Giorgio Fabbri

Curriculum vitæ
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Born in Cesena (Italy), 10 Apr 1979

Education and positions

Nov 2008 - Today	**Assistant professor (permanent position)**, *University "Parthenope", Naples, Italy. Department of Economic Studies "S.Vinci".*
Jan 06 - Oct 08	**Research fellow**, *University "Luiss - Guido Carli", Rome, Italy.*
Jan 07 - Jan 08	**Research associate**, *University of the New South Wales, Sydney, Australia.*
Nov 02 - Oct 06	**PhD student**, *University "La Sapienza", Rome, Italy. "Istituto Guido Castelnouvo".*
Oct 98 - Jul 02	**Student**, *Scuola Normale Superiore (Pisa, Italy) and University of Pisa.*

Other

Dec 2009 - Today	**Research associate**, *IRES, Université Catholique de Louvain.*

Titles

title	**PhD in Math** - University *La Sapienza*, Rome, Italy
thesis subject	*First order HJB equations in Hilbert space and applications*
supervisor	prof. Fausto Gozzi
date	20 Dec 2006

title	**Diploma** - Scuola Normale Superiore, Pisa.
dissertation subject	*Action of amenable groups and transference of convolution operators*
supervisor	prof. Fulvio Ricci
mark	70/70 *cum laude*
date	22 Jul 2002
3rd year dissertation at SNS	Internal dissertation at Scuola Normale Superiore, Pisa. Supervisor: prof. Luigi Ambrosio. Dissertation subject: *Metodo diretto nel calcolo delle variazioni (transl.: Direct method in calculus of variation)*. June 2001.

title	**Degree in Math** (4 years) - Università di Pisa
thesis subject	*Sul 'tranference method' di operatori di convoluzione (transl.: On the 'tranference method' of convolution operators)*
supervisor	prof. Fulvio Ricci
mark	110/110 *cum laude*
date	12 Jul 2002

Study/research periods in other universities

One semester or more

place	Unité de Mathématiques appliquées - **Ecole Nationale Supérieure de Techniques Avancées** (ENSTA). Paris, France
host professor	prof. Francesco Russo
position	research visitor
date (duration)	Sept 2011 - Dec 2011 (4 months)

place	Applied Math department, **University of Pisa**. Italy
host professor	prof. Franco Flandoli
position	research visitor
date (duration)	Apr 2010 - June 2010 (3 months)

place	School of Mathematics and Statistics **University of the New South Wales** - Sydney, Australia
host professor	prof. Benjamin Goldys
position	research associate
date (duration)	Jan 2007 - Jan 2008 (1 year)
research subject	Stochastic PDE, implied volatilities models (in collaboration with **Alan Brace** [Bank of Australia] too)

place	Math department, **Georgia Institute of Technology** (Gatech). GA. USA
host professor	prof. Andrzej Święch
position	research visitor
date (duration)	Jan 2005 - May 2005 (4 months)
research subject	Viscosity solution for a class of first order HJB in Hilbert spaces

1-3 months

place	Department of Economics, **Istanbul Bilgi University**. Turkey
host professor	prof. Renzi Sanver
date (duration)	1 Mar 2010 - 2 Apr 2010 (1 month)
research subject	Boycott and child labor

place	Department of Economic Sciences, **Universitè catholique de Louvain**. Belgium
host professor	prof. Raouf Boucekkine
date (duration)	7 Sept. 2009 - 4 Oct. 2009 (1 month)
research subject	Epidemiological models

Brief periods

place	Department of Mathematics **Georgia Institute of Technology** (Gatech). GA. USA
host professor	prof. Andrzej Święch
date (duration)	30 Mar - 14 Apr 2011 (2 weeks)
research subject	Optimal control of stochastic PDEs

place	Math department, **University of Pisa**. Italy
host professor	prof. Fausto Gozzi
date (duration)	9-15 Jan, 30 Jan-12 Feb 2011 (3 weeks)
research subject	Optimal control problems driven by stochastic PDE

place	G.R.E.Q.A.M., (Groupe de Recherch en Economie Quantitative d'Aix Marseille), **Universite Aix-Marseille III**. France
host professor	prof. Patrick Pintus

date (duration)	28 Nov 2010 - 4 Dec 2010 (1 week)
research subject	Growth Reversals and Welfare

place	Math department, **University of Pisa**. Italy
host professor	prof. Fausto Gozzi
date (duration)	19-22 Sept, 18-20 Oct, 6-8 Dec 2010 (10 days)
research subject	Optimal control problems driven by stochastic PDE

place	Department of Economic Sciences, **Universitè catholique de Louvain**. Belgium
host professor	prof. Raouf Boucekkine
data e durata	18 Jan 2010 - 23 Jan 2010 (1 week)
research subject	A spatial growth model

place	Department of Mathematics **Georgia Institute of Technology** (Gatech). GA. USA
host professor	prof. Andrzej Święch
date (duration)	22 Feb 2009 - 5 Mar 2009 (2 weeks)
research subject	Second order HJB equations in Hilbert spaces

place	School of Mathematics and Statistics **University of the New South Wales** - Sydney, Australia
host professor	prof. Benjamin Goldys
date (duration)	22 Jan 2009 - 9 Feb 2009 (2 weeks)
research subject	Stochastic PDE

place	Department of Economic Sciences **Universitè catholique de Louvain**. Belgium
host professor	prof. Raouf Boucekkine
date (duration)	13 Jan 2009 - 16 Jan 2009 (4 days)
research subject	A model for obsolescence and depreciation

place	Department of Economic Sciences **Universitè catholique de Louvain**. Belgium
host professor	prof. Raouf Boucekkine
date (duration)	29 febbraio - 8 marzo 2006 (10 days)
research subject	Vintage capital models

Talks and seminairs

Talks at conferences and workshops

title	*Life span and the problem of optimal population size*
place and date	12th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics. Vienna, Austria (2012) [to come]

title	*Leapfrogging, Growth Reversals and Welfare*
place and date	XXXV convegno AMASES". Pisa, Italy (2011)

title	*On the Mitra-Wan Forest Management Problem in Continuous Time*
place and date	XXXV convegno AMASES". Pisa, Italy (2011)

title	*A dynamic programming result for optimal control problems driven by stochastic partial differential equations*
place and date	"Stochastic control and related PDEs" Summer School. Milan [Bicocca University] (2011)

title	*Leapfrogging, Growth Reversals and Welfare*

place and date “Conference in Macroeconomic Analysis and International Finance 2011”. Rethymno, Greek (2011)

title *Maintenance and Investment: Complements or Substitutes? A Reappraisal*
place and date “Riunione scientifica annuale SIE”. Catania, Italy (2010)

title *Optimal population problem and endogenous growth: re-assessing the Parfit’s* repugnant conclusion
place and date “24th European conference on operational research (Euro XXIV)”. Lisbon, Portugal (2010)
notes invited speech

title *Optimal population problem: the role of finite life*
place and date “24th European conference on operational research (Euro XXIV)”. Lisbon, Portugal (2010)
notes invited speech

title *Optimal population problem and endogenous growth: re-assessing the Parfit’s* repugnant conclusion
place and date “VID Viennese Vintage Workshop”. Vienna Institute of Demography. Wien, Austria (2009)
notes invited speech

title *Maintenance and Investment: Complements or Substitutes? A Reappraisal*
place and date XXXIII convegno AMASES”. Parma, Italy (2009)

title *A viscosity solution approach to the infinite dimensional HJB equation related to a boundary control problem in transport equation*
place and date Conference “Differential Equations and Topology”. Moscow, Russia (2008)
notes invited speech

title *A viscosity solution approach to the infinite dimensional HJB equation related to a boundary control problem in transport equation*
place and date Conference “Conference on Decision and Control (CDC08)”. Cancun, Messico (2008)
notes **the talk, already scheduled in the conference program, has been deleted thanks to lack of research funds for travel reimbursement**

title *An infinite dimensional approach for an arbitrage free implied volatilities model*
place and date XXXI convegno AMASES”. Lecce, Italy (2007)

title *An Infinite Dimensional Approach for an Arbitrage Free Implied Volatilities Model*
place and date Conference “Quantitative Methods in Finance”. Sydney, Australia (2007)
notes **the talk, already scheduled in the conference program, has been deleted due to lack of research funds for paying the conference fee**

title *An AK growth model with vintage capital: a dynamic programming approach* place and date XXX convegno AMASES". Trieste, Italy (2006)

title *Dynamic programming methods for optimal control problem of PDE arising in economics*
place and date 22nd IFIP TC 7 Conference on System Modeling and Optimization". Turin, Italy (2005)

title *A Vintage model with obsolescence: a dynamic programming approach*
place and date Workshop "Vintage Modeling in Economics and Economic Demography", European University Institute, Florence, Italy (2005)
notes invited speech

title *An abstract setting for a growth model with innovation and depreciation*
place and date "Viennese Vintage Workshop 2005". Vienna Institute of Demography. Wien, Austria (2005)
notes invited speech

title *On some optimal control problem with delay arising from economics*
place and date "Workshop on Kolmogorov equation". University of Parma. Italy (2004)

Invited talks at universities

title *Leapfrogging, Growth Reversals and Welfare: an example of an optimal control problem driven by a neutral differential equation arising in economic modeling*
place and date Ecole Nationale Supérieure des Techniques Avancées, ENSTA-ParisTech, Paris, France (2011)

title *Dynamic programming in Hilbert spaces for studying growth models with heterogeneous capital*
place and date Department of Economics, Istanbul Bilgi University, Istanbul, Turkey (2010)

title *Dynamic programming in Hilbert spaces for studying growth models with heterogeneous capital*
place and date Department of Applied Mathematics (DMA), University of Venice, Italy (2010)

title *Portfolio Optimization with Execution Delay*
place and date Ecole Nationale Supérieure des Techniques Avancées, ENSTA-ParisTech, Paris, France (2010)

title *A linear quadratic problem for an heat equation with Dirichlet boundary control and noise*
place and date Department of Mathematics, Universidade Federal Fluminense, Rio de Janeiro, Brasil. (2009)

title *Dynamic Programming in a time-to-build model*
place and date "Workshops in Economics and related studies", Dipartimento di Scienze Economiche e Aziendali, Luiss - Guido Carli, Rome. Italy (2008)

title *An Infinite Dimensional Approach for an Arbitrage Free Implied Volatilities Model* place and date — "Seminars on Stochastic Differential Equations and Applications", School of mathematics and statistics, UNSW, Sydney. Australia (2007)

title — *A verification result in the framework of viscosity solutions for infinite dimensional Hamilton-Jacobi-Bellman equation*

place and date — "Seminars on Stochastic Differential Equations and Applications", School of mathematics and statistics, UNSW, Sydney. Australia (2007)

title — *First order HJB equations in Hilbert spaces and applications*

place and date — Dipartimento di Matematica, Instituto Guido Castelnuovo, Università "La Sapienza", Rome. Italy (2006)

Attendences at meetings, schools, conference without giving talks

Serie of lessons — *Trimestre sur le Contrôle des Equations aux Dérivées Partielles et Applications* (two weeks). Paris. France (2010) [scheduled: 7-19 November 2010]

Conference — *Poverty traps, an empirical and theoretical assessment*. Discussant for a paper. Naples. Italy (2009)

School — *Risk theory and related topics* (10 days) organized by European Mathematical Society. Bedlevo. Poland (2008)

Conference — *Stochastic Partial Differential Equations and Applications - VIII*. Poster session participation, poster title: *An Infinite Dimensional Approach for an Arbitrage Free Implied Volatilities Model*. Levico Terme. Italy (2008)

Serie of lessons — *Stochastic Analysis, Stochastic Partial Differential Equations and Applications to Fluid Dynamics and Particle Systems* (A series of lessons within the research semester). Centro de Giorgi, Pisa. Italy (2006)

Workshop — *Boundary control and optimization*. Centro de Giorgi, Pisa. Italy (2004)

School — *Stochastic finance 2004* (one week). Department of Mathematics. University of Coimbra. Coimbra. Portogallo (2004)

Conference — *Stochastic finance 2004*. Instituto Superior de Economia e Gestao. Lisbona. Portogallo (2004)

Serie of lessons — *Cattedra Galileiana 2003: Stochastic Optimal Control Methods in Finance*. Scuola Normale Superiore. Pisa. Italy (2003)

School — *Foundations and developments of economic mathematics* (15 days). Organized by the department oof economics of University of Naples "Federico II". Pozzuoli. Italy (2003)

Workshop — *Age-Structured Models in Population Dynamics and Economics*. Vienna. Austria (2003)

Referee activity

referee for — Reviewer for Mathematical Reviews (Mathscinet)
SIAM journal on Control and Optimization
Journal of Optimization Theory and Applications
Journal of Mathematical Analysis and Applications
Journal of Mathematical Economics
Mathematical Population Studies
Journal of Mathematics and Mathematical Sciences
Stochastic Processes and their Applications
Journal of Applied Probability/Advances in Applied Probability
Southern Economic Journal
ESAIM: Control, Optimization and Calculus of Variations

Participation in national and international research projects and research groups

personal grant	Winner of the *Unicredit's Post-Doc Research Grant*
Title	International borrowing without commitment: volatility of capital inflow and welfare
period	2012-2012
head	Giorgio Fabbri
participant	GDRE ("Groupement De Recherche Europeenne") Italo-French [INdAM-CNRS]
Title	Control of Partial Differential Equations
period	2009-2012
head	Piermarco Cannarsa
participant	PRIN 2008 (PRIN, "Programmi di Ricerca di Interesse Nazionale", are national research projects funded by italian ministry of university
Title	Deterministic ans stochastic methods in studying evolution problems
period	2010-2011
head	Alessandra Lunardi
participant	PRIN 2006 (PRIN, "Programmi di Ricerca di Interesse Nazionale", are national research projects funded by italian ministry of university
Title	Optimization and control methods for the management of public debt; static and dynamics models
period	2007-2008
head	Fausto Gozzi
member	Group GNAMPA ("National group for mathematical analysis, probability and their applications")-INdAM ("National institute of high mathematics")
period	2005-2011

Didactics

course	**A third of a course in "Microeconomics"** (italian)
place	University of Naples *Parthenope*
year	2011/2012
course	**Institutions of political economy** (italian)
place	University of Naples *Parthenope*
year	2011/2012
note	In the academic year **2010/2011** G.F. joined the national protest of italian researchers to oppose the violent attack of Berlusconi's government against italian public university and then refused to teach any course
year	2010/2011
course	**Growth theory** (italian)
place	University of Naples *Parthenope*
year	2009/2010
course	**Topics in optimal control theory** (italian)

place	Short course to Ph.D. students at University of Naples *Parthenope*
year	2008/2009

course	**Development economics** (italian)
place	University of Naples *Parthenope*
year	2008/2009

course	**Teaching assistant for "Pre-course in quantitative methods"** (english)
place	LUISS - G.Carli, Rome
year	2008/2009
note	within the "Master of Sciences in Economics"

course	**Teaching assistant for the course "Linear Algebra"** (italian)
place	University of Rome "La Sapienza"
year	2005/2006

Publications

1. R. Boucekkine and G. Fabbri. Assessing parfit's *Repugnant Conclusion* within a canonical endogenous growth set-up. *Journal of Population Economics [*Impact Factor 2012 = ...*]*, pages 1–17, to appear. 10.1007/s00148-011-0384-6.

2. R. Boucekkine, G. Fabbri, and P. Pintus. On the optimal control of a linear neutral differential equation arising in economics. *Optimal Control Applications and Methods [*Impact Factor 2012 = ...*]*, to appear.

3. M. Bambi, G. Fabbri, and F. Gozzi. Optimal policy and consumption smoothing effects in the time-to-build ak model. *Economic Theory [*Impact Factor 2012 = ...*]*, to appear.

4. R. Boucekkine, G. Fabbri, and F. Gozzi. Revisiting the optimal population size problem under endogenous growth: minimal utility level and finite life. *Asia-Pacific Journal of Accounting & Economics [*Impact Factor 2011 = ...*] (Special issue edited by Kazuo Nishimura)*, 18(3):287–306, 2011.

5. R. Boucekkine, G. Fabbri, and F. Gozzi. Maintenance and investment: Complements or substitutes? a reappraisal. *Journal of Economic Dynamics and Control [*Impact Factor 2010 = 1.117*]*, 34(12):2420–2439, 2010.

6. G. Fabbri, F. Gozzi, and A. Swiech. Verification theorem and construction of ε-optimal controls for control of abstract evolution equations. *Journal of Convex Analysis [*Impact Factor 2010 = 0.900*]*, 17(2):611–642, 2010.

7. G. Fabbri and B. Goldys. An LQ problem for the heat equation on the halfline with Dirichlet boundary control and noise. *SIAM Journal on Control and Optimization [*Impact Factor 2009 = 1.546*]*, 48(3):1473–1488, 2009.

8. G. Fabbri and F. Gozzi. Solving optimal growth models with vintage capital: The dynamic programming approach. *Journal of Economic Theory [*Impact Factor 2008 = 1.224*]*, 143(1):331–373, 2008.

9. G. Fabbri. A Viscosity Solution Approach to the Infinite-Dimensional HJB Equation Related to a Boundary Control Problem in a Transport Equation. *SIAM Journal on Control and Optimization [*Impact Factor 2008 = 1.517*]*, 47:1022–1052, 2008.

10. G. Fabbri. Viscosity Solutions to Delay Differential Equations in Demo-Economy. *Mathematical Population Studies [*Impact Factor 2008 = 0.792*]*, 15(1):27–54, 2008.

11. G. Fabbri, F. Gozzi, and S. Faggian. On the dynamic programming approach to economic models governed by ddes. *Mathematical Population Studies [*Impact Factor 2008 = 0.792*]*, 15(4):267–290, 2008.

12. (**in collection**) G. Fabbri. A dynamic programming approach in hilbert spaces for a family of applied delay optimal control problems. In R. Glowinski and J.P. Zolesio., editors, *Free and Moving Boundaries:*

Analysis, Simulation and Control, volume 252 of *Lecture Notes in Pure and Applied Mathematics*, pages 375–394. 2007.

Revised and resubmitted works

- *Spatial dynamics and convergence: The spatial AK model* [with Raouf Boucekkine and Carmen Camacho] Revised and resubmitted (third round) to *Journal of Economic Theory*
- *Product boycott, household heterogeneity and child labor* [with Michele di Maio] Revised and resubmitted to *Journal of Population Economics*

Submitted works

- *The Optimal population size problem under finite lives* [with Raouf Boucekkine and Fausto Gozzi]
- *An infinite dimensional approach for an arbitrage free implied volatilities model* [with Alan Brace and Benjamin Goldys]
- *Leapfrogging, Growth Reversals and Welfare* [with Raouf Boucekkine and Patrick Pintus]

In progress

- *"The economics of forestry" in continuous time* [with Silvia Faggian and Giuseppe Freni]
- *Portfolio Optimization with Execution Delay* [with Salvatore Federico, Huyên Pham and Fausto Gozzi]
- *Stochastic Optimal Control in Infinite Dimensions: Dynamic Programming and HJB Equations* [with Fausto Gozzi and Andrzej Święch]
- *An application or the theory of χ-weak Dirichlet processes to optimal synthesis for stochastic partial differential equation* [with Francesco Russo]