



BANCA D'ITALIA  
EUROSISTEMA



## 29<sup>th</sup> (EC)2 Conference on “Big Data Econometrics with Applications”

**Rome, December 13<sup>th</sup>-14<sup>th</sup>, 2018**

(Bank of Italy's Conference Center “Carlo Azeglio Ciampi” – Via Nazionale, 190, 00184 - Rome)

### PROGRAM

**Thursday, 13<sup>th</sup> December 2018**

8:30 – 9:00

**Registration**

9:00 – 9:15

**Welcome address**

**Salvatore Rossi** (Senior Deputy Governor, Bank of Italy)

9:15 – 9:25

**Opening address**

**Peter R. Hansen** (University of North Carolina at CH and (EC)2)

**Mehmet Caner** (Ohio State University)

**Giuseppe Cavaliere** (University of Bologna and SIDE-IEA)

9:25 – 10:10

**Keynote Lecture 1**

Chair: Stefano Siviero (Bank of Italy)

“Opening the Black Box of Central Bank Communication”

**Stephen Hansen** (University of Oxford).

10:10 – 10:40

**Coffee break**

10:40 – 12:20

**Session 1: Financial Econometrics 1**

Chair: Giuseppe Cavaliere (University of Bologna and SIDE-IEA)

***Factor Models for Portfolio Selection in Large Dimensions***

Gianluca De Nard (University of Zurich), Olivier Ledoit (University of Zurich),  
**Michael Wolf** (University of Zurich)

***A Multi-Factor Realized GARCH with An Application to the Fama-French Model***

**Ilya Archakov** (University of Vienna), Peter R. Hansen (University of North Carolina at CH and (EC)2), Asger Lunde (Aarhus University)

***Incremental Factor Model for High Frequency Observations with Large Dimension and Long Span***

**Ye Lu** (University of Sydney), Joon Y. Park (Indiana University)

***Vector Autoregressive Model with Dynamic Factors***

**Federico Carlini** (Università della Svizzera Italiana), Patrick Gagliardini (Università della Svizzera Italiana)

12:20 – 14:10

## Lunch and Poster Session 1

14:10 – 14:55

## Keynote Lecture 2

Chair: Malene Kallestrup-Lamb (Aarhus University)

**“Forecasting Macroeconomic Variables with Big-Data and Machine Learning Methods”**

**Marcelo Medeiros** ((Pontifical Catholic University of Rio de Janeiro))

14:55 – 16:35

## Session 2: High Dimensions in Econometrics

Chair: Mehmet Caner (Ohio State University)

***A regularization approach for estimation and variable selection in high dimensional regression***

**Yiannis Dendramis** (Athens University of Economics and Business), Liudas Giraitis (Queen Mary University), George Kapetanios (King’s College)

***Locally Robust Semiparametric Estimation***

**Juan Carlos Escanciano** (Universidad Carlos III de Madrid), Victor Chernozhukov (Massachusetts Institute of Technology), Whitney Newey (Massachusetts Institute of Technology)

***Recovering Social Networks from Panel Data: Identification, Simulations and an Application***

**Pedro C.L. Souza** (University of Warwick), Aura De Paula (UCL)

***Penalized maximum likelihood estimation of finite mixture models***

**Sofya Budanova** (Higher School of Economics, Moscow)

16:35 – 17:45

## Coffee Break and Poster Session 2

17:45 – 19:00

## Session 3: Time Series and Networks

Chair: Michael Wolf (University of Zurich)

***Community Detection in Large Vector Autoregressions***

Gudmundur Stefan Gudmundsson (CREATES and Aarhus University), **Christian Brownlees** (Universitat Pompeu Fabra)

***Large scale panel choice model with unobserved heterogeneity***

**Tomohiro Ando** (University of Melbourne), Jushan Bai (Columbia University)

***Bond Risk Premia with Machine Learning***

Daniele Bianchi (University of Warwick), **Matthias Buechner** (University of Warwick), Andrea Tamoni (London School of Economics)

20:00

## Dinner at the Restaurant L’Archeologia<sup>1</sup>

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<sup>1</sup> At 19:15 a bus will leave from the corner between Via Milano and Via Nazionale (50 m from the Conference venue) to reach the Restaurant “L’Archeologia” on Via Appia Antica 139, 00179 Roma RM).

## Friday, 14th December 2018

9:00 – 10:15

### Session 4: Social Media and Big Data for Policy

Chair: Cathy Yi-Hsuan Chen (Humboldt University)

#### ***Machine Learning in the Service of Policy Targeting: The Case of Public Credit Guarantees***

Monica Andini (Bank of Italy), Michela Boldrini (University of Bologna), **Emanuele Ciani** (Bank of Italy), Alessio D'Ignazio (Bank of Italy), Guido De Blasio (Bank of Italy), Andrea Paladini (University of Rome, La Sapienza),

#### ***Questioning the news about economic growth: Sparse forecasting using thousands of news-based sentiment values***

David Ardia (University of Neuchatel), **Keven Bluteau** (University of Neuchatel), Kris Boudt (Vrije Universiteit Amsterdam)

#### ***Can we measure inflation expectations using Twitter?***

**Cristina Angelico** (Bank of Italy), Marcello Miccoli (Bank of Italy), Juri Marcucci (Bank of Italy), Filippo Quarta (Bank of Italy)

10:15 – 10:50

### Coffee break

10:50 – 11:35

### Keynote Lecture 3

Chair: Mehmet Caner (Ohio State University)

#### **“Power in High-Dimensional Testing Problems”**

**Anders B. Kock** (University of Oxford).

11:35 – 13:15

### Session 5: Microeconometrics

Chair: Viktor Todorov (Northwestern University)

#### ***The Role of the Propensity Score in Fixed Effect Models***

Dmitry Arkhangelsky (CEMFI), Guido Imbens (Stanford University)

#### ***Central Bank Policies and Financial Markets: Lessons from the Euro Crisis***

Ashoka Mody (Princeton University), **Milan Nedeljkovic** (National Bank of Serbia and CESifo)

#### ***Lassoing and Boosting The Causal Effects of The Retirement Decision on Health***

**Nikolaj Udengaard Hansen** (Aarhus University), Malene Kallestrup-Lamb (Aarhus University), Anders B. Kock (University of Oxford)

#### ***Bayesian dynamic tensor regression***

Monica Billio (Ca' Foscari University of Venice), Roberto Casarin (Ca' Foscari University of Venice), Syliva Kaufmann (Study Center Gerzensee), **Matteo Iacopini** (Ca' Foscari University of Venice)

13:15 – 14:35

### Lunch and Poster Session 3

14:35 – 16:15

## **Session 6: Financial Econometrics 2**

Chair: Gianluca Cubadda (University of Rome, Tor Vergata)

### ***Nonparametric Option-Implied Volatility***

Viktor Todorov (Northwestern University)

### ***The Cross-sectional Distribution of Mutual Fund Skill***

Laurent Barras (McGill University), Patrick Gagliardini (Università della Svizzera Italiana), Oliver Scaillet (University of Geneva and Swiss Finance Institute)

### ***Detecting Regimes of Predictability in the U.S. Equity Premium***

David Harvey (University of Nottingham), Steve Leybourne (Nottingham University), Robert Sollis (Newcastle University), **Robert Taylor** (University of Essex)

### ***High-dimensional predictive regression in the presence of cointegration***

Bonsoo Koo (Monash University), Heather Anderson (Monash University), Myung Hwan Seo (Seoul National University), **Wenyang Yao** (Deakin University)

16:15 – 17:25

## **Coffee Break and Poster Session 4**

17:25 – 18:00

## **Round Table: Publishing in Econometrics**

Chair: Mehmet Caner (Ohio State University)

Peter R. Hansen (University of North Carolina at CH and (EC)2)

Juan Carlos Escanciano (Universidad Carlos III)

Viktor Todorov (Northwestern University)

Robert Taylor (University of Essex)

Giuseppe Cavaliere (University of Bologna and SIDE-IEA)

Marcelo Medeiros (Pontifical Catholic University of Rio de Janeiro)

18:00

## **Farewell and Aperitivo**

Chairs: Peter R. Hansen (University of North Carolina at CH and (EC)2)

Giuseppe Cavaliere (University of Bologna and SIDE-IEA)

Mehmet Caner (Ohio State University)

**The Scientific committee:** Mehmet Caner (Chair, Ohio State University)

Giuseppe Bruno (Bank of Italy)

Giuseppe Cavaliere (University of Bologna and SIDE-IEA)

Cathy Yi-Hsuan Chen (Humboldt University)

Mario Forni (University of Modena and Reggio Emilia)

Malene Kallestrup-Lamb (Aarhus University)

Juri Marcucci (Bank of Italy)

Marcelo Medeiros (Pontifical Catholic University of Rio de Janeiro)

## Poster Session 1

- 1) “*An automated approach towards sparse single-equation cointegration modelling*”, by Stephan Smeekes\* and **Etienne Wijler**\*;  
\*Maastricht University
- 2) “*Prediction Bands for Yield Curves: A Dynamic Functional Factor Model Approach*”, by **Sven Otto**\* and Nazarii Salish<sup>◇</sup>;  
\*University of Cologne; <sup>◇</sup>Universidad Carlos III de Madrid
- 3) “*External Validity in Fuzzy Regression Discontinuity Designs*”, by **Marinho Bertanha**\* and Guido Imbens<sup>◇</sup>;  
\*University of Notre Dame; <sup>◇</sup>Stanford University
- 4) “*Detection of rare events: a machine learning toolkit with an application to banking crises*”, by **Jerome Coffinet**\* and Jean-Noel Kien\*;  
\*Bank of France
- 5) “*On LASSO for Predictive Regression*”, by Ji Hyung Lee\* and **Zhentao Shi**<sup>◇</sup>;  
\*University of Illinois; <sup>◇</sup>The Chinese University of Hong Kong
- 6) “*Discover Regional and Size Effects in Global Bitcoin Blockchain via Sparse-Group Network AutoRegressive Modeling*”, by Ying Chen\*, **Simon Trimborn**\* and Jiejie Zhang\*;  
\*National University of Singapore
- 7) “*Testing for observation-dependent regime switching in mixture autoregressive models*”, by **Mika Meitz**\* and Pentti Saikkonen<sup>◇</sup>;  
\*University of Helsinki
- 8) “*Inference in Misspecified Asset Pricing Models using a Large Matching Model*”, by **Bertille Antoine**\*;  
\*Simon Fraser University
- 9) “*Measuring Retail Trade Using Card Transactional Data*”, by Diego Bodas\*, Juan R. Garcia\*, Juan Murillo\*, Matias Pacce<sup>◇</sup>, **Tomas Rodrigo**\*, Juan De Dios Romero\*, Pep Ruiz De Aguirre\*, Camilo Ulloa\* and Heribert Valero\*;  
\*BBVA; <sup>◇</sup>Bank of Spain

## Poster Session 2

- 1) “*Granger causality testing in mixed-frequency VARs with possibly (co)integrated processes*”, by Alain Hecq\* and **Thomas Götz**<sup>◊</sup>;  
\*Maastricht University; <sup>◊</sup>Deutsche Bundesbank
- 2) “*On The Modeling of Covariance Matrices: A Generalized Fisher Transformation*”, by Ilya Archakov\* and **Peter R. Hansen**<sup>◊</sup>;  
\*University of Vienna; <sup>◊</sup>University of North Carolina at CH and (EC)2
- 3) “*Central Bank Communication and the Yield Curve: A Semi-Automatic Approach using Non-Negative Matrix Factorization*”, by **Ancil Crayton**\*;  
\*University College Dublin
- 4) “*Measuring Property Price Variations Using Online Property Advertisements*”, by **Indranil Gayen**\*;  
\*Reserve Bank of India
- 5) “*News And Consumer Card Payments*”, by Guerino Ardizzi\*, **Simone Emiliozzi**\*, Juri Marcucci\* and Libero Monteforte\*;  
\*Bank of Italy
- 6) “*Quantifying social segregation in large-scale networks*”, by **Jo Thori Lind**\*;  
\* University of Oslo
- 7) “*Monetary Policy across Space and Time*”, by **Katerina Petrova**\*;  
\*University of St Andrews
- 8) “*Regime Changes in Large Dimensional Factor Models: A New Test with an Application to Portfolio Choice*”, by **Daniele Massacci**\*;  
\*Bank of England
- 9) “*Estimating a Large-Dimensional Factor Model with Noisy High-Frequency Data*”, by Yucheng Sun\* and **Wen Xu**\*;  
\*Capital University of Economics and Business
- 10) “*Concentration and Internet Advertising: The Rise of Buyer Power*”, by Francesco Decarolis\* and **Gabriele Rovigatti**<sup>◊</sup>;  
\*Bocconi University; <sup>◊</sup>Bank of Italy

## Poster Session 3

- 1) “*Cluster-robust Standard Errors for Linear Regression Models with Many Controls*”, by **Riccardo D’Adamo**<sup>\*</sup>;  
<sup>\*</sup> University College London
- 2) “*Shapley regressions: A tool for statistical inference on machine learning models*”, by **Andreas Joseph**<sup>\*</sup>;  
<sup>\*</sup> Bank of England
- 3) “*The Heterogeneous Impact of Sugar Taxes on Cola Demand across Different Household Types*”, by **Valerio Serse**<sup>\*</sup>;  
<sup>\*</sup> Université Catholique de Louvain
- 4) “*Inflation and Economic Growth: Random Forest Methodology*”, by **Sidika Basci**<sup>\*, $\diamond$</sup> ; Houcine Senoussi <sup>$\diamond$</sup> ;  
<sup>\*</sup> Yildirim Beyazit University;  <sup>$\diamond$</sup>  EISTI, Cergy, France
- 5) “*Variance Dynamics in Term Structure Models*”, by **Cisil Sarisoy**<sup>\*</sup>;  
<sup>\*</sup> Board of Governors of the Federal Reserve System
- 6) “*ICOs success drivers: a textual and statistical analysis*”, by Paola Cerchiello<sup>\*</sup> and **Anca Mirela Toma**<sup>\*</sup>;  
<sup>\*</sup> University of Pavia
- 7) “*Loan screening and default prediction with Machine Learning and Deep Neural Networks*”, by **Jeremy Turiel**<sup>\*</sup> and Tomaso Aste<sup>\*</sup>;  
<sup>\*</sup> University College London
- 8) “*A regularized structural factor-augmented vector autoregressive model*”, by **Maurizio Daniele**<sup>\*</sup> and Julie Schnaitmann<sup>\*</sup>;  
<sup>\*</sup> University of Konstanz

## Poster Session 4

- 1) “*Home is where the ad is: online interest proxies housing demand*”, by Marco Pangallo\* and **Michele Loberto**<sup>◊</sup>;  
\*University of Oxford; <sup>◊</sup>Bank of Italy
- 2) “*An Orthogonal Approach to Inference for Deep Learning*”, by **Alex Parret**\*;  
\*University of California, Irvine
- 3) “*Granger Causality Testing in High-Dimensional VARs: a Post-Double-Selection Procedure*”, by Alain Hecq\*, **Luca Margaritella**\* and Stephan Smeekes\*;  
\*Maastricht University
- 4) “*Cointegration in functional autoregressive processes*”, By **Massimo Franchi**\* and Paolo Paruolo<sup>◊</sup>;  
\*Sapienza University of Rome; <sup>◊</sup>European Commission – Joint Research Centre
- 5) “*Semiparametric estimation of the relationship between recessions and health*”, by **Marta Boczon**\*;  
\*University of Pittsburgh
- 6) “*A dynamic factor model approach to incorporate Big Data in state space models for official statistics*”, by **Caterina Schiavoni**\*, Franz Palm\*, Stephan Smeekes\* and Jan van den Brakel\*;  
\*Maastricht University
- 7) “*Representation, Estimation and Forecasting of the Multivariate Index-Augmented Autoregressive Model*”, by **Gianluca Cubadda**\* and Barbara Guardabascio<sup>◊</sup>;  
\*University of Rome, Tor Vergata; <sup>◊</sup>Istat
- 8) “*Classifying Firms with Text Mining*”, by **Giacomo Caterini**\*;  
\*University of Trento

## CONFERENCE INFORMATION:

**Presentations in Plenary Sessions** are expected to last 20 minutes, allowing 5 minutes for general discussion.

**Poster Sessions:** Poster should be **B1**, i.e. **70 cm x 100 cm** either portrait or landscape.

**Conference venue:** Centro Convegni "Carlo Azeglio Ciampi", via Nazionale 190, 00184 Rome

The **social dinner** will take place at the restaurant:

“L’Archeologia” on Via Appia Antica 139, 00179 Roma RM.

There will be a **bus**:

- from the corner between Via Milano and Via Nazionale (50 m from the Conference venue) to the restaurant, **leaving at 19:15**.
- from the restaurant to the conference venue **at around 23:00**.