

# JESSICA RICCIONI



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## ACADEMIC RECORDS



**November 2016 – (expected: March/May 2021)**  
**Ph.D. in Quantitative methods for economic policy**  
**University of Macerata, Department of Economics and Law**



**January 2018 – (expected: March/May 2021)**  
**Co-Tutorship “Cotutelle” Agreement**  
**Paris 1 Panthéon-Sorbonne / University of Macerata,**  
**Department of Economics and Law**

### Courses:

Input-Output models: foundations, Prof. M. Ciaschini; Eigenvalues and eigenvectors of matrices with Matlab, Prof. E. Michetti; Econometric models at the Department of the Treasury, Prof. F. Felici; Input-Output models: applications, A. K. El Meligi; Dynamic models in economics, Prof. R. Coppier; Input-Output models: theoretical aspects, M. Ciaschini; Statistical models: methodology, software and applications with Stata and XLSTAT, Prof. C. Davino; Analysis and measuring efficiency of markets and financial intermediaries, Prof. A. Quaranta; Empirical analysis of international trade flows in the presence of interference with R, Prof. L. De Benedictis; Eurozone crisis, austerity and widening divides across Europe, Prof. F. Farina; Inequality, redistribution and growth, Prof. F. Farina; Social Accounting Matrix, Prof. C. Socci; Differential equations, Prof. S. Brianzoni; The “macro-foundation” of the theory of surplus and relative prices: the value of the net income and the rate of surplus-value. Sraffa and Marx, Prof. S. Perri; Extended multisector model, Prof. R. Pretaroli; Methodology and economic thought: some guidelines, Prof. S. Spalletti; The polarization of incomes: concepts, measurement and linking to social conflict, Prof. F. Clementi; Economics with heterogeneous interacting agents: an introduction, Prof. M. Gallegati; Basic econometrics, Prof. M. Gallegati; The aggregation conundrums and basic toolkits of agent-based, Prof. A. Palestini; A simple model of business fluctuations with heterogeneous interacting agents and credit networks, Prof. A. Russo, Prof. L. Riccetti and Prof. A. Caiani; Modeling financial markets in an agent-based framework, Prof. R. Ruggeri; Heavy-tailed distributions for agent-based economic modelling, Prof. F. Clementi; General computable equilibrium models, Prof. F. Severini; To differences equations, Prof. M. Guzowska; Labour Economics, Prof. E. Valentini; Simulations with Matlab, Prof. F. Grassetti; GAMS models, Prof. C. Socci; Discrete dynamics in economics and finance, Prof. E. Michetti.

Grade 110/110 Cum Laude  
Thesis Interpretation of financial markets through the Benford's law  
Subject Elements of probability theory and mathematical theory of financial portfolio  
Supervisor Prof. Roy Cerqueti

Grade 110/110  
Thesis The Exchange Traded Fund  
Subject Economics and instruments of financial intermediaries  
Supervisor Prof. Alessandro Giovanni Grasso

Final grade 100/100

## **PUBLICATIONS IN REFERRED JOURNALS**

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Riccioni, J., Cerqueti, R., (2018). Regular paths in financial markets: investigating the Benford's Law. Chaos, Solitons and Fractals, 107, 186-194.

Cinelli, M., Ficcadenti, V., Riccioni, J., The interconnectedness of the economic content in the speeches of the US Presidents. Annals of Operations Research.

DOI: <https://doi.org/10.1007/s10479-019-03372-2>.

## **SUBMITTED PAPERS**

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Cerqueti, R., Maggi, M., Riccioni, J., Data science for decision support systems in finance: How Benford's law predicts financial risk. (Revise and resubmit in Annals of Operations Research).

## WORKING PAPERS

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Castellano, R., Cerqueti, J., Riccioni, J., Endogenous regimes in electricity prices (work in progress).

Andersen, J.V., Cerqueti, R., Riccioni, J., Rational expectations and stochastic systems (work in progress).

Cerqueti, R., Riccioni, J., Benford Markov chains and applications to finance (work in progress).

Cerqueti, R., Ficcadenti, V., Riccioni, J., Benford's Law Indicator (work in progress).

## REFEREE FOR

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Annals of Operations Research

## CONFERENCES AND SEMINARS

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**Lunch Seminar**  
**University of Pisa**

**Pisa, IT**  
**December 5-7, 2019**

Invited seminar

**43<sup>rd</sup> Annual Meeting of the AMASES**  
**Association for Mathematics Applied to Social and Economic Sciences**

**Perugia, IT**  
**September 9-11, 2019**

Cinelli, M., Ficcadenti, V., Riccioni, J., The interconnectedness of the economic content in the speeches of the US Presidents

**IWcee19**  
**National Research Council of Italy**

**Rome, IT**  
**July 3-5, 2019**

Andersen, J.V., Cerqueti, R., Riccioni, J., Rational expectations and stochastic systems

**DySES 2018: Systemic Risk**  
**University Paris 1 Panthéon-Sorbonne**

**Paris, FR**  
**October 9-12, 2018**

Andersen, J.V., Cerqueti, R., Riccioni, J., Rational expectations and stochastic systems

**42<sup>nd</sup> Annual Meeting of the AMASES**  
**Association for Mathematics Applied to Social and Economic Sciences**

**Napoli, IT**  
**September 13-15, 2018**

Andersen, J.V., Cerqueti, R., Riccioni, J., Rational expectations and stochastic systems

**Computational and Methodological Statistics**  
**Senate House and Birkbeck University of London**

**London, UK**  
**December 15-18, 2017**

Riccioni, J., Cerqueti, R., Regular paths in financial markets: investigating the Benford's Law.

**SEMINAR DAY**  
**University of Macerata**

**Macerata, IT**  
**November 15, 2017**

Riccioni, J., Regularity and stochastic structure of financial data: a mixed data science and Markovian approach.

**KNOWeSCAPE 2017 - TD1210 Fourth Annual Meeting**  
**COST project**

**Sophia, BG**  
**February 22 - 24, 2017**

Riccioni, J., Cerqueti, R., Regular paths in financial markets: investigating the Benford's Law.

**Bergamo Città Impresa**  
**(with grant)**

**Bergamo, IT**  
**November 10-12, 2017**

## **SCIENTIFIC ASSOCIATIONS**

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**2018 - in progress : AMASES**

## **TEACHING**

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University of Rome Unitelma Sapienza  
**Teaching Assistant**

**February 2019 - in progress**

Computational models for economics and finance, Maths, Artificial economics: simulation and computational methods, Economy of Emerging Countries, Political Economy, Political and International Economy, Political Economy for tourism, Political Economy and international cooperation, Innovation in emerging countries.

University of Rome Unitelma Sapienza  
**Subject Expert ("Cultore della Materia")**

**January 2019 - in progress**

Computational models for economics and finance, Maths, Artificial economics: simulation and computational methods.

University of Rome Unitelma Sapienza  
**Tutor Teaching**

**February 2019 - October 2019**

Corporate Finance, Economy of Financial Intermediaries, Portfolio Management, Financial Markets and Investments, Economy of Emerging Countries, Political Economy, Political and International Economy, Economy of Tourism-Advanced.

## TRAININGS

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### **MLDYN 2020**

Scuola Normale Superiore

**On-line mode**  
**November 26 – 27, 2020**

### **Monte Carlo Simulation for Finance**

University of Piemonte Orientale

**On-line mode**  
**November 4–6/18-20 , 2020**

### **Simplicity of Complexity (Winter School)**

University of Wroclaw  
Econo-physics methods

**Ladek Zdroj, PL**  
**February 18 – 24, 2018**

### **Multivariate methods with R (Cronos Spring Course)**

#### **Limassol, Cyprus**

Limassol, Cyprus University of Technology

**April 8 – 10, 2017**

Courses:

R Programming and Mixture models (Jochen Einbeck, Department of Mathematical Sciences, Durham University, UK).

Multivariate time series models: sparse estimation and robustness aspects (Christophe Croux, KU University, Belgium).

Clustering functional data (Enea Bongiorno, University Piemonte Orientale, Italy).

An introduction to fuzzy clustering (M. Brigida Ferraro, La Sapienza University of Rome, Italy).

Participation in Study conference: “Financial stability, economic development and the role of banks: bail –in” (University of Macerata)

**December 2016**

Enabling to investment advisor to-door selling (Rome)

**April 2016**

Course aimed at passing the exam for advisor to-door selling (Bologna)

**April 2016**

Course in team working and team building (Centeus Rome)

**March 2016**

Course in marketing and communication (Centeus Rome)

**June 2016**

Participation in Polymorphic Crisis Workshop (University of Macerata)

**May 2015**

Internship in Accounting firm Innamorati, Santarelli, Stella

**July 2013 – November 2013**

## WORK EXPERIENCES

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Financial advisor and investment advisor  
to-door selling in “Poste Italiane spa”

**November 2015 – November 2016**

## TECHNICAL SKILLS

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English

Reference level: C1

French

Reference level: A2

### **O.S: Windows, Mac OS, Linux**

Very good knowledge of Microsoft Office, Internet and browsers (ECDL full in 2006)

Computing software:

Microsoft Excel (capacity to develop macro and routine), LaTeX, SPSS, Stata, XLSTAT, Matlab, Octave and R.

## RESEARCH INTERESTS

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Behavioural finance, Finance, Derivatives, Financial Risk Measures, Empirical analysis of financial markets. Markov chain, Benford's Law, Markov processes, Complex systems with applications in finance, stochastic systems.

Pursuant to articles 46 and 47 of the D.P.R. n. 445/2000 and aware penal sanctions resulting from producing false information, I declare truthful the affirmations present in this document.

Visso, 23/02/2021

Firmato  
Jessica Riccioni