Emanuele **Guidotti**

PhD Student · Partner at Algo Finance Sagl

Neuchâtel, Switzerland

☐ (+41) 78 230 04 77 | ✉ emanuele.guidotti@unine.ch | ⌂ emanueleguidotti.dev | in emanuele-guidotti

Skills

DevOps	Excellent: Wordpress · Intermediate: Google Cloud Platform
Programming	Excellent: R · Advanced: C++, SQL, PHP, HTML · Intermediate: XML, CSS · Basic: Javascript, jQuery, AJAX
Languages	Mother tongue: Italian · Fluent: English (level C1)

Experience

Algo Finance Sagl — *Lugano, Switzerland*
Partner — *May 2018 - Now*
- Software house start-up developing financial algorithms for the asset management industry.

The YUIMA Project — *Tokyo, Japan*
Member — *2016 - Now*
- International academic research team mainly composed by mathematicians and statisticians. The Project is supported by the Japan Science and Technology Agency CREST.

YUIMA Summer School on Computational and Statistical Methods for Stochastic Process — *Brixen, Italy*
Lecturer — *July 2019*
- The 4 days course aims at introducing researchers, PhD students and practitioners to several aspects of modern numerical and statistical analysis of time series through the R language and, in particular, the YUIMA package.

WhatsOut Srl — *Milan, Italy*
Founder — *Jun. 2018 - Feb. 2019*
- Innovative start-up based on the AI enhanced web application I designed and developed.

University of Milan — *Milan, Italy*
Teaching Assistant — *2017 - 2018*
- Teaching "Mathematics" at the Department of Social and Political Sciences.

University of Tokyo — *Tokyo, Japan*
Visiting Scholar — *Jan 2017, May, Nov and Dec 2018*
- Working with the YUIMA Team. Statistical research.

Voices from The Blogs — *Milan, Italy*
Data Scientist — *2017 - 2018*
- Collaborating with Voices from the Blogs, start-up dealing with Big Data Analysis, Deep Learning, Machine Learning and Sentiment Analysis.

Education

University of Neuchâtel — *Neuchâtel, Switzerland*
PhD in Finance — *Mar. 2019 - Now*
- Favourite courses:
    - *Swiss Program for Beginning Doctoral Students in Economics (Econometrics Sequence)*, Study Center Gerzensee, Switzerland.
    - *Empirical Asset Pricing*, Ecole Polytechnique Fédérale de Lausanne, Switzerland.
    - *Machine Learning in Finance*, Politecnico di Milano, Italy.
    - *Academic Writing Conventions and Style*, University of Neuchâtel, Switzerland.

Voxcom Language and Communication Training — *Milan, Italy*
Professionally Speaking — *Mar. 2017*
- 2-day, full-time training course in presentation and communication skills. Voxcom generally runs this training for C-level managers and specialist professionals.

University of Milan
Milan, Italy

MSc in Economics and Finance - Quantitative Finance _2015 - 2017_

- Final grade: 110/110 cum laude.
- Thesis: _yuimaGUI: an Interactive Platform for Computational Finance.._ The Platform I developed is available online and has been presented at several international conferences about Statistics, R programming and Finance.
- Favourite courses:
  - _Numerical and Statistical Methods for Finance_.
  - _Databases_ (Department of Informatics).
  - _Data Models and DBMS of New Generation_ (Department of Informatics).
  - _Data Mining and Computational Statistics_.
  - _Time Series Analysis_.
  - _Risk Theory_.

University of Milan
Milan, Italy

BSc in Physics - General Physics _2012 - 2015_

- Final grade: 110/110 cum laude.
- Thesis: _Option Pricing: Black-Scholes and Lévy dynamics._
- Favourite courses:
  - _Computational Methods for Physics_.
  - _Numerical Treatment of Experimental Data_.
  - _General Relativity_.
  - _Quantum Mechanics_.
  - _Electromagnetism_.
  - _Calculus I, II and III_.

High School Luigi Cremona
Milan, Italy

High School Diploma of Science _2007 - 2012_

- Final grade: 100/100.

Rotary International
Milan, Italy

Rotary Youth Leadership Awards _Mar. 2011_

- Leadership program coordinated by Rotary Clubs around the globe. Participants are chosen for their leadership potential.

Honors & Awards

Scholarships

2017	**University Scholarship Pirelli,** Awarded to the top 25 students among Pirelli employees' children.	_Milan, Italy_
2016	**University Scholarship Pirelli,** Awarded to the top 25 students among Pirelli employees' children.	_Milan, Italy_
2015	**University Scholarship Pirelli,** Awarded to the top 25 students among Pirelli employees' children.	_Milan, Italy_
2014	**University Scholarship Pirelli,** Awarded to the top 25 students among Pirelli employees' children.	_Milan, Italy_
2013	**High School Scholarship Pirelli,** Awarded to the top 140 students among Pirelli employees' children.	_Milan, Italy_
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Presentation

International Conference on Computational and Methodological Statistics
London, UK

Presenter for <Towards Coding of the Asymptotic Expansion Formula in YUIMA> _Dec. 2019_

- The implementation of the asymptotic expansion formula would allow the user to efficiently compute expected values of multidimensional diffusion processes with virtually any degree of accuracy.

European Meeting of Statisticians
Palermo, Italy

Presenter for <Towards Coding of the Asymptotic Expansion Formula in YUIMA> _July 2019_

- The implementation of the asymptotic expansion formula would allow the user to efficiently compute expected values of multidimensional diffusion processes with virtually any degree of accuracy.

YUIMA Conference
Rome, Italy

Presenter for <RblDataLicense: R Interface to "Bloomberg Data License"> _May 2018_

- Introduced RblDataLicense, connecting R to the Bloomberg Data License Service.

Seminar at the University of Tokyo, Mathematical Sciences　　　　　*Tokyo, Japan*

Presenter for <Latest development in the R-package YUIMAGUI>　　　　　*May 2018*

- Introduced the latest development in yuimaGUI, interactive platform for computational statistic and finance.

International Conference on Computational and Methodological Statistics　　　　　*London, UK*

Presenter for <The Yuima framework for simulation and inference of stochastic processes and its GUI>　　　　　*Dec. 2017*

- Introduced the Yuima framework for simulation and inference of stochastic processes and its Graphical User Interface.

Annual Meeting of the Association for Mathematics Applied to Social & Economic Sciences　　　　　*Cagliari, Italy*

Presenter for <yuimaGUI: a Graphical User Interface for the yuima package>　　　　　*Sep. 2017*

- Introduced yuimaGUI, interactive platform for computational statistic and finance.

R/Finance Conference　　　　　*Chicago, USA*

Presenter for <yuimaGUI: interactive platform for computational finance>　　　　　*May. 2017*

- Introduced yuimaGUI at the primary meeting for academics and practitioners interested in using R in Finance.

Seminar at the University of Tokyo, Mathematical Sciences　　　　　*Tokyo, Japan*

Presenter for <yuimaGUI: a Graphical User Interface for the yuima package>　　　　　*Jan 2017*

- Introduced the first version of yuimaGUI, a Graphical User Interface for the yuima package.

International Conference on Computational Statistics　　　　　*Oviedo, Spain*

Presenter for <yuimaGUI: a Graphical User Interface for computational finance based on the yuima R package>　　　　　*Aug 2016*

- Introduced the first version of yuimaGUI, a Graphical User Interface for computational finance based on the yuima R package.

Papers

RblDataLicense: R Interface to "Bloomberg Data License"　　　　　*SSRN*

Author　　　　　*Nov 2019*

- Working paper. Submitted to the Journal of Statistical Software.

R-packages

Calculus: High Dimensional Numerical and Symbolic Calculus in R　　　　　*CRAN - GitHub*

Author　　　　　*Nov 2019*

- Efficient C++ optimized functions for numerical and symbolic calculus. It includes basic symbolic arithmetic, tensor calculus, Einstein summing convention, fast computation of the Levi-Civita symbol and generalized Kronecker delta, Taylor series expansion, multivariate Hermite polynomials, accurate high-order derivatives, differential operators (Gradient, Jacobian, Hessian, Divergence, Curl, Laplacian) and Monte Carlo integration in arbitrary orthogonal coordinate systems: cartesian, polar, spherical, cylindrical, parabolic or user defined by custom scale factors.

RblDataLicense: R Interface to "Bloomberg Data License"　　　　　*CRAN - GitHub*

Author　　　　　*May 2019*

- As the technology infrastructure increases in sophistication, Bloomberg released the Data License service, the platform that delivers Bloomberg's datasets. For the first time, users can directly program against Bloomberg's comprehensive historical data, servicing the growing needs of data science. The RblDataLicense package aims at providing a user-friendly R interface to the Data License service. As a prerequisite, a valid Data License from Bloomberg is needed. This software and its author are in no way affiliated, endorsed, or approved by "Bloomberg" or any of its affiliates. "Bloomberg" is a registered trademark.

yuimaGUI: a Graphical User Interface for the "yuima" Package　　　　　*CRAN*

Author　　　　　*Jan 2017*

- Provides a graphical user interface for the yuima package: open source academic project aimed at developing a complete environment for estimation and simulation of Stochastic Differential Equations and other Stochastic Processes.