



## 2nd ITALIAN CONFERENCE ON ECONOMIC STATISTICS

## STATISTICAL ANALYSIS OF COMPLEX ECONOMIC DATA: RECENT DEVELOPMENTS AND APPLICATIONS

7th February 2024

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

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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
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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*

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15:30      **Coffee break**

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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

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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

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**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

*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

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**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**

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

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**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

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**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

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**10:00**      **Coffee break**

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**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

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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

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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

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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

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**13:00**

**Lunch**

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**14:00**

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

Chair: **ROSSELLA BERNI**, University of Florence

Discussants: **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

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**15:30**

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

Chair: **FRANCESCA BASSI**, University of Padua

*Cross-cultural implications in luxury brands social media advertising in China*

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

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**15:30**

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

Chair: **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*

DANILO FILIPPONI, MAURICIO GARNIER-VILLARREAL, DIMITRIS PAVLOPOULOS, ROBERTA VARRIALE

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**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

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**16:45**

**Coffee break**

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**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 Politècnica de València

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

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**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

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**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
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