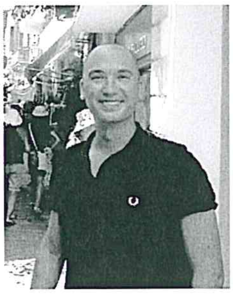
Last updated: May 5, 2015

RUGGERO CALDANA



Permanent Address:
Current Address:
Mobile:
E-Mail:
Date, place and country of birth:

GENERAL SKILLS

- Solid understanding of financial economics, financial mathematics and statistics (Ph.D. level).
- Expertise in stochastic calculus and asset pricing: deep knowledge of equity, interest rate, credit risk and energy pricing models.
- Deep knowledge of programming languages, tools and algorithms for computational finance.
- Expertise in investment markets, financial market conventions and risk management practices.
- Experience of teaching and research. Publications in international journals and talks at conferences.
- Strong investigation and problem solving skills.
- Financial industry experience working in a collaborative, team-oriented environment.

PERMANENT WORKING POSITIONS

Jan 2015 - ongoing, Advanced Analytics Specialist,
Accenture, Milan, Italy, www.accenture.com.

- Data clustering and forecasting for energy markets.
- Optimization of trading strategies for natural gas in a multi-country and multi-contract setting;
- Design of the functional process and analytics for business software.

Dec 2012 - Dec 2014, Postdoc research fellow,
Università del Piemonte orientale, Novara, Italy, www.unipmn.it.

Research interests focus on:

- Financial Engineering;
- Financial Risk Management;
- Numerical Methods for Finance;
- Energy Market Modelling.

Feb 2009 - Nov 2011, Quantitative analyst,
PwC Advisory, Milan, Italy, www.pwc.com.

- Consulting experience in financial instruments modelling, calibration and pricing.
- Scenario based analysis and standard risk methodologies.
- Matlab development of pricing tools using Monte Carlo, PDE, Fourier analysis and trees.
- Sensitivity analysis and effectiveness test in compliance with IAS39.

PROFESSIONAL COLLABORATIONS

Sep 2013 – Dec 2014, risk modeller for Energisk SAS, www.energisk.org

- Development of the FloRisk prototype, a Matlab-based application aimed at monitoring and managing market risk of energy commodities portfolios.

Jan 2012 – Aug 2013, consultant for TEI Energy, www.tei-energy.com.
• Development of a Matlab-based application aimed at bootstrapping forward curves in electricity markets and pricing European power interconnector transmission rights.
• Definition and Excel implementation of futures hedging strategies for interconnector transmission rights.

TEACHING ACTIVITY

• **2013 - Assistant in Financial Mathematics 1.** Bachelor in Mathematical Engineering. Politecnico di Milano. Department of mathematics. 22 hours. Lecturer: E. Barucci.
• **2013 - Lecturer in Risk Management.** Master Executive in Quantitative Finance. Politecnico di Milano. MIP. 12 hours.
• **2013 - Lecturer in Risk Management.** Master Executive in Energy and Finance. Politecnico di Milano. MIP. 10 hours.
• **2014 - Lecturer in Risk Management.** Master Executive in Energy and Finance. Politecnico di Milano. MIP. 10 hours.
• **2014 - Lecturer in Mathematical Methods 2.** Bachelor in Economics and Business. Università del Piemonte Orientale. DiSEI. 50 hours.
• **2015 - Lecturer in Risk Management.** Master Executive in Energy and Finance. Politecnico di Milano. MIP. 8 hours.

REFERRED PUBLICATIONS IN INTERNATIONAL JOURNALS

• Caldana R. and Fusai G. (2013) *A general closed-form spread option pricing formula*, Journal of Banking & Finance, 37, 4893–4906.
• Caldana R., Cheang G., Chiarella C. and Fusai G. (2015) *Correction: Exchange option under jump-diffusion dynamics*, Applied Mathematical Finance, 22, 99–103.
• Caldana R., Fusai G., Gnoatto A. and Grasselli M. (2015), *General closed-form basket option pricing bounds,* accepted for publication in Quantitative Finance.

BOOK CHAPTERS

• Caldana R., Fusai G., Roncoroni A. (2015) *How to build electricity forward curves,* in Roncoroni A., Fusai G. and Cummins P. (Eds), *Handbook of Multi-Commodity Markets and Products,* 673-684, Wiley.

WORKING PAPERS

• Caldana R., Fusai G., Roncoroni A. (2015) *On the rational construction of electricity forward curves with hourly granularity,* Working paper.
• Gambaro A., Caldana R., Fusai G. (2015) *Approximate pricing of swaptions in general interest rate models,* Working paper.
• Gambaro A., Caldana R., Fusai G. (2015) *Accurate pricing of swaptions via lower bound,* Working paper.

THESES

• Caldana R. (2012) *Spread and Basket Option Pricing: an Application to Interconnected Power Markets,* Ph.D. thesis of Università di Milano-Bicocca.
• Caldana R. (2008) *Numerical approximation of stochastic differential equations under standard and non-standard assumptions,* M.Sc. thesis of Politecnico di Milano.
• Caldana R., Fumagalli A. (2006) *Adaptive algorithms for the bi-dimensional Black and Scholes equation,* B.Sc. thesis of Politecnico di Milano.

Last updated: January 21, 2015

TALKS AT CONFERENCES

- Talk at the "XXIV Workshop on Quantitative Finance", Rimini, Italy, January 24-25, 2013.
- Talk at the "XXXVII Meeting of the AMASES", Stresa, Italy, September 5-7, 2013.
- Talk at the "XXV Workshop on Quantitative Finance", Florence, Italy, January 23-24, 2014.
- Talk at the "2nd Energy markets and quantitative methods", Padova, Italy, May 22-23, 2014.
- Talk at the "8th World Congress of the Bachelier Finance Society", Brussels, Belgium, June 2-6, 2014.
- Talk at the "Energy Finance 2014 Conference", Erice, Italy, September 24-26, 2014.
- Talk at the "E-quant bootcamp 2014", Lucca, Italy, October 13-17, 2014.
- Talk at the "EWGCFM 2014", Milan, Italy, December 4-6, 2014.

EDUCATION

- **Nov 2009- Nov 2012, Ph.D. Mathematics for Financial Market Analysis,**
Università di Milano-Bicocca, Milan, Italy, **www.unimib.it.**
- **Jan 2012- Jul 2012, Visiting Ph.D. student,**
Cass Business School, London, UK, **www.cass.city.ac.uk.**
- **Sep 2006 – Oct 2008, M.Sc. Mathematical Engineering, Quantitative Finance,**
Politecnico di Milano, Milan, Italy, **www.polimi.it.** Grade: 110/110 *cum laude*.
- **Sep 2003 – Sep 2006, B.Sc Mathematical Engineering, Computer Science,**
Politecnico di Milano, Milan, Italy, **www.polimi.it.** Grade: 106/110.
- **Sep 1998- Jul 2003, Diploma di Liceo Scientifico,**
Liceo Scientifico Enrico Medi, Villafranca di Verona, Italy, **www.liceomedi.com.** Grade: 100/100.

LANGUAGES

- Italian: Native
- English: Fluent

IT SKILLS

- Financial tools: Bloomberg, FinCad, Dianos Price Wizard, Quantlib.
- Programming Languages and Mathematical tools: Matlab, R, Gretl, C++, Python, Visual Basic.
- Operating Systems and relevant applications: Microsoft Windows and Apple MacOS, Microsoft Office and i-Work packages, LaTex, Lotus Notes.

AWARDS

- **Sep 2013 - AMASES AWARD** for the best paper presented at the XXXVII National AMASES Conference by a young researcher. Winner with the paper "A general closed-form spread option pricing formula".

REVIEWER ACTIVITY

- North American Journal of Economics and Finance.
- International Journal of Computer Mathematics.

MEMBERSHIPS and PROFESSIONAL ASSOCIATIONS:

- BACHELIER FINANCE SOCIETY, **www.bachelierfinance.org**
- AMASES, **www.amases.it**