian tweets about the 2022 energy crisis
MATTEO FARNÈ, LAURA ZAVARISE

Estimating the effects of Iberian price cap using a Bayesian multivariate synthetic control approach
GIULIO GROSSI

Assessing gender equality and inclusivity: a survey within the Italian life sciences sector
LAURA BENEDAN, CINZIA COLAPINTO, PAOLO MARIANI, LAURA PAGANI, MARIANGELA ZENGA

13:00	**Lunch**

14:00 **Invited session, Novoli Campus, D6/0.18**
itENBIS and StEering Center Session
Statistics for Engineering and Technology: New Challenges and Last Developments

<u>Chair</u>: **ROSSELLA BERNI**, University of Florence
<u>Discussants</u>: **GABRIELE PATRIZI**, University of Florence
                NEDKA DECHKOVA NIKIFOROVA, University of Florence

Sustainability in lean & design for Six Sigma
GABRIELE ARCIDIACONO, Guglielmo Marconi University

Forecasting of correlated field-failures
ANTONIO PIEVATOLO, CNR-IMATI
FEDERICO CORTESE, CNR-IMATI

A statistical approach to the safe improvement of freight train efficiency
LUCIANO CANTONE, Tor Vergata University of Rome

15:30 **Session of contributed papers (6) – Novoli Campus, D6/0.18**
Statistical complexity for the analysis of enterprises

<u>Chair</u>: **FRANCESCA BASSI**, University of Padua

Cross-cultural implications in luxury brands social media advertising in China: a conceptual overview
FEDERICA CODIGNOLA

Bootstrapping methods on innovative start-ups
ALESSIO BUMBEA, GIUSEPPE ESPA, ANDREA MAZZITELLI, ALESSANDRO RINALDI

Licensing in Italy: consumer protection or rent-seeking problem? Evidence from a staggered difference in differences analysis using balance-sheet data of Italian pharmacies
FRANCESCO MAZZULLA, MERI RAGGI

Power laws in the shadow economy
MARIA FELICE AREZZO

Determinants of consumers' choice in Italian pasta market
SERGIO BRASINI, GIORGIO TASSINARI

15:30 **Session of contributed papers (7) – Novoli Campus, D6/0.14**
Data complexity for economic sustainability

<u>Chair</u>: **ELENA FABRIZI**, University of Teramo

The COVID19 impact on Italian firms' employment
ALESSANDRO ZELI, MATILDE BINI, LEOPOLDO NASCIA

Tail index regression forest
MARCO BEE, EMANUELE TAUFER, LUCA TRAPIN

Mortality and risk of cardiovascular diseases by age at retirement in three Italian cohorts
CHIARA ARDITO, GIUSEPPE COSTA, ANGELO D'ERRICO, ROBERTO LEOMBRUNI

Statistical inference for a quantile-based inequality indicator
SILVIA SCARPA, MARIA ROSARIA FERRANTE, STEFAN SPERLICH

New approaches for non-standard employment statistics using multi-source data. The Dutch and Italian experience
DANILA FILIPPONI, MAURICIO GARNIER-VILLARREAL, DIMITRIS PAVLOPOULOS, ROBERTA VARRIALE

15:30	**Session of contributed papers (8) – Novoli Campus, D6/0.13**

Temporal data complexity

Chair: **ANDREA MARLETTA**, University of Milano-Bicocca

An index of mental health: predicting the present
ERASMO VASSALLO

Assessing labor market shocks in Italy using a robust Hodrick-Prescott filter with structural breaks
PAOLO MARANZANO, MATTEO PELAGATTI

Multiple Seasonal ARIMA models
LUISA BISAGLIA, FRANCESCO LISI

HAR-based realized volatility clustering
PIERPAOLO D'URSO, RAFFAELE MATTERA, EDOARDO OTRANTO, LUCA SCAFFIDI DOMIANELLO

Impact analysis of PES in assisting young people in transitioning out of NEET status in Spain
ÒSCAR PRIETO-FLORES, OMEED AGAHI, RUTA BRAZIENE, RICARDO BORGES RODRIGUES, ANTONELLA ROCCA, PAOLO MAZZOCCHI, GIOVANNI DE LUCA, NIALL O'HIGGINS, VALENTINA MILENKOVA, DILYANA KERANOVA, MAI BEILMANN, NATALIA EDISHERASHVILI, MARIA ISABEL PELL, MIRIAM ROSA, LEONOR BETTENCOURT, ELENA MARTA, FRANCISCO SIMÕES

16:45	**Coffee break**

17:15	**Invited session, Novoli Campus, D6/0.18**

New data for the production of economic statistics

Chair: **ANNAMARIA BIANCHI**, University of Bergamo
Discussant: **TIZIANA LAURETI**, Tuscia University

Regional economic sentiment index estimation using Google Trends data: a methodological approach and application to Spain
JOSEP DOMÈNECH, Universitat Politécnica de Valéncia
ANDREA MARLETTA, University of Milano-Bicocca

Exploring International Trade in the recent geopolitical context, using ImporT ExpoRt NetwoRk Analysis (TERRA)
MAURO BRUNO, ISTAT
FEDERICO BROGI, ISTAT
ERIKA CERASTI, ISTAT
FABRIZIO DE FAUSTI, ISTAT
BARBARA GUARDABASCIO, University of Perugia

Quantification and impact on sales of customers' experience from reviews in social media
DOMENICA FIOREDISTELLA IEZZI, Tor Vergata University of Rome
ROBERTO MONTE, Tor Vergata University of Rome

18:30	**Plenary session – Novoli Campus, D6/0.18**

Bridging data, algorithms and human talent: the evolution of the data science job marketplace

ANDREA DE MAURO, Tor Vergata University of Rome

19:00	**Closing remarks – Novoli Campus, D6/0.18**

- **FRANCESCA ADELE GIAMBONA**, University of Florence
- **ANTONELLA ROCCA**, Parthenope University of Naples
- **ROSALIA CASTELLANO**, Parthenope University of Naples