Dr. Nicoletta Gabrielli / *Curriculum Vitae*

http://nicolettagabrielli.weebly.com

Personal details

Nationality: Italian
Date of birth: 14.04.1985
Place of birth: Civitavecchia, Rome, Italy
Status: Single
Permit: C

Work Experience

Quantitative Analyst / Financial Engineer

Bank Julius Bär — **Zürich**
Risk Analytics — *from 09.2015*

- *Job description:* Validation and control of in-house as well as third party developed pricing algorithms with main focus on complex Equity and Foreign Exchange structured products.
  - Development and implementation reference pricing models.
  - Responsibility for assessment of model risk, model limitations and analysis of model assumptions.
  - Review quality of risk and stress information as well as independent price verification.
  - Participation in new product approval process.

PostDoc

Department of Banking and Finance — **University of Zürich**
Center for Finance and Insurance — *09.2014-08.2015*

Job description: Research in the field of quantitative financial mathematics applied to insurance.

Research fellow

Department of Mathematics — **ETH Zürich**
Mathematical Finance and Actuarial Mathematics — *05.2014-08.2014*

Job description: Coordination of an exercise class in computational finance and research in the area of mathematical finance.

Scientific assistant

Department of Mathematics — **ETH Zürich**
Mathematical Finance and Actuarial Mathematics — *10.2009-04.2014*

Doctor of Sciences, ETH Zürich, April 2014

- *Research:* Application of stochastic processes in mathematical finance
  - Stochastic volatility models
  - Numerical approximations
  - Stochastic differential equations

- *Teaching:* Coordination of several classes in stochastic analysis, probability and mathematical finance
  - Training of students in scientific computing (Matlab, R)
  - Coordination of exercise classes, preparation and evaluation of exercise sheets
  - Supervision of dissertations and Master theses

Exercise instructor

Department of Mathematics — **"La Sapienza" University of Rome**
Laboratorio e Centro di Calcolo (computing centre) — *03.2005–02.2009*

Job description: Teaching assistant for various classes with exercises in Matlab, C++, Mathematica and Maple.

Odd jobs

- Creating custom made T - shirt for ETH Zürich events
- Summer events staff (expositions, festivals, competitions)
- Tutoring mathematics

Education

Ph.D. in Mathematics

Department of Mathematics — **ETH Zürich**
Mathematical Finance and Actuarial Mathematics — *10.2009–04.2014*

- *Dissertation:* "Affine processes from the perspective of path space valued Lévy processes"
- *Focus:* The application of affine processes in mathematical finance, has widely increased in recent years. Such applications range over a broad variety of common topics in finance such as option pricing or simulation of term structure models. The thesis provides new results on affine processes and on their applications to mathematical finance, with a view towards numerics.
- *Supervisor:* Prof. Dr. Josef Teichmann

MSc in Applied Mathematics

Department of Mathematics — **"La Sapienza" University of Rome**
110/110 with distinction — *10.2007–07.2009*

- *Dissertation*: "Processi di Levy come modelli di mercato: applicazione della trasformata di Fourier nell'option pricing"
- *Focus*: Jump-diffusion models and Lévy processes as market models with various implementations for option pricing

BSc in Mathematics

Department of Mathematics — **"La Sapienza" University of Rome**
110/110 with distinction — *10.2004–07.2007*

- *Dissertation*: "Il teorema di Beckman-Quarles e questioni connesse"
- *Focus*: Algebra and Geometry

Secondary School

Scientific High School — **Civitavecchia (Rome)**
100/100 with distinction — *09.1999–07.2004*

Diploma in music theory and solfeggio..

Conservatory **Frosinone**

Study of music theory and piano *09.2002*

Awards

NAG's Student Award..

Student Award Prize for the best project in mathematical finance using NAG (The Numerical Algorithms Group) Toolbox for Matlab.

- Application of the NAG Toolbox for option pricing, plotting of volatility surfaces, simulate trajectories of random processes

Papers

- Gabrielli, N. and Teichmann, J. "Pathwise construction of affine processes", submitted December 2014
- Gabrielli, N. "Regularity Results for Degenerate Kolmogorov Equation of Affine Type", ArXiv e-print, June 2014
- Gabrielli, N. "Per iniziare a scrivere la tesi", Latex Tutorial for students, June 2009

Conferences

Various presentations at international conferences and seminars.

Computer skills

Operative systems: Linux, Mac, Windows

Programming: MATLAB, R, C++, Java

Scientific computing: Mathematica, Maple

Typesetting: LaTeX

Languages

Italian: Mother tongue

English: Fluent

German: Good

Hobby and interests

Sport (aerobics, running) · Drawing and painting (watercolours) · Cooking · Travelling