

# Pieralberto Guarniero

## Work Experience

### **Università Bocconi (Decision Sciences)**

**Milano (Italy)**

*Lecturer*

*September 2019 - Present*

- Module leader for the courses: Data Analysis (MSc), Statistics and Probability (MSc), Statistics (BSc) and Mathematics and Statistics (BSc). Average student satisfaction: 9.4/10.
- Coordinator for all Statistics courses taught in English (international track).
- Designed and delivered the first blended fully virtual module in Statistics at Bocconi. The course combines asynchronous videos and live lectures within the framework of continuous assessment.
- Speaker at Widening Participation events (Numbers 2).

### **University of Warwick (Statistics)**

**Warwick (UK)**

*Senior Teaching Fellow*

*August 2017 - August 2019*

- Module leader for the courses: Monte Carlo Methods (MSc, SSLC commendation for teaching excellence), Financial Time Series (MSc, Warwick Business School), Finance and Financial Reporting (BSc). Average student satisfaction of 97%.
- Coordinator of PhD students tutorials and support classes. Redesigned and delivered teaching training sessions for PhD students in Statistics and Mathematics.
- Widening Participation, Outreach and Publicity reference person for the Statistics department. Speaker at WP events (e.g. Maths and Beyond) and Outreach events (e.g. Progression to PG studies, Open Days).
- Dissertation supervisor and personal tutor of over 40 students.

### **Università degli Studi di Bologna (Mathematics)**

**Bologna (Italy)**

*Guest Lecturer*

*March 2019 - Present*

- Module leader for the course Sequential Monte Carlo and Applications in Finance, for postgraduate and PhD students of the Master's in Mathematical Finance.

### **University of Warwick**

**Warwick (UK)**

*PhD Seminar Tutor*

*September 2013 - June 2017*

- Tutor and seminar classes teacher at the Statistics department for the modules: Probability, Stochastic Processes, Mathematical Statistics, Mathematical Finance.
- Seminar tutor of Statistical Methods for Social Sciences, at the department of Social Sciences.

### **Banca Sella**

**Biella (Italy)**

*Investment Portfolio Intern*

*April 2013 - July 2013*

- Assisted an experienced financial trader through the management of an Italian bonds investment fund at the Banca Sella Trading Room.
- Traded assets on MOT (Italian regulated bond market) according to a proprietary interest rates model.
- Supported investment decisions and portfolio hedging through data analysis and procedures automation.

## Education

### **University of Warwick**

**Warwick (UK)**

*PhD in Statistics*

*September 2013 - June 2017*

- PhD in look-ahead methods for sequential Monte Carlo funded by EPSRC bursary.
- Developed sequential Monte Carlo algorithms for efficient parameter estimation for hidden Markov models. Thesis based on financial data and applications (multi-factor stochastic volatility models).
- Completed the Academy for PhD Training in Statistics covering topics including: statistical computing, inference and modelling, applied stochastic processes and computer intensive statistics.
- PhD student representative for 2 years (Student-Staff Liaison Committee chair).

### **Università degli Studi di Bologna**

**Bologna (Italy)**

*Master in Mathematical Finance (Hons)*

*October 2012 - May 2013*

- Corso di Alta Formazione post-lauream with scholarship awarded by Iason Ltd.
- Core: probability theory, mathematical and computational finance, risk management, econometrics.

### **Università degli Studi di Padova**

**Padua (Italy)**

*Master of Science in Mathematics (Hons)*

*October 2010 - October 2012*

- Specialism in quantitative finance. Core: stochastic analysis, statistics, mathematical finance, analysis.
- Thesis in stochastic analysis: "Functional Inequalities and Applications to Hardcore Dynamics".
- Erasmus student at the University of Warwick (October 2010 - July 2011).

### **Università degli Studi di Padova**

**Padua (Italy)**

*Bachelor of Science in Mathematics*

*September 2007 - September 2010*

- Specialism in finance and applied mathematics. Core: analysis, geometry, algebra, probability, economics.
- Thesis in mathematical finance: "Bounds for the Ruin Probability in Case of Reinsurance and Investment in the Financial Market".

## **Recent Activities and Awards**

### **Executive Master in Journalism, Corriere della Sera**

*May 2021 - December 2021*

- Lectures and laboratories cover a range of journalistic topics including: economics, data journalism, social media and podcasts, politics and international affairs, crime news,...
- Finalist for the best project award. My final project consisted in a journalistic investigation on the impact of the pandemic on university exams.

### **Bocconi Excellence in Advance Teaching (BEAT)**

*June 2020*

- Practice based faculty programme that trains academics in the design, development and delivery of innovative teaching and learning experiences.

### **Academic Professional Pathway towards Teaching Excellence (APP TE)**

*August 2019*

- 12 month part-time programme designed to train academics in key educational theories in the field of higher education teaching and learning to create deep awareness of teaching excellence.
- Awards the nationwide recognised status of Higher Education Academy Fellow.

### **Publications**

- P. Guarniero, A. M. Johansen and A. Lee. The Iterated Auxiliary Particle Filter. *Journal of the American Statistical Association* 112(520):1636–1647, 2017.
- P. Guarniero. The Iterated Auxiliary Particle Filter and Applications to State Space Models and Diffusion Processes. PhD Thesis, University of Warwick, 2017.

### **TEDx Speaker**

*October 2016*

- My [TEDx talk](#) recounts the discovery of my passion for teaching during my PhD studies.
- Our sociable nature inspires us towards the practice of sharing. Teaching is the magical moment when Communication and Mathematics meet in the process of sharing knowledge.

### **Warwick Teaching Excellence Awards**

*October 2015 - Present*

- Winner of the Warwick Award for Teaching Excellence (PGR) for postgraduate researchers in 2015.
- Warwick Award for Teaching Excellence (PGR) nominee in 2016 as PhD student.
- Warwick Award for Teaching Excellence nominee in 2018 and in 2019 as lecturer.
- Commendation for teaching excellence at Warwick Statistics in 2019.

### **Winner of Best Poster Award at the Major Conference on SMC Methods**

*August 2015*

- The biennial SMC conference (SMC2015, Paris) gathers over 200 academics from all areas of science.

### **Postgraduate Award in Teaching and Learning in Higher Education**

*March 2015*

- Programme that comprises a series of workshops and structured online activities related to professionalism in teaching and learning at university level. Bears 30 university credits (CATS) at Master's level.
- Awards the nationwide recognised status of Higher Education Academy Associate.

### **Teaching and Learning Workshops Organiser, Speaker and Participant**

*September 2014 - Present*

- Delivered talks on presenting and lecturing with an iPad in a series of venues: the Warwick Teaching Fellows forum, the Warwick Academic Development Programme, the Warwick Statistics teaching forum.
- Organiser of the reading group "Circle of Teaching and Learning" at the Warwick Statistics department.
- Enthusiast participant of teaching and learning events organised by e.g. the Warwick Learning and Development Centre and Warwick Higher Education International Academy, the Institute for Mathematics and its Application, the Loughborough Mathematics Education Centre.

## **Languages & IT Skills**

### **Languages**

- Italian. Native speaker.
- English. Proficient in writing and speaking.
- Spanish. Elementary proficiency.

### **Computer Skills**

- R, Matlab, Mathematica, Python
- Final Cut Pro X, Adobe Premiere
- Microsoft Office, Apple iWork

## **Extra Curricular Activities and Passions**

### **Communication**

- Enthusiastic amateur content creator for the communication of Science and Economics.
- Worked in PR for an entertainment company, arranging 50+ events each year.
- Worked as an entertainer at the top rated touristic resort of Chia Laguna, Sardinia.
- Instagram entertainment blogger.

### **Music**

- Clarinet player at A. Steffani Conservatory, Castelfranco Veneto, for 8 years.
- Solo and Choral singer at a music academy for 5 years.

### **Sport**

- Amateur crossfitter.
- Professional volleyball player for 15 years.

### **Downtime**

- Avid news reader.
- Japanese Anime.
- Tarots.