Department of Finance
Universita' Commerciale L. Bocconi,
Via Röntgen 1, 20136 Milan, Italy

Francesco Corielli
Associate Professor of Applied Mathematics

E-Mail
Francesco.Corielli@unibocconi.it

Academic Positions
Jan 2010- Bocconi University, Department of Finance
Associate Professor of Applied Mathematics
Jan 2009-Jan 2010 Bocconi University, Department of Finance
Associate Professor of Mathematical Statistics
Nov 1998-Jan 2009 Bocconi University, Department of Quantitative Methods
Associate Professor of Mathematical Statistics
Nov 1989-Nov 1998 Bocconi University, Department of Quantitative Methods
Assistant Professor of Mathematical Statistics

Education
Bocconi University, Milan
Laurea In Economics (DES) (Magna cum Laude-Thesis Publication) October 1983

Professional Activities
Director of the Master in Quantitative Finance and Risk Management (2000-2003; 2006-2008)
Coordinator of the Master in Quantitative Finance and Risk Management (1999-)
Member of the Committee for Research of Bocconi University
Organizing Committee of PhDs in Finance and in Statistics, Bocconi University
Organizing Committee Master in Computational Finance, Physics dept. , Milan University

Research interests
Derivative pricing and hedging. Analytical and numerical analysis of partial differential equations in Finance. Empirical asset pricing. Empirical corporate finance.

Main publications In international Journals and Books
(1988) "Business failure analysis: a bayesian approach" (with D.M. Cifarelli and G. Forestieri). Studies in Banking and Finance 7 , pp. 73-79, Elsevier Science Publishers B. V. (North-Holland), Amsterdam.
(1995) "A note on the decidability of de Finetti's coherence".
Theory and Decision, 38, pp. 121-129.
(1996) "European financial markets integration and the risk premium on Italian government debt" (with Alessandro Penati) B.N.L. Quarterly Review, pp. 109-119.
(1996) "Long run equity risk and dynamic trading strategies: a simulation exercise for the Italian stock market" (with Alessandro Penati) Research on Economics 50, pp. 27-56.
(1997) "Laws of large numbers in continuum economies"
Decision Games and Markets", Kluwer, Boston, pp. 191-207.
(2004) "Pitfalls in linear models for style analysis" (with Attilio Meucci)
Statistical Methods and Applications, 13.1, pp.105-129

(2005) “Risk management implications of time-inconsistency: Model updating and recalibration of no-arbitrage models” (with Andrea Buraschi)
Journal of Banking & Finance 29, 2883–2907
(2006) “Factor based index tracking” (with Massimiliano Marcellino)
Journal of Banking & Finance 30 2215–2233
(2006) “Hedging with energy. Simple error bounds for mis-specified diffusions”
Mathematical Finance, Vol. 16, No. 3, 495–517
(2006) “Model error analysis methods”
Applied Statistics, 18-4, 2006.
(2010) “Project finance collateralized debt obligations: an empirical analysis on spread determinants” (with Valerio Buscaino, Stefano Caselli, Stefano Gatti)
European Financial Management (accepted)
(2010) “Risk shifting through nonfinancial contracts. Effects on loan spreads and capital structure of project finance deals” (with Stefano Gatti and Alessandro Steffanoni) Journal of Money Credit and Banking 42,7, 1296-1320
(2010) "Parametrix approximation of diffusion transition densities" (with Andrea Pascucci and Paolo Foschi) Siam Journal on Financial Mathematics,1, 833-867

Main publications in Italian Journals and Books

(1986) "Modelling compositional data: an application to household commodity expenditure in Italy" (con G. Consonni) In: "Scritti in onore di Francesco Brambilla", Vol. 1. Milano - Edizioni di "Bocconi Comunicazione" – pp.191-202.
(1986) "Note sull'applicazione di alcuni modelli per l'analisi discriminante", In: "La previsione delle insolvenze aziendali". Milano - Giuffre' Editore – pp. 81 110.
(1989) "Una applicazione del filtro di Kalman allo studio della funzione di domanda di importazione per sei paesi industrializzati" (con F. Coricelli e G. Polimeni). In "Specializzazione e integrazione internazionale dell'industria italiana", a cura di Fabrizio Onida, Milano, Franco Angeli, pp 197-241.
(1988) "Su alcuni effetti dell'adozione di iniziali finitamente additive quando il modello di base appartiene alla classe esponenziale troncata", (con C. Carota). "Rivista di matematiche per le scienze economiche e sociali"-anno 11, Fascicolo 1-2, pp.147-161.
(1989) "Sull'uso diagnostico del Filtro di Kalman. Un confronto con i minimi quadrati recursivi con un'applicazione allo studio di funzioni di reazione delle autorita' monetarie"
(con B. Sitzia e R. Helg). In "Ricerche e metodi per la Politica Economica", numero speciale di Contributi all'analisi economica, Banca d'Italia, pp.83-109.
(1990) "Funzioni di decisione bayesiane con leggi di probabilita' finitamente additive" (con Sonia Petrone). Atti della XXXV riunione scientifica della Societa’ Italiana di Statistica, Volume II, PP. 419-426.
(1991) "Analisi Tecnica e modelli statistici: aspetti teorici ed evidenza empirica”. In "Il rischio azionario e la Borsa. Un'analisi del funzionamento del mercato italiano". A cura di Alessandro Penati. Milano, EGEA, pp. 173-179.
(1992) "Le regolarita' di calendario dei rendimenti azionari: il caso italiano".
(con Barbara Rindi) Ricerche Economiche ,46 , 3-4, pp. 303-326, Universita’ Ca’ foscari di Venezia, Venezia 1.11-(1993) "A proposito di flussi elettorali: qualche critica e una proposta"
(con M. Weber). Fondazione Feltrinelli, Quaderni/44, "Quale mobilita' elettorale? Tendenze e modelli.", a cura di Renato Mannheimer, pp. 197-228, Franco Angeli, Milano
(1996) "Intorno a qualche risultato relativo al processo di Dirichlet" (con D. M. Cifarelli), In “Studi in onore di Giampiero Landenna” Giuffre’ Editore, Milano, pp.79-89.

(1996) “Applicazione della teoria dei prezzi edonici al mercato immobiliare milanese” (con Paola Frigeri, Alessandra Messori e Piero Tedeschi) in Economia e Pianificazione della Citta’ Sostenibile, a cura di Roberto Camagni, Il Mulino, Bologna, pp.123-144.
(1997) “Polinomi di Bernstein e modelli di non arbitraggio per la curva dei rendimenti”. (con Sonia Petrone). Atti del XXI convegno annuale AMASES. Roma, pp.115-129.
(1997) “Applicazioni statistiche alla finanza di mercato: il caso del reddito fisso”. In Atti del Convegno S.I.S. “La statistica per le imprese” Torino 2-4 aprile 1997. Tirrenia Stampatori, Torino, pp. 459-473.
(1998) “Stima dei parametri dinamici per modelli di curva dei rendimenti” Atti della della XXXIX Riunione Scientifica S.I.S. Napoli. pp. 457-464.
(2004) “Eigenfunctions based estimating martingales for perturbed diffusions”, Volume II, Atti della XLII riunione scientifica SIS, Bari, Cleup, Bari,. pp. 147-150.
(2004) “Pitfalls in linear models for style analysis” (con Attilio Meucci), Statistical Methods and Applications, 13.1, pp.105-129
(2007) “The Sturm Liouville problem in diffusion modelling”. In: Risk and Prediction, Atti della Riunione Intermedia SIS 2007. CLEUP, Padova.
(2007) “Performance measurement and its statistics: an appraisal of some evaluation problems”. In Risk and prediction, satellite session, CLUEP, Padova.

Working papers
“On analytic perturbations of the B&S PDE” (with Paolo Carta)
“Parametrix approximation of risk neutral transition densities and option valuation” (with Andrea Pascucci and Paolo Foschi).
“Analytical approximations for financial derivatives” (with Andrea Pascucci and Paolo Foschi).
“Approximation tools for PDE solutions and applications in finance” (with Alberto Mietto).
“Corporate governance and independent directors: much ado about nothing? The evidence behind private equity investment performance” (With Stefano Caselli and Stefano Gatti).

Teaching
Current teaching:
Bocconi University, Milan:
-Financial econometrics and empirical finance (Masters of Arts in Finance) (since 2003)
-Statistics for diffusions (PhD in Statistics and PhD in Finance) (since 2002)

Past teaching
Bocconi University
-1984-1997: Statistics (BA in Economics).
-1990-2004: Econometrics (BA in Economics)
-1998-2003: Computational Statistics (BA in Economics)
-1995-2005: Mathematical Statistics (PhD in Business and Economics)
-1998-2006: Stochastic Models for the Term Structure (Master in Quantitative Finance and Risk Management)
-2007-2010: Quantitative methods for finance (BA in Finance)

Other Universities
Master and PhD level corse in Statistics and Econometrics at:
Turin University, Milan Polytechnic, Department of Physics Milan University, University of Rome “la Sapienza”, Venice “Ca’ Foscari”

Visiting positions
London Business School 1996 and 1998

Imperial College, London 2004 and 2006

Meetings, Seminars, Discussions and invited Presentations
1986 S.A.Di.Ba. Meeting: "Specializzazione e integrazione internazionale dell' industria italiana" (org. Banca d'Italia, Perugia)
1986 International Symposium on Probability and Bayesian Statistics. Innsbruck. Austria
1987 (invited speaker) Seminar Trieste University: "Kalman filter, econometric applications"
1987 Third Valencia International Meeting on Bayesian Statistics (Altea, Spain)
1988 XXXIV General Meeting, Italian Statistical Society (Siena).
1988 (invited speaker) S.A.Di.Ba. Meeting on: "Ricerche e Metodi per la Politica economica", (org. Banca d'Italia, Perugia)
1988 Meeting: "Italia 1948 1988, 40 anni di elezioni", Societa' Italiana di Studi Elettorali (Napoli)
1990 XXXV General meeting Italian Statistical Society (Padova)
1991 SIS meeting: "Sviluppi metodologici nei diversi approcci all'inferenza statistica"
1991 IV Bayesian Statistics. Valencia
1995 Meeting "The economics of retirement and saving", Un. Ca' Foscari,Venezia
1995 Meeting "La gestione del rischio finanziario per gli investitori istituzionali nel contesto italiano" Centro P. Baffi, Un. Bocconi
1995 (invited speaker) "Pre-testing bias in Econometrics" Un. Ca' Foscari, Venezia
1995 (invited speaker) Seminari di Borsa e Finanza, Consiglio di Borsa, Milano
1995 (invited speaker) Societee Europeenne de Recherches Financieres, SUERF, Thun, SUI.
1996 (invited speaker) Seminar, Mathematics Dept., Universita' di Trieste
1996 (invited speaker) CONSOB meeting on the efficienti of MTS
1997 (invited speaker) Meeting "Ricerche sull'industria dei servizi mobiliari in Italia" Milan University
1997 (invited speaker) XXI General meeting AMASES
1998 (invited speaker) XXXIX General Meeting SIS
2000 XXXX General meeting SIS
2001 (invited speaker) Meeting CSAET (Ischia) on Mathematical Methods for Finance
2001 (invited speaker)Workshop on Interest Rate Modelling: Recent Issues. Economics Dept. Novara University
2002 XLI General meeting SIS. Organizing Committee for the Statistics and Finance dedicated meeting
2002 (invited speaker) Seminar on the estimation of continuous time models. Ca' Foscari University, Venice
2003 ASSA meeting Washington DC. USA
2003 (invited speaker) IV workshop Quantitative Finence. Turin
2003 (invited speaker) RISK Italy
2003 (invited speaker) Risk measure and Control 2003. La Sapienza University. Rome
2003 (invited speaker) Non linear models and evolutionary computing in time series. Ca' Foscari University. Venice
2004 V workshop Quantitative Finance. Milan
2004 Risk management for the XXI century, Bocconi University, Milan. Head of the Organizing committee
2004 XLI General meeting SIS.
2005 ASSA meeting. Philadelpia USA.
2006 ASSA meeting. Boston USA
2006 (invited speaker) International meeting on Risk Management. Ascona. SUI
2006 (invited speaker) Risk management for Hedge Funds. Politecnico of Milan
2006 (invited speaker) Day on Credit and Insurance; XLIII General meeting SIS. Turin

2006 International Summer School on Risk Measurement and Control, Economics department and MQSP, "La Sapienza" University. Rome
2007 (invited speaker) general meeting SIS
2007 (invited speaker) Quant Congress Europe, London (Risk)

Refereeing for International Journals
Decisions in Economics and Finance, SIAM Journal on Optimization, Journal of Futures Markets, International Statistical Institute, Annals of Statistics, Mathematical Finance, Journal of Banking and Finance, Statistical Methods and Applications.

Affiliations
Econometric Society; Italian Statistical Society

Other professional activities
Has been among the promoters for the attribution to Bruno deFinetti of the invention of modern portfolio theory (See Mark Rubinstein's preface to Harry M. Markowitz's paper: "deFinetti Scoops Markowitz" Journal of Investment Management, Vol. 4, No. 3, Third Quarter 2006).

Consulting and Collaborations with Institutions
Has been consultant on topics of quantitative finance for ANIA, ISTAT, CONSOB
Between 2002 and 2009 contributed to the creation of the Risk Management function at Cassa Depositi e Prestiti Italy
Beginning with 1994 has been consultant in London and in Milan for , Lehman Brothers, Bankers Trust, J.P. Morgan, Goldman Sachs, Nomura, Banca Intesa, Unicredito, Banco Popolare.