Giovanni De Luca
Curriculum vitae

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1. General information

Personal

Address: Dipartimento di Statistica e Matematica per la Ricerca Economica, Via Medina, 40 - 80133 Napoli
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Education

1991: Degree in Economics, University of Salerno. Dissertation in econometrics: *Distribuzione dei redditi e disoccupazione, una verifica time-series per l'Italia*, tutor Francesca Bettio, 110/110.

1992: Third graduate summer course on efficiency analysis, Center for Operations Research and Econometrics, Université Catholique de Louvain, July 19-30.

1994: Visiting Student at the Department of Probability and Statistics of the Faculty of Pure Science, University of Sheffield (UK), Master in Statistics. Courses attended: Practical Statistics (Dr. Fieller), Probability Modelling (Prof. Biggins), Linear Models (Prof. Loynes), Generalized Linear Models (Prof. Loynes), Multivariate Statistics (Prof. Fieller), Statistical Inference (Dr. Blackwell).

1994-1997: Ph.D. in Metodi Statistici e Matematici per la Ricerca Economica e Sociale, Dipartimento di Scienze Statistiche, University of Perugia. Dissertation: *Un approccio alternativo per il test di integrazione stagionale*, tutor prof. Pierluigi Daddi.

1998: Research grant, Dipartimento di Scienze Statistiche, University of Perugia. Topics: ARCH-type and stochastic volatility models for volatility forecasting.

1999: Master in Economics and Finance 1999, Venice International University, Venezia.

Academic positions

1999 (dec.): Assistant Professor in Economic Statistics, University of Verona, Italy.

2002 (dec.): Assistant Professor in Economic Statistics, University of Naples *Parthenope*, Italy.

2006 (nov.): Associate Professor in Economic Statistics, University of Naples *Parthenope*, Italy.

2. Research

Research interests

Copula functions for financial returns.
Seasonal integration tests.
Models for financial time series: conditional heteroskedasticity models, stochastic volatility models.
Analysis of tick-by-tick financial data.
Statistical methods for operational risk.
Consumer Price Index: sampling procedure under a budget contraint.

Publications

1. De Luca G. (1998), An alternative approach for the seasonal integration test, *Statistica*, n. 3.

2. Bartolucci F., De Luca G., Loperfido N. (2000), A generalization for skewness of the basic stochastic volatility model, *Proceedings of the 15th International Workshop on Statistical Modelling*, Bilbao, July 2000.

3. Bartolucci F., De Luca G. (2000), Exact maximum likelihood estimation for the asymmetric stochastic volatility model, *Proceedings of Computational Statistics*, Utrecth, August 2000.

4. Bartolucci F., De Luca G. (2001), Maximum likelihood estimation for a latent variable time series model, *Applied Stochastic Models in Business and Industry*, Volume 17, Issue 1.

5. De Luca G., Golia S. (2001), The prediction of a price change and the persistence in intradaily durations, *Proceedings of Modelli complessi e metodi computazionali per la stima e la previsione*, Bressanone, September 2001.

6. Bartolucci F., De Luca G. (2002), Estimation of stochastic volatility models, in Kontoghiorghes *et al.* (edited by) *Computational methods in decision-making, economics and finance*, Kluwer Applied Optimization Series.

7. Bartolucci F., De Luca G. (2002), A general framework for fitting stochastic volatility models, *Atti della riunione SIS 2002*.

8. Bartolucci F., De Luca G. (2002), Maximum likelihood estimation of a CAPM with time-varying beta, *Proceedings of the Conference CompStat 2002*, Short Communications and Posters, Berlino, August 2002.

9. Bartolucci F., De Luca G. (2003), Likelihood-based inference in asymmetric stochastic volatility models, *Computational Statistics and Data Analysis*, Volume 42, Issue 3.

10. De Luca G. (2003), The distributional assumptions for ACD models, *Proceedings of Quantitative Methods in Economy*, Bratislava, Slovakia.

11. De Luca G., Zuccolotto P. (2003), Finite and infinite mixtures for financial durations, *Metron*, vol. LXI, n. 3.

12. De Luca G. (2004), Estimating the instantaneous volatility of the price process, in Bee Dagum E. *et al.* (edited by) *Linear and Non Linear Dynamics in Time Series.*

13. De Luca G., Zuccolotto P. (2004), Empirical evidence for different financial durations, *Proceedings of the Conference Metodi matematici e statistici per l'analisi dei dati assicurativi e finanziari*, Salerno, Italy.

14. De Luca G., Loperfido N. (2004), A Skew-in-Mean GARCH Model, in Genton M. (edited by) *Skew-Elliptical Distributions and Their Applications: A Journey Beyond Normality*, Ed. Chapman & Hall / CRC, Boca Raton, FL, pp. 205-222.

15. De Luca G., Gallo G.M. (2004), Mixture processes for financial intradaily durations, *Studies in Nonlinearity and Dynamics in Econometrics*, vol. 8.2.

16. De Luca G., Gallo G.M. (2004), Modelling financial durations between price movements, *Proceedings of the 19th International Workshop on Statistical Modelling*, Firenze, Italy.

17. De Luca G., Zuccolotto P. (2004), Detecting features of different financial durations through the Pareto distributions, *Quaderni di Statistica*, vol. 6.

18. De Luca G., Genton M., Loperfido N. (2006), The Multivariate Skew GARCH model, *Advances in Econometrics: Econometric Analysis of Financial and Economic Time Series (volume 20 Part A)*, Elsevier.

19. De Luca G., Loperfido N. (2006), The Skew-t GARCH model, *Proceedings of the Conference SER2006*, Monte Porzio Catone, Italy.

20. De Luca G., Zuccolotto P. (2006), Diagnostics for regime-switching distributed PACD models, *Proceedings of the Conference SER2006*, Monte Porzio Catone, Italy.

21. De Luca G., Zuccolotto P. (2006), Regime-switching Pareto distributions for ACD models, *Computational Statistics and Data Analysis*, Volume 51, Issue 4.

22. De Luca G. (2006), Forecasting volatility using high-frequency data, *Statistica Applicata*, vol. 18 n. 2.
23. De Luca G., Rivieccio G. (2006), Modelling financial durations via a parametric and a semiparametric approach, in Bee Dagum E. *et al.* (edited by), *Statistical Inference on the Deterministic and Stochastic Dynamics of Observed Time Series*, Proceedings of the Final Workshop PRIN/COFIN 2002, Pitagora Editrice Bologna.
24. De Luca G., Loperfido N. (2007), Asymmetries for multivariate returns: an empirical approach, *Atti della riunione intermedia SIS 2007.*
25. De Luca G., Rivieccio G. (2007), Modeling the conditional dependence between stock market returns with a Copula-GARCH approach, *Atti della riunione intermedia SIS 2007.*
26. De Luca G., Gallo G.M. (2007), Time-varying mixture MEM for realized volatility, *S.Co 2007, Book of Short Papers.*
27. De Luca G., Golia S. (2007), The autocorrelation function for squared white noises, *S.Co 2007, Book of Short Papers.*
28. De Luca G., Rivieccio G., Zuccolotto P. (2008), Exploring the copula approach for the analysis of financial durations, in Perna C., Sibillo M. (edited by), *Mathematical and Statistical Methods in Insurance and Finance*, Springer Milan.
29. De Luca G., Rivieccio G. (2008), Asymmetric multivariate tail dependence, *Atti della riunione SIS 2008.*
30. De Luca G., Gallo G.M. (2009), Time-varying mixing weights in mixture Autoregressive Conditional Duration models, *Econometric Reviews*, Volume 28 (1-3).
31. De Luca G., Rivieccio G. (2009), Archimedean copulae for risk measurement, *Journal of Applied Statistics*, Volume 36, Issue 8.
32. De Luca G., Rivieccio G., Zuccolotto P. (2009), Joint tail dependence in multivariate copulae, *Book of Abstract, EURISBIS'09.*
33. De Luca G., Rivieccio G., Zuccolotto P. (2009), Archimedean copulas and market risk in a financial crisis perspective, *S.Co. 2009 Proceedings.*

Other publications in italian

1. Cecconi C., De Luca G. (2000), Un disegno di campionamento sperimentale per la rilevazione dei prezzi al consumo nei comuni umbri, in Filippucci C. (edited by) *Tecnologie informatiche e fonti amministrative nella produzione di dati*, Franco Angeli.
2. De Luca G., Guerriero M. (2001), La tecnica di bootstrap per gli intervalli di previsione nei modelli AR(p)-ARCH(q), *Quaderni di Statistica del DESI*, University of Verona, Volume 2.
3. De Luca G. (2001), La direzione dei prezzi di titoli azionari e i modelli ACD, *Quaderni di Statistica del DESI*, University of Verona, Volume 2.
4. Olivieri D., De Luca G. (2003), *L'impatto economico del Festival Lirico Veronese*, Fondazione Arena di Verona.
5. De Luca G., Rivieccio G. (2006), I modelli di tipo ARCH: la teoria consolidata e i nuovi sviluppi, *Newsletter AIFIRM*, n. 2.

Conferences presentations

- Un approccio alternativo per il test di integrazione stagionale, Contributi Statistici allEconometria, Roma, Feb. 1997

- Exact maximum likelihood estimation for a latent variable time-series model, Inference and Prediction in Financial Risk Management, Tirano, Sept. 1999 (with Bartolucci F.)
- Un disegno di campionamento sperimentale per la rilevazione dei prezzi al consumo nei comuni umbri, Tecnologie informatiche e fonti amministrative nella formazione dei dati economici", Bologna Feb. 2000 (with Cecconi C.)
- Maximum likelihood estimation of a stochastic volatility models, Computational Methods in Decision Making and Finance, Neuchatel (CH), Aug. 2000 (with Bartolucci F.)
- The prediction of a price change and the persistence in intradaily durations, Modelli complessi e metodi computazionali per la stima e la previsione, Bressanone, Sept. 2001 (with Golia S.)
- A general framework for fitting stochastic volatility models, XLI Riunione Scientifica Società Italiana di Statistica, Milano, Jun. 2002 (with Bartolucci F.)
- Maximum likelihood estimation of a CAPM with time-varying beta, CompStat, Berlino, Aug. 2002 (with Bartolucci F.)
- Estimating the instantaneous volatility of the price process, Linear and Nonlinear Dynamics in Time Series, Bressanone, Jun. 2003
- Modelling the fractions of informed and uninformed traders in financial markets, International Conference in Methodology and Statistics, Ljubljana (Slovenia), Sept. 2003
- The distributional assumptions for ACD models, Quantitative Methods in Economy, Bratislava (Slovacchia), Nov. 2003
- A Multivariate Skew-in-mean GARCH model, Joint Statistical Meeting, Toronto, Aug. 2004 (with Genton M. and Loperfido N.)
- A Multivariate Skew GARCH model, Adavances in Econometrics, Baton Rouge (Louisiana), Nov. 2004 (with Genton M. and Loperfido N.)
- Time-varying Mixing Weights in Mixture Autoregressive Conditional Duration Models, Statistical Inference on Linear and Non-Linear Dynamics in Time Series, Bressanone, Jun. 2005 (with Gallo G.)
- The Pareto ACD model, 3rd World Conference Computational Statistics and Data Analysis, Limassol (Cipro) Oct. 2005 (with Zuccolotto P.)
- A Skew-t GARCH model, II Workshop Modelli e metodi per serie storiche finanziarie, Padova, Jan. 2006 (with Loperfido N.)
- The Skew-t GARCH model, Convegno Nazionale delle Ricerche sulle Serie Temporali, Monte Porzio Catone, Apr. 2006 (with Loperfido N.)
- Forecasting volatility using high-frequency data, SIS 2006, Riunione Satellite *La statistica per le Imprese*, Torino, Jun. 2006 (invited)
- A time-varying mixture MEM for realized volatility, S.Co. 2007, Venezia, Sept. 2007 (invited, with Gallo G.M.)
- Modelling multivariate returns via asymmetric Archimedean copulae, CFE 2008, Neuchatel (CH), Jun. 2008 (with Rivieccio G. and Zuccolotto P.)
- Asymmetric multivariate tail dependence, SIS 2008, Cosenza, Jun. 2008 (with Rivieccio G.)
- Joint tail dependence in multivariate copulae, EURISBIS'09, Cagliari, Jun. 2009 (invited, with Rivieccio G. and Zuccolotto P.)
- Archimedean copulas and market risk in a financial crisis perspective, S.Co. 2009, Milano, Sept. 2009 (invited, with Rivieccio G. and Zuccolotto P.)

Citation indexes (Harzing's Publish or Perish)

h-index: 4

g-index: 5

hc-index: 4

3. Teaching

A.Y. from 2000/01 to 2002/03: *Statistical quality control*, course of studies in Economics, University of Verona, Italy.

A.Y. from 2000/01 to 2002/03: *Statistic for financial markets*, course of studies in Economics, University of Verona, Italy.

A.Y. from 2002/03 to present: *Statistic for financial markets*, course of studies in Economics, University of Naples *Parthenope*, Italy.

A.Y. from 2003/04 to 2007/08: *Time-series analysis*, course of studies in Economics, University of Naples *Parthenope*, Italy.

A.Y. from 2005/06 to present: *Statistics*, course of studies in Economics, University of Naples *Parthenope*, Italy.

4. Additional information

Member of the Italian Statistical Society.

Member of the Committee of PhD *Applied Statistics*, University of Naples *Parthenope* (coordinator Prof. Quintano).

Refereeing for scientific journals:
1. *Computational Statistics and Data Analysis*
2. *Journal of Economic Dynamics and Control*
3. *Journal of Applied Statistics*
4. *Statistical Methods & Application*
5. *Metron*

Participation to PhD evaluation committees:
1. PhD in *Applied statistics*, University of Florence, 2007.
2. PhD in *Mathematical and statistical methods for social and economic research*, University of Perugia, 2004.

Organization of the session *High-frequency data in finance*, Conference *Computational and Financial Econometrics*, Geneva, April 2007.

Reviewer for the assessment of the *Standard Research Grants Program of the Social Sciences and Humanities Research Council of Canada (SSHRC).*