MASSIMO FRANCHI
Curriculum Vitae

Associate Professor of Econometrics
Department of Statistical Sciences
Sapienza University of Rome

Part II - EDUCATION

- 2004 July: **PhD in Economics**, Sapienza University of Rome. Supervisor: Prof. M. Lippi.
- 2001 August: **Summer school** Scuola Matematica Interuniversitaria (SMI), Perugia.
- 2000 July: **MSc in Economics**, Universitat Pompeu Fabra (UPF), Barcelona, Spain.
- 1999 April: **Laurea (110 e lode) in Economics,** Sapienza University of Rome. Supervisor: Prof. G. Gandolfo.
- 1993 July: **Maturità scientifica** (56/60), Liceo Scientifico Statale Archimede, Roma.

Part III - APPOINTMENTS

IIIA - ACADEMIC APPOINTMENTS

- 2015 September - today: **Associate Professor of Econometrics** at Department of Statistical Sciences, Sapienza University of Rome.
- 2018 August - September: **Visiting Professor** at Department of Economics, University of California San Diego. Invitation by Prof. B. Beare.
- 2017 January - February: **Visiting Professor** at Department of Economics, Indiana University. Invitation by Prof. J. Park.
- 2013 September - 2014 August: **Assistant Professor (temporary position)** at Department of Economics, University of Lausanne. Invitation by Prof. R. Lalive.
- 2008 November – 2015 August: **Assistant Professor of Econometrics** at Department of Statistical Sciences, Sapienza University of Rome (on leave 2008 – 2009, 2013 - 2014).
- 2007 October – 2009 October: **Carlo Giannini Fellow in Econometrics** at Department of Economics, University of Insubria. Collaboration with Prof. P. Paruolo.
- 2007 January - August: **Associate Professor (temporary position)** at Institute for Mathematical Sciences, University of Copenhagen. Invitation by Prof. A. Rahbek.
- 2006 September – December: **Visiting Professor** at Department of Economics, Universitat Jaume I. Invitation by Prof. J. Ordonez.
- 2005 September – 2006 August: **Post Doc** at Department of Economics, University of Copenhagen. Collaboration with Prof. K. Juselius.

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- 2004 September – 2005 August: **Marie Curie Fellow** at Department of Economics, University of Copenhagen. Supervision by Prof. K. Juselius.
- 2003 - 2007: **Post doc** at Department of Economic Sciences, Sapienza University of Rome. Supervision by Prof. E. Zaghini.

IIIB - OTHER APPOINTMENTS

- 2002 - 2004 - **Borsista** CONSOB for the project: "Analisi del funzionamento dei Sistemi di Scambi Organizzati (SSO)". CONSOB supervisor: Dott. Barbara Leoni.

Part IV – TEACHING EXPERIENCE (IT = in italian, ENG = in english)

- **Sapienza University of Rome,** Department of Statistical Sciences:

2018 – 2019: Econometria (IT, 9 ECTS), Econometria Finanziaria (IT, 9 ECTS), Financial Econometrics (ENG, 9 ECTS).
2016 – today: Econometria (IT, 9 ECTS), Econometria Finanziaria (IT, 9 ECTS).
2008 – today (on leave 2013 – 2014): Econometria (IT, 9 ECTS).
2012 - 2013: Quantitative Marketing Analysis (IT, 9 ECTS).
2009 - 2010: Statistics for Business (IT, 6 ECTS).

- **Sapienza University of Rome,** Department of Economic Sciences:

2003 - 2009: Econometria (IT, 40 hours, PhD).

- **University of Lausanne,** Department of Economics:

2013 - 2015: Statistics and Econometrics II (ENG, 9 ECTS), Econometrics (ENG, 9 ECTS).

- **LUISS,** Department of Economics:

2011 – 2015: Serie Storiche ed Econometria Finanziaria (IT, 9 ECTS).

- **EIEF**:

2008 – 2018: Topics in VAR Modeling (ENG, 20 hours, PhD).

- **CIdE Summer School in Econometrics:**

2008 - 2009: Cointegration (ENG, 20 hours, PhD).

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- **University of Copenhagen,** Institute for Mathematical Sciences:

2006 - 2007: Econometrics (ENG, 9 ECTS) and Advanced Econometrics (ENG, 3 ECTS).

- **University of Lecce**, Dipartimento di Economia:

2005 - 2007: Cointegrazione (IT, 20 hours, PhD) e MATLAB Summer School (ENG, TA, PhD).

Part V – SOCIETY MEMBERSHIP, UNIVERSITY SERVICE, REFEREE ACTIVITY and TALKS at CONFERENCES AND SEMINARS

- SOCIETY MEMBERSHIP

2009 - today: member of Società Italiana di Econometria and Econometric Society (2004 – 2008).

- UNIVERSITY SERVICE

2019 - today: Presidente del Corso di Studio di Statistical Methods and Application (SMA), Department of Statistical Sciences, Sapienza University of Rome.

2015 - today: Member of the working group for the revision of the Degree in Actuarial Sciences, Department of Statistical Sciences, Sapienza University of Rome.

PhD COMMITTEE MEMBERSHIP:

2017: 1) Aarhus University, Denmark, 2) LUISS, Rome.

2015: 1) LUISS, Rome, 2) Sapienza University of Rome, 3) Università di Bologna.

- REFEREE ACTIVITY

Annals of Operations Research, Econometric Theory, Econometrics & Statistics, Econometrics, Economics Letters, Empirical Economics, Economics E-journal, International Journal of Central Banking, Journal of Econometrics, Journal of Business & Economic Statistics, Journal of Multivariate Analysis, Journal of Economic Dynamics and Control, Journal of the Korean Statistical Society, Metron, Oxford Bullettin of Economics and Statistics, Southern Economic Journal.

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- CONFERENCES AND SEMINARS

2019: ICEEE, Lecce, January.

2018: NBER-NSF Time Series Conference, San Diego, September, University of Bologna, November, JRC, Ispra, November, 29th (EC)^2 Conference, Rome, December.

2017: 3rd Vienna Workshop on High Dimensional Time Series in Macroeconomics and Finance, Vienna, June, Department of Economics, Indiana University, January.

2016: 10th International Conference on Computational and Financial Econometrics (CFE), Sevilla, December, Kick-off Workshop of the DFG Project: Estimation and Inference Theory for Cointegrated Processes in the State, Technische Universitat Dortmund, January.

2015: 9th International Conference on Computational and Financial Econometrics (CFE), London, December, ICEEE, Salerno, January.

2014: University of Copenhagen, November, Sapienza University of Rome, April.

2013: University of Lausanne, December, University of Lausanne, June, University of St. Andrews, March, ICEEE, Genova, January.

2012: 6th International Conference on Computational and Financial Econometrics (CFE), Oviedo, University of Bonn, October, EIEF, September, Conference in Memory of Carlo Giannini, April.

2011: 17th ILAS Conference, Braunschweig, August, ICEEE, Pisa, January.
2010: 6th Eurostat Colloquium on Modern Tools for Business Cycle Analysis, Luxembourg, September, Conference in Memory of Carlo Giannini, January.

2009: EIEF, November, Econometrics, Time Series Analysis and Systems Theory, Conference in Honor of Manfred Deistler, Wien, June, ICEEE, Ancona, January.

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2008: Joint Research Centre, Ispra , October, Factor Structures for Panel and Multivariate Time Series Data Conference, Maastricht, September, NBER-NSF Time Series Conference, Arhus, September, Università di Padova, September, University of Copenhagen, September, European Econometric Society Meeting (ESEM), Milano, August, Conference in Memory of Carlo Giannini, Bergamo, January.

2007: University of Insubria, October, Tinbergen Institute Conference, Rotterdam, March, ICEEE, Rimini, January.

2006: University of Maastricht, January, EIEF, December, Universitat Jaume I, Castellon de la Plana, October, European Econometric Society Meeting (ESEM), Vienna, August, Università Cattolica di Milano, May, University of Arhus, May, University of Verona, April, University of Insubria, March, University of Copenhagen, March, Summer Econometric Workshop, Arhus, August, Cointegrated VAR model: methods and applications, Copenhagen, June.

2005: University of Urbino, April, University of Brescia, April, University of Lecce, April, ICEEE, Venezia, January.

2004: Universitat Jaume I, Castellon de la Plana, October, SIE, Bologna, October, Econometric Methods for the Modelling of Nonstationary Data, Policy Analysis and Forecasting (EMM) Annual Conference, Alghero, September, University of Pisa, June, University of Copenhagen, June, Econometric Study Group (ESG) Annual Conference, Bristol, July.

2003: Statistical Modelling of Discrete Structures in Economics: Methods and Applications, Munich, June, Spring Meeting of Young Economists (SMYE), Leuven, April.

2002: Computing in Economics and Finance (CEF), Aix-en-Provence, June 2002.

Part VI – FUNDING INFORMATION

- 2018: **Principal Investigator** - JRC Exploratory Research Activity "A feasibility study on the functional time series dynamic analysis of income distributions", with Prof. P. Paruolo.
- 2017: **Principal Investigator** - Sapienza University of Rome grant for the project "Econometric Analysis of Functional Time Series", with Prof. F. Battaglia.

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- 2016: Sapienza University of Rome grant for the project "Analisi statistica di serie storiche multivariate di grandi dimensioni", with Proff. F. Battaglia, S. Fachin and B. Maggi.
- 2012: **Principal Investigator** - EIEF grant for the project "DSGE Models, State Space Representations and VARs", with Prof. P. Paruolo.
- 2011: Sapienza University of Rome grant for the project "Metodi di ottimizzazione per la selezione di variabili e parametri", with Proff. F. Battaglia, S. Fachin and B. Maggi.
- 2010-2011: PRIN-Cofin for the project "Forecasting economic and financial time series: understanding the complexity and modelling structural change"; national coordinator: Prof. T. Proietti.
- 2010: Sapienza University of Rome grant for the project "Previsioni basate sul modello dinamico a fattori di grandi dimensioni: approccio nel dominio frequenziale", with Proff. S. Fachin, M. Lippi e B. Maggi.
- 2009: Sapienza University of Rome grant for the project "Statistical analysis of spatial and temporal dependencies in economic data", with Prof. E. Patacchini.
- 2007 - 2009 Carlo Giannini Fellowship for research in Econometrics at University of Insubria, Italy.
- 2004 September – 2005 August: Marie Curie Fellowship for PhD studies at University of Copenhagen, Denmark.
- 1999 - 2000: Fondazione Luigi Einaudi fellowship for the MSc studies at Universitat Pompeu Fabra, Spain.

Part VII – RESEARCH ACTIVITIES

My research activity is in the field of multivariate time series and in particular concerns representation, estimation and inference in the presence of non-stationary processes. The connections with linear algebra and the theory of operators are numerous and some of my works are published in mathematical journals. Recently my interest has been addressed to the functional case, in which the processes are infinite dimensional. The applications are many and concern, for example, the study of the dynamics of the distribution of individual income or the structure of interest rates.

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Part VIII – SUMMARY OF SCIENTIFIC ACHIEVEMENTS

Papers (National): 4 (2000 - 2006)
Papers (International): 17 (2007 - today)
Books: 0

Total Impact factor, WoS 5 years: 12.26
Total citations, Scopus: 49
Hirsh (H) index, Scopus: 5

Part IX – SELECTED PUBLICATIONS

Articoli in riviste di classe A, ultimi 15 anni:

1 with Paruolo, P. (2019). A general inversion theorem for cointegration, forthcoming in **Econometric Reviews**, IF 1.218, cit. 0.
2 M. Franchi (2018). Testing for cointegration in I(1) state space systems via a finite order approximation, **Economics Letters**, 165, p.73-76, IF 0.581, cit. 0.
3 with Vidotto, A. (2013) A check for finite order VAR representations of DSGE models. **Economics Letters** 120, p.100-103, IF 0.457, cit. 9.
4 with Ordonez, J. (2011) Multiple equilibria in Spanish unemployment. **Structural Change and Economic Dynamics** 22, p.71-80, IF 1.542, cit. 2.
5 with Paruolo, P. (2011) A characterization of vector autoregressive processes with common cyclical features. **Journal of Econometrics** 163, p.105-117, IF 1.349, cit. 8.
6 M. Franchi (2010) A representation theory for polynomial cofractionality in vector autoregressive models. **Econometric Theory** 26, p.1201-1217, IF 1.015, cit. 7.
7 with Ordonez, J. (2008) Common smooth transition trend-stationarity in European unemployment. **Economics Letters** 101, p.106-109, IF 0.483, cit. 4.
8 M. Franchi (2007) The integration order of vector autoregressive processes. **Econometric Theory** 23, p.546-553, IF 0.748, cit. 6.

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Articoli in altre riviste, ultimi 10 anni:

9 with Johansen, S. (2017). Improved inference on cointegrating vectors in the presence of a near unit root using adjusted quantiles, **Econometrics**, 5(2), 25, IF NA, cit. NA.

10 with Paruolo, P. (2016). Inverting a matrix function around a singularity via local rank factorization. **SIAM Journal on Matrix Analysis and Applications**, 37, p.774-797, IF 2.194, cit. 2.

11 with Paruolo, P. (2015). Minimality of State Space Solutions of DSGE Models and Existence Conditions for Their VAR Representation. **Computational Economics**, 46, p.613-626, IF 0.691, cit. 7.

12 with Paruolo, P. (2011) Inversion of regular analytic matrix functions: local Smith form and subspace duality. **Linear Algebra and its Applications** 435, p.2896-2912, IF 0.974, cit. 3.

Work in progress:

13 with Paruolo, P. (2019). Cointegration in functional autoregressive processes, **revised and resubmitted** (2 round) in **Econometric Theory**.

14 with Paruolo, P. (2019). Cointegration and root functions, **Mimeo**, (to be submitted to the Econometrics Special Issue "Celebrated Econometricians: Katarina Juselius and Søren Johansen" in March/April).

15 M. Franchi (2019). Some results on eigenvalues of finite type, resolvents and Riesz projections, **Mimeo**, (to be submitted to Linear Algebra and its Applications - or similar - in March/April).

Roma, lì 25/02/2019

Massimo Franchi

Il dichiarante