

CHIARA SABELLI

PERSONAL INFORMATION

Born in Italy, 27 December 1984

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address Via Giordano Bruno 37, 56125 Pisa, ITALY

WORK EXPERIENCE

*SNS-UniCredit
Postdoc*

2013–Present **Post-Doc at Scuola Normale Superiore**

Research project: long-term multivariate properties of interest rates in the multiple yield curves environment. Scenario generation for risk management purposes.

Principal results:

- reformulation of the standard HJM modelling framework in the objective probability measure
- MLE calibration algorithm for a multivariate GARCH-in-mean process on historical time series

*Poste Vita
Associate*

2012–2013 **Investment Strategy Unit at Poste Vita**

Associate in the Finance Department of Poste Vita, the Insurance Company owned by Poste Italiane S.p.A.

Principal Duties:

- Sensitivity analysis of the company's asset portfolio to main risk factors
- Scenario generation for the main risk factors through bootstrapping and filtered historical simulation
- Use of the MG-ALFA Asset-Liability-Management software for: strategic asset allocation, determination of the duration gap
- Ranking of funds for potential investments

EDUCATION

PhD in Physics

2008–2012 **Università degli studi di Roma Sapienza**

XXIV Ciclo Scuola di dottorato in Scienze Chimiche, Fisiche, Matematiche Vito Volterra.

Thesis: The New Hadron Spectroscopy

Advisor: Prof. Antonio Davide POLOSA

PhD thesis defense date: 14 February 2012

Honors: Special mention of the INFN Premio Fubini 2012 Committee

Research skills:

- Phenomenology of strong interactions among elementary particles in the non perturbative region
- Monte Carlo Techniques for generic simulations and in particular for hadronic collisions
- Main tools for the statistical analysis of experimental data

Master Degree in Physics

2007-2008 **Università degli studi di Roma Sapienza**
110/110 cum laude · Master in Theoretical particle physics.
Thesis: On the Supersymmetric contributions to single flavor changing decays
Advisors: Prof. Guido MARTINELLI & Dott. Luca SILVESTRINI
Date: 25 September 2008
Acquired skills:

- Quantum Field Theory
- Phenomenology of the Standard Model of elementary particles

Socrates-Erasmus Exchange Program

2006-2007 **Université de Genève**
Exams for 40 ECTS · 1st year of the Master degree in Theoretical particle physics
Advisors: Prof. Silvia GENTILE & Prof. Michel DROZ
Acquired skills:

- Classic and Quantum Field Theory
- Advanced Statistical Mechanics
- Realization of an elementary particles experiment, hardware and software

Bachelor degree in Physics

2003-2006 **Università degli studi di Roma Sapienza**
110/110 cum laude · Bachelor in Physics.
Thesis: Quantum considerations on pyramidal molecules
Advisor: Prof. Silvano PETRARCA
Date: 28 October 2006
Acquired skills:

- Mathematical Analysis, Algebra, Geometry
- Classical Physics
- C Programming
- Statistical Mechanics
- Quantum Mechanics
- Laboratories (Mechanics - Thermodynamics - Optics - Electronic)

High School Diploma

1998-2003 **Liceo Scientifico Statale Primo Levi, Roma**
100/100 · Scientific High school Diploma.

WORKING PAPER

2014

arXiv:q-fin C.. SABELLI, M. PIOPPI, L. SITZIA and G. BORMETTI,
"Multi-curve HJM modelling for risk management", [arXiv:1411.3977 [q-fin]].

PUBLICATIONS

2011.*b*

Phys. Rev. D T. J. BURNS, F. PICCININI, A. D. POLOSA, V. PROSPERI and C. SABELLI,
"The momentum distribution of J/ψ in B decays", *Phys. Rev. D* **83** (2011),
114029 [arXiv:1104.1781 [hep-ph]].

- 2011.a
Phys. Rev. D F. BRAZZI, B. GRINSTEIN, F. PICCININI, A. D. POLOSA and C. SABELLI,
 “Strong Couplings of $X(3872)_{J=1,2}$ and a New Look at J/ψ Suppression in Heavy Ion Collisions”, *Phys. Rev. D* **84** (2011), 014003 [arXiv:1103.3155 [hep-ph]].
- 2010.b
Phys. Rev. D T. J. BURNS, F. PICCININI, A. D. POLOSA and C. SABELLI,
 “The 2^{-+} assignment of $X(3872)$ ”, *Phys. Rev. D* **82** (2010), 074003 [arXiv:1008.0018 [hep-ph]]
- 2010.a
Riv. Nuovo Cim. N. V. DRENSKA, R. FACCINI, F. PICCININI, A. D. POLOSA, F. RENGÀ and C. SABELLI,
 “New hadronic spectroscopy”, *Riv. Nuovo Cim.* **033** (2010) 633-712 [arXiv:1006.2741 [hep-ph]].
- 2009.c
Phys. Lett. B C. BIGNAMINI, B. GRINSTEIN, F. PICCININI, A. D. POLOSA and C. SABELLI,
 “More loosely bound hadron molecules at CDF?”, *Phys. Lett. B* **684** (2010), 228 [arXiv:0912.5064 [hep-ph]].
- 2009.b
Phys. Rev. Lett. G. COTUGNO, R. FACCINI, A. D. POLOSA and C. SABELLI,
 “Charmed Baryonium”, *Phys. Rev. Lett.* **104** (2010), 132005 [arXiv:0911.2178 [hep-ph]].
- 2009.a
Phys. Rev. Lett. C. BIGNAMINI, B. GRINSTEIN, F. PICCININI, A. D. POLOSA and C. SABELLI,
 “Is the $X(3872)$ Production Cross Section at Tevatron Compatible with a Hadron Molecule Interpretation?”, *Phys. Rev. Lett.* **103** (2009), 162001 [arXiv:0906.0882 [hep-ph]].

TALKS

- 2015
XVI Workshop on Quantitative Finance “Multi-curve HJM modelling for risk-management”
 Università degli studi di Parma - Dipartimento di Economia
 29-30 January 2015
[\[http://www.qfinancevi.altervista.org/\]](http://www.qfinancevi.altervista.org/).
- 2011
8th QWG Workshop (Plenary speaker) “Indirect search of exotic mesons: $B \rightarrow J/\psi + All$ ”
 8th International Workshop on Heavy Quarkonium 2011
 GSI - Darmstadt Germany, 4-7 October 2011
[\[https://indico.gsi.de/conferenceDisplay.py?ovw=True&confId=1196\]](https://indico.gsi.de/conferenceDisplay.py?ovw=True&confId=1196)
- 2011.b
SuperB Workshop “The new mesons: direct and indirect search”
 SuperB Workshop and Kick Off Meeting
 La Biodola - Isola d’Elba, 28 May- 2 June 2011
[\[http://agenda.infn.it/conferenceDisplay.py?confId=3352\]](http://agenda.infn.it/conferenceDisplay.py?confId=3352)

2011.a

IFAE 2011
(Plenary speaker)

"Ricerca indiretta di mesoni esotici: $B \rightarrow J/\psi + All$ "
IFAE2011, Incontri di fisica delle alte energie
Università degli studi di Perugia, 27-29 April 2011
[<http://agenda.infn.it/conferenceDisplay.py?confId=3031>]

2010.c

7thQWG
Workshop
(Plenary speaker)

"X(3872): is it really an exotic?"
International Workshop on Heavy Quarkonium
Fermilab - Batavia Illinois, 18-21 May 2010
[<http://conferences.fnal.gov/QWG2010/>]

2010.b

18thDIS Workshop

"Prompt production of loosely bound molecules at hadron colliders"
XVIII International Workshop on Deep-Inelastic Scattering and Related Subjects.
Università di Firenze, 20-24 April 2010 (In English).
[<http://dis2010.to.infn.it/>]

2010.a

IFAE 2010
(Plenary speaker)

"I nuovi adroni: molecole o tetraquarks?"
IFAE2010, Incontri di fisica delle alte energie
Dip. di Fisica Università di Roma 'Sapienza', 7-9 April 2010
[<http://ifae2010.roma1.infn.it/>]

SUMMER SCHOOLS AND COURSES

2012

ESG training

Barrie & Hibbert Economic Scenario Generator User Training
London, November 7th - 9th 2012
[http://www.barrhibb.com/economic_scenario_generator/]

2010

CTEQ 2010

CTEQ - MCnet Summer School on QCD Phenomenology and Monte Carlo Event Generators
Lauterbad (Black Forest) Germany, July 26th - August 4th 2010
[<http://www.cteq-mcnet.org/>]

2009

Parma
International
school

Theoretical Tools for the LHC
Parma, August 31th - September 4th 2009
[<http://www.pr.infn.it/snft/2009/snft-2009.html>]

INTERNATIONAL COLLABORATIONS

2010

UCSD

University of California, San Diego
Collaboration with Prof. Benjamin Grinstein.
December 1st-13th 2010

2009

UAB

Institute for High Energy Physics at the Universitat Autònoma de Barcelona
Collaboration with Dott. Rafael Escribano.
May 10th-16th 2009

IT SKILLS

<i>Operating Systems</i>	MAC OS X, WINDOWS, LINUX (Ubuntu).
<i>Programming languages</i>	C, FORTRAN, C++, VBA (Visual Basic for Application)
<i>Scientific Softwares</i>	Technical Computing: MATHEMATICA (advanced user), MATLAB (intermediate user). Statistical Computing: R (intermediate user). Graphing Utility: GNUPLOT (intermediate user).
<i>Productivity Softwares</i>	OFFICE, IWORK, L ^A T _E X

LANGUAGE SKILLS

<i>Italian</i>	Native Speaker.
<i>English</i>	Fluent (B2), 2002 FIRST CERTIFICATE OF ENGLISH with final mark B.
<i>French</i>	Fluent (B2), 2007 Ecole de langue et civilisation Francaises (Université de Genève): GRAMMAIRE II with final mark 5.5/6, ÉCRIT II with final mark 4.5/6.

March 12, 2015

Chiara Sabelli