

**Curriculum Vitae  
Nunzio Cappuccio**

**October 2006**

**Date of Birth:** Catania, 7<sup>th</sup> October 1953

**Marital status:** married, two children

**Nationality:** Italian

**Languages:** Italian, French, English

**Home Address**

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**EDUCATION**

**September 1982:** Master of Science in Econometrics and Mathematical Economics, London School of Economics and Political Science.

**February 1981:** Licence et Maîtrise en Science Économiques, Université Catholique de Louvain

**February 1977:** Laurea in Scienze Statistiche ed Economiche, Università di Padova

**July 1971:** "Maturità classica", Liceo Classico Statale "T. Gargallo" Siracusa

**PRESENT POSITION**

**December 2004:** Professor (Professore straordinario) of Econometrics, Faculty of Statistical Sciences and Department of Economics, University of Padova

**PAST POSITIONS**

**November 1992 – December 2004:** Associate Professor in Econometrics, Faculty of Statistical Sciences and Department of Economics University of Padova

**February 1989 – October 1992:** Assistant Professor in Economics and Econometrics, Faculty of Statistical Sciences and Department of Economics, University of Padova

**March 1984 – January 1989:** Assistant Professor in Economics and Econometrics, Faculty of Economics and Department of Economics and Statistics, University of Trieste

## **POSTGRADUTE FELLOWSHIPS**

**1978 – 1980:** Tovini Fellowship, Banca San Paolo di Brescia

**1980 – 1982:** Jona Fellowship, Istituto Bancario San Paolo di Torino

**1983:** Fellowship of the Belgian Government

**1984:** CNR-NATO Fellowship

## **TEACHING**

### **University of Padova**

#### **Faculty of Statistics**

**2002/03 – present:**

Econometrics of Financial Markets (“laurea” in Statistics, Economics and Finance)

Econometrics (advanced course) (“laurea specialistica” in Statistics, Economics, Finance and Management).

**1992/93 - 2001/02:**

Advanced Econometrics (“laurea” in Statistics and Economics)

**1999/00 – 2000/01:**

Time Series Analysis (“diploma” in Statistics and Computer Science for Management)

**1990/91 -1993/94 and 1997/98:**

Econometrics (“laurea” in Statistics and Economics)

**1991/92:**

Macroeconomics (“laurea” in Statistics and Economics)

#### **Faculty of Economics**

**2004/05 - present**

Time Series Econometrics for Financial Markets (“laurea specialistica” in Banking and Finance)

### **Department of Economics – Ph. D. Program in Economics and Management**

**2000/01- 2005/06:**

coordinator of the Econometrics course

### **Free University of Bozen – Bolzano, School of Economics and Management**

**2002/03 - 2003/04 – 2004/05:**

Statistics A (“laurea” in Economics and Management and Agricultural Economics)

**2004/05 – 2005/06:**

Econometrics B (“laurea specialistica ” in Global Management and Markets)

**University of Modena, Faculty of Economics**

**1997/98 - 1998/99:**

Econometrics (“laurea” in Economics)

**Inter University Centre for Econometrics**

**1992, 1994, 1996 and 1998 – 2006:**

Lectures on special topics in econometrics for Ph. D. students

**TUTORING**

**University of Padova, Faculty of Statistics**

**1988/89 - 1989/90:** teaching assistantship in Econometrics

**University of Trieste, Faculty of Economics**

**1983/84 - 1987/88:** teaching assistantship in Microeconomics

**PROFESSIONAL EXPERIENCE**

**2006/07 – actually:** Head of the Department of Economic Sciences, University of Padova

**2001/02 – 2003/04:** supervisor of the “Laurea” in Statistics, Economics e Finance, Faculty of Statistical Sciences , University of Padova

**1996/97 - 1998/99:** supervisor of the “Laurea” in Statistics and Economics, Faculty of Statistical Sciences, University of Padova;

**1993/94 - 1995/96:** Head of the “Centro di Calcolo di Ateneo”, University of Padova;

**1990/91 - 1991/92:** member of the board of the Department of Economics University of Padova

**1984/85 - 1987/88:** member of the board of the Department of Economics and Statistics, University of Trieste

He had served as a referee for following journals: Journal of Econometrics, European Economic Review, Statistica, Ricerche Economiche, Rivista Internazionale di Scienze Economiche e Commerciali, The European Journal of Finance, Econometrics Journal.

**NATIONAL RESEARCH PROJECTS**

**Italian MIUR project 2005 - 2006:** “Classical and bayesian estimation methods of econometric models for the analysis of financial markets”, coordinator of the national project and of the University of Padova research unit for the subproject “Dynamic portfolio allocation and option pricing with latent factor models via sequential Monte Carlo methods”.

**Italian MIUR project 2002 - 2003:** “Econometrics for the analysis and the forecasts of the volatility in financial time series with applications to european financial markets”, member of the research unit coordinated by Prof. Lubian, University of Verona.

**Italian MIUR project 2000 – 2001:** “Models for the evaluation of the risk in presence of stochastic volatility in the fundamentals and in the contingent claims”, coordinator of the University of Padova research unit.

**Italian MIUR project 1998 – 1999:** “Some aspects in time series generated by economic systems under structural breaks”, coordinator of the University of Padova unit.

**Italian MIUR project 1994 – 1995:** “Unit roots, cointegration and long memory processes”, coordinator of the University of Padova research unit.

**Italian MIUR project 1990 – 1992:** “Non gaussian models for the financial markets”, coordinator of the University of Padova research unit.

## PUBLICATIONS

### *International Journals*

- R.1. Cappuccio, N. e D. Lubian (2006), "Asymptotic null distributions of stationarity and nonstationarity tests under local-to-finite variance errors", forthcoming in *Annals of the Institute of Statistical Mathematics*
- R.2. Cappuccio, N. e D. Lubian (2006), "Local asymptotic distributions of stationarity tests", *Journal of Time Series Analysis*, 27, 323-345.
- R.3. Cappuccio, N. , D. Lubian e D. Raggi (2006): "Investigating Asymmetry in U.S. Stock Market Indexes: Evidence from a Stochastic Volatility Model", *Applied Financial Economics*, 16, 479-490.
- R.4. Cappuccio, N. , D. Lubian e D. Raggi (2004): "MCMC Bayesian Estimation of a Skew-GED, Stochastic volatility Model", *Studies in Nonlinear Dynamics and Econometrics*, 8 (2), article 6, downloadable from <http://www.bepress.com/snede> .
- R.5. Callegari, F., N. Cappuccio e D. Lubian (2003): "Asymptotic inference in time series regressions with a unit root and infinite variance errors", *Journal of Statistical Planning and Inference*, 116, 277-303.
- R.6. Cappuccio, N. e D. Lubian (2001): "Estimation and Inference on long-run equilibria: a simulation study", *Econometric Reviews*, 20, 61-84.
- R.7. Cappuccio, N., M. Ferrante e G. Fonseca (1998): "A note on the stationarity of a threshold first-order bilinear process", *Statistics and Probability Letters*, 40, 379-384.
- R.8. Cappuccio, N. e D. Lubian (1997): "Spurious regressions between I(1) processes with long memory errors", *Journal of Time Series Analysis*, 18, 341-354.
- R.9. Cappuccio, N. e D. Lubian (1996): "Triangular representation and error correction mechanism in cointegrated system", *Oxford Bulletin of Economics and Statistics*, 58, 409-415.
- R.10. Cappuccio, N. e D. Lubian (1996): "Fully modified estimation of cointegrating vectors via VAR prewhitening: a simulation study", *Journal of the Italian Statistical Society*, 5, 13-37.
- R.11. Cappuccio, N. e D. Lubian (1996): "Ordering of covariances matrices", Solution to Problems, *Econometric Theory*, 12.
- R.12. Cappuccio, N. e R. Orsi (1992): " Testing exogeneity in overidentified models", *Journal of the Italian Statistical Society*, 1, 203-225.

### *Italian Journals*

- IJ.1. Cappuccio, N. e D. Lubian (1994): "Representations of a cointegrated system and implied estimation procedures", *Giornale degli Economisti ed Annali di Economia*, 53.
- IJ.2. Cappuccio, N. (1989): "Analisi di un'equazione strutturale: specificazione, stima e verifica dell'ipotesi di esogenità", *Giornale degli Economisti ed Annali di Economia*, 48, 225 – 252
- IJ.3. Cappuccio, N. (1987): "Modelli econometrici lineari ad informazione limitata", *Statistica*, 67, 549- 572.

*Chapters in Books and Articles in Conference Proceedings*

- C.1. Cappuccio, N., D. Lubian e D. Raggi (2001): "Bayesian estimation of a stochastic volatility model with skew-GED errors", in *Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione*, atti del convegno S.Co. 2001, a cura di C. Provasi, CLEUP Editrice.
- C.2. Cappuccio, N. (1994): Items "Modelli di scelta discreta", "Regressione", "Serie storiche", "Stima", "Verifica d'ipotesi", *Enciclopedia per la Conduzione d'Impresa, Economia Politica*, Torino, UTET.
- C.3. Bisaglia, L., N. Cappuccio e D. Lubian (1992): "Specificazione dinamica e cointegrazione: un'analisi Montecarlo della superconsistenza", *Atti della XXXVI Riunione Scientifica della Società Italiana di Statistica*, vol. 2, 135-141.
- C.4. Cappuccio, N. (1991): "Stima di una funzione di domanda di servizi telefonici", in P. Ravazzi, *Un modello integrato di analisi e simulazione per l'impresa manageriale*, Torino, G. Giapicchelli Editore.
- C.5. Cappuccio, N. (1990): "Analisi bayesiana ad informazione completa di un modello con due equazioni simultanee", *Atti della XXXV Riunione Scientifica della Società Italiana di Statistica*, vol. 2, 11-18.
- C.6. Cappuccio, N. (1988): "Il metodo della pseudomassima verosimiglianza e sua applicazione in econometria", *Atti della XXXIV Riunione Scientifica della Società Italiana di Statistica*, vol. 2, 279-286.

*Books*

- B.1. Cappuccio, N. e R. Orsi (2005): *Econometria*, 2<sup>nd</sup> edition, Bologna, Il Mulino.
- B.2. Cappuccio, N. e R. Orsi (1991): *Econometria*, Bologna, Il Mulino.

**Recent Working Papers and Mimeo**

- M.1. Cappuccio, N. e M. Moretto (2001): "Comments on the investment – uncertainty relationship in a real option model", Quaderno del Dipartimento di Scienze Economiche, Università di Padova, e Nota di lavoro della Fondazione Eni Enrico Mattei..
- M.2. Cappuccio, N. and D. Lubian (2005): "Explaining Size Distortions of the KPSS Stationarity Test", submitted at the *Econometrics Journal*

## CURRENT AND PLANNED RESEARCH INTERESTS

### A. Unit root tests under non standard conditions (ref.R.5, , R.1, R.2, M.2)

In this set of papers the limiting distribution of the principal statistics of the unit root literature is studied in order to understand their asymptotic behaviour under non standard conditions

In R.5 the asymptotic distributions of the OLS estimator and the t statistics of the null hypothesis of a unit root are obtained in various regression models when the true generating mechanism is either a driftless random walk or a random walk with drift and the distribution of the error term belongs to the normal domain of attraction of a stable law with characteristic exponent lesser than two.

In R.1 the consequences of a “local” departure from the finite variance setup are studied for several tests of unit root and stationarity tests. Simulation evidence on the robustness of the limiting distributions (derived under finite variance) to heavy tails in finite samples is provided.

In R.1 the asymptotic distributions under a sequence of local alternatives of the stationarity tests are obtained, while in M.2 the size distortions of the KPSS test observed in MonteCarlo analysis is studied under a sequence of particular DGP.

### B. Stochastic volatility models (ref.R.3, R.4, C.1)

In order to analyse financial time series a stochastic volatility model is used considering several distributions for the return shocks. The general model for the returns shock is the Skew-GED distribution. This allows a parsimonious yet flexible treatment of asymmetry and heavy tails in the conditional distribution of returns. The Skew-GED distribution nests both the GED, the Skew-normal and the normal densities as special cases so that specification tests are easily performed. The model is applied to a data set of daily and weekly exchange rates (in R.4 and C.1) and to three indexes from the U.S. stock market (Dow Jones 30, Standard & Poor 500, Nasdaq 100). Inference is conducted under a Bayesian framework using Markov Chain MonteCarlo methods for computing the posterior distributions of the parameters. The empirical results suggest that daily returns are mostly symmetric with fat-tailed distributions while weekly returns exhibit both significant asymmetry and fat tails.

### C. Current research concerns the estimation of a dynamic latent factor model for the asset returns. The model should take into account both time-varying conditional means and stochastic volatility and, possibly, allowing for correlation and interaction between the latent factors. The objective is to characterize the weights of the optimal portfolio for the considered dynamic latent factor model.

## PAST RESEARCH INTERESTS

- i. Estimation of structural equations and exogeneity test (ref. R.12, IJ.2, IJ.3, C.5,)
- ii. Statistical analysis of cointegrated systems (ref. R.6, R.8, R.9, R.10, IJ.1)
- iii. Time series analysis (ref R.7)

## **SHORT DESCRIPTION OF TAUGHT COURSES**

### **Econometrics**

1. The linear regression model
2. The generalized linear regression model
3. The linear model with correlation between explicative variables and error term
4. The dynamic linear model and dynamic specification
5. The multivariate regression model and the seemingly unrelated regression model
6. The simultaneous equations model

### **Advanced Econometrics**

1. The vector autoregressive model
2. Unit root asymptotics and unit root tests
3. Cointegrated systems

### **Financial Econometrics**

1. The econometrics of the efficiency frontier in the mean-variance model
2. The econometrics of the CAPM model
3. Volatility models: ARCH, GARCH, M-GARCH, EGARCH