europass Curriculum Vitae

PERSONAL INFORMATION

Luca Cattivelli

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Sex Male | Date of birth 30/06/1990 | Nationality Italian

EDUCATION AND TRAINING

From 2014 — **PhD student in Mathematical Finance**

Scuola Normale Superiore, Pisa (Italy).

2012 – 2014 — **Master's degree in Physics**

Department of Physics, University of Parma (final grade: 110/110 with laude). Thesis: “The two-particle problem in comb like structures”, Supervisor: Prof. Davide Cassi (University of Parma) and Dott. Elena Agliari (Sapienza University of Rome).

2009 – 2012 — **Bachelor's degree in Physics**

Department of Physics, University of Parma (final grade: 110/110 with laude). Thesis: “An elementary application of Lie algebras to the degenerate states of the hydrogen atom”, Supervisor: Prof. Enrico Onofri (University of Parma).

2009 — **High School Diploma**

Scientific high school “Paciolo D'Annunzio”, Fidenza (final grade 100/100).

Mother tongue(s): Italian

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Computer languages: Matlab, C++, Mathematica, Bash, Python, R, Gretl.

Publications

- E. Agliari, D. Cassi, L. **Cattivelli**, F. Sartori, “Hitting and Covering Times in Branches Structures”, Physical Review E 91.5, 052132 (2015).
- L. **Cattivelli**, E. Agliari, F. Sartori, D. Cassi, “Lévy Flights with power law absorption”, Physical Review E 92.4: 042156 (2015).
- E. Agliari, D. Cassi, L. **Cattivelli**, F. Sartori “The two-particle problem in comb-like structures”, Physical Review E 93.5: 052111 (2016).
- L. **Cattivelli**, D. Pirino. “A SHARP Model of Bid-Ask Spread Forecasts”, (available at SSRN)

Conferences

- "XIX National Conference on Statistical Physics and **Complex Systems**" presenting a poster entitled: "The two-particle problem in comb like Topologies", Parma, 29 June - 1 July 2015
- "**Recent Developments in Econometric Methodologies**" (Bergamo University, 25th-26th November 2016), presenting "A SHARP model of bid-ask spread forecasts"
- "The Seventh Italian **Congress of Econometrics and Empirical Economics**", Messina, January 25-27, 2017, presenting "A SHARP model of bid-ask spread forecasts"

Schools

- **Advanced Risk and Portfolio Management Bootcamp** (ARPM), New York, USA.
- 13th NIPE summer school (Portugual): An intruduction to **High Frequency Financial Econometrics and Trading**, with prof. Ait-Sahalia (Princeton University).
- XXVII **Course of Econometrics** for PhD Students, Bertinoro (FC, Italy), organized by the Società Italiana di Econometria (SIdE). The director of the course is prof. Giorgio Calzolari (University of Florence).
- Tutorial on **Quantile and M-Regression**, University of Pisa.

PhD courses

List of courses and relative marks:

1. High Frequency Finance and Market Microstructure, 30/30 cum laude.
2. Mathematical Finance, 29/30.
3. Seminar on Credit Risk, 30/30 cum laude.
4. Time series and networks, 30/30 cum laude.

PhD thesis

My research field is high frequency financial econometrics within the Mathematical Finance research group of Scuola Normale Superiore.

Collaborations:

- Davide Pirino (University of Rome Tor Vergata). We have developed a stochastic model for **liquidity forecasting** and for optimal execution of orders. (available at SSRN).
- Giampiero Gallo (University of Florence): we are studying **Lasso** techniques for high dimensional vector Multiplicative Errors model (**vMEM**).
- Federico Antonioli (University of Parma): we are developing an 'interrupted' cointregration model for studying the time varying cointegration relationship between stock prices and dividends.