



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 – 10:00

**Keynote Lecture 1**

Chair: Juri Marcucci (Bank of Italy)

**“Opening the Black Box of Central Bank Communication”**

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

10:00 – 10:30

**Coffee break**

10:30 – 12:10

**Session 1: Financial Econometrics 1**

Chair: Giuseppe Cavaliere (University of Bologna)

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

Gianluca De Nardi (University of Zurich), Olivier Lodoit (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 Hansen (University of North Carolina at CH), Asger Lunde (Aarhus University)

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

**Ye Lu** (University of Sydney)

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

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

- 12:10 – 14:00 **Lunch and Poster Session 1**
- 14:00 – 14:45 **Keynote Lecture 2**  
 Chair: Malene Kallestrup-Lamb (Aarhus University)  
**“Forecasting Macroeconomic Variables with Big-Data and Machine Learning Methods”**  
**Marcelo Medeiros** (PUC RIO)
- 14:45 – 16:25 **Session 2: High Dimensions in Econometrics**  
 Chair: Viktor Todorov (Northwestern 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** (National Research University, Russian Federation)
- 16:25 – 17:45 **Coffee Break and Poster Session 2**
- 17:45 – 19:00 **Session 3: Time Series and Networks**  
 Chair: Gianluca Cubadda (University of Rome, Tor Vergata)
- Community Detection in Large Vector Autoregressions***  
**Gudmundur Stefan Gudmundsson** (CREATES and Aarhus University), **Christian Brownlees** (Universitat Pompeu Fabra)
- Central Bank Policies and Financial Markets: Lessons from the Euro Crisis***  
**Milan Nedeljkovic** (National Bank of Serbia and CESifo)
- 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

8:30 – 10:10

### Session 4: Financial Econometrics 2

Chair: Marcelo Medeiros (Pontifical Catholic University of Rio de Janeiro)

#### ***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***

Heather Anderson (Monash University), Myung Hwan Seo (Seoul National University), Wenying Yao (Deakin University)

10:10 – 10:45

### Coffee break

10:45 – 11:30

### Keynote Lecture 3

Chair: Mehmet Caner (Ohio State University)

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

Anders B. Kock (University of Oxford).

11:30 – 13:10

### Session 5: Microeconometrics

Chair: Mehmet Caner (Ohio State University)

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

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

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

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

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

Nikolaj Hansen (Aarhus University), Malene Kallestrup Lamb (Aarhus University)

#### ***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)

13:10 – 14:45

### Lunch and Poster Session 3

14:45 – 15:30

#### **Keynote Lecture 4**

Chair: Michael Wolf (University of Zurich)

**“Estimating nonparametric structural relationships using machine learning”**

**Matthew Harding** (University of California, Irvine)

15:30 – 16:00

#### **Coffee Break**

16:00 – 17:40

#### **Session 6: Social Media and Big Data for Policy**

Chair: Cathy Yi-Hsuan Chen (Humboldt University)

##### ***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)

##### ***Deriving the Inflation Risk Premium by Use of Textual Analysis***

**Michael Althof** (Humboldt University), **Cathy Chen** (Humboldt University)

##### ***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)

##### ***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),

17:40

#### **Farewell**

Chair: Peter R. Hansen (University of North Carolina at CH)

## Poster Session 1

- 1) “*An automated approach towards sparse single-equation cointegration modelling*”,  
by Stephan Smeekes\* and **Etienne Wijler**\*;  
\*Maastricht University
- 2) “*Home is where the ad is: online interest proxies housing demand*”,  
by Marco Pangallo\* and **Michele Loberto**◊;  
\*University of Oxford; ◊Bank of Italy
- 3) “*Prediction Bands for Yield Curves: A Dynamic Functional Factor Model Approach*”,  
by **Sven Otto**\* and Nazarii Salish◊;  
\*University of Cologne; ◊Universidad Carlos III de Madrid
- 4) “*External Validity in Fuzzy Regression Discontinuity Designs*”,  
by **Marinho Bertanha**\* and Guido Imbens◊;  
\*University of Notre Dame; ◊Stanford University
- 5) “*Detection of rare events: a machine learning toolkit with an application to banking crises*”,  
by **Jerome Coffinet**\* and Jean-Noel Kien\*;  
\*Bank of France
- 6) “*On LASSO for Predictive Regression*”,  
by Ji Hyung Lee\* and **Zhentao Shi**◊;  
\*University of Illinois; ◊The Chinese University of Hong Kong
- 7) “*Concentration and Internet Advertising: The Rise of Buyer Power*”,  
by Francesco Decarolis\* and **Gabriele Rovigatti**◊;  
\*Bocconi University; ◊Bank of Italy
- 8) “*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
- 9) “*Testing for observation-dependent regime switching in mixture autoregressive models*”,  
by **Mika Meitz**\* and Pentti Saikkonen◊;  
\*University of Helsinki
- 10) “*Inference in Misspecified Asset Pricing Models using a Large Matching Model*”,  
by **Bertille Antoine**\*;  
\*Simone Fraser University
- 11) “*An Orthogonal Approach to Inference for Deep Learning*”,  
by **Alex Parret**\*;  
\*University of California, Irvine
- 12) “*Measuring Retail Trade Using Card Transactional Data*”,  
by Diego Bodas\*, Juan R. Garcia\*, Juan Murillo\*, Matias Pacce◊, **Tomas Rodrigo**\*, Juan De Dios Romero\*,  
Pep Ruiz De Aguirre\*, Camilo Ulloa\* and Heribert Valero\*;  
\*BBVA; ◊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) “*Monetary Policy across Space and Time*”,  
by **Katerina Petrova**\*;  
\*University of St Andrews
- 3) “*On The Modeling of Covariance Matrices: A Generalized Fisher Transformation*”,  
by Ilya Archakov\* and **Peter Hansen**<sup>◊</sup>;  
\*University of Vienna; <sup>◊</sup>University of North Carolina and Copenhagen Business School
- 4) “*Central Bank Communication and the Yield Curve: A Semi-Automatic Approach using Non-Negative Matrix Factorization*”,  
by **Ancil Crayton**\*;  
\*University College Dublin
- 5) “*Measuring Property Price Variations Using Online Property Advertisements*”,  
by **Indranil Gayen**\*;  
\*Reserve Bank of India
- 6) “*News And Consumer Card Payments*”, by Guerino Ardizzi\*, **Simone Emiliozzi**\*, Juri Marcucci\* and Libero Monteforte\*;  
\*Bank of Italy
- 7) “*Quantifying social segregation in large-scale networks*”,  
by **Jo Thori Lind**\*;  
\* University of Oslo
- 8) “*Semiparametric estimation of the relationship between recessions and health*”,  
by **Marta Boczon**\*;  
\* University of Pittsburgh
- 9) “*Granger Causality Testing in High-Dimensional VARs: a Post-Double-Selection Procedure*”,  
by Alain Hecq\*, **Luca Margaritella**\* and Stephahn Smeekes\*;  
\*Maastricht University
- 10) “*Regime Changes in Large Dimensional Factor Models: A New Test with an Application to Portfolio Choice*”,  
by **Daniele Massacci**\*;  
\*Bank of England
- 11) “*Cointegration in functional autoregressive processes*”,  
By **Massimo Franchi**\* and Paolo Paruolo<sup>◊</sup>;  
\*Sapienza University of Rome; <sup>◊</sup>European Commission – Joint Research Centre
- 12) “*Estimating a Large-Dimensional Factor Model with Noisy High-Frequency Data*”,  
by Yucheng Sun\* and **Wen Xu**\*;  
\*Capital University of Economics and Business

## Poster Session 3

- 1) “*Regularising the factor zoo with OWL*”,  
by **Chuanping Sun** ;  
\*Queen Mary, University of London
- 2) “*Cluster-robust Standard Errors for Linear Regression Models with Many Controls*”,  
by **Riccardo D’Adamo** ;  
\* University College London
- 3) “*Shapley regressions: A tool for statistical inference on machine learning models*”,  
by **Andreas Joseph** ;  
\*Bank of England
- 4) “*Real-time estimation of unemployment with dynamic factor and state space models*”,  
by **Caterina Schiavoni**\*, Franz Palm\*, Stephan Smeekes\* and Jan van den Brakel\* ;  
\*Maastricht University
- 5) “*The Heterogeneous Impact of Sugar Taxes on Cola Demand across Different Household Types*”,  
by **Valerio Serse** ;  
\*Université Catholique de Louvain
- 6) “*Inflation and Economic Growth: Random Forest Methodology*”,  
by **Sidika Basci** ;  
\*Yildirim Beyazit University
- 7) “*Variance Dynamics in Term Structure Models*”,  
by **Cisil Sarisoy** ;  
\*Board of Governors of the Federal Reserve System
- 8) “*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
- 9) “*ICOs success drivers: a textual and statistical analysis*”,  
by Paola Cerchiello\* and **Anca Mirela Toma** ;  
\*University of Pavia
- 10) “*Loan screening and default prediction with Machine Learning and Deep Neural Networks*”,  
by **Jeremy Turiel**\* and Tomaso Aste\* ;  
\*University College London
- 11) “*A regularized structural factor-augmented vector autoregressive model*”,  
by **Maurizio Daniele**\* and Julie Schnaitmann\* ;  
\*University of Konstanz
- 12) “*Classifying Firms with Text Mining*”,  
by **Giacomo Caterini** ;  
\*University of Trento

The Scientific committee: Mehmet Caner (Chair, Ohio State University)  
Giuseppe Bruno (Bank of Italy)  
Giuseppe Cavaliere (University of Bologna)  
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)