# Luca Scarpa, PhD

Assistant Professor - RTDa Department of Mathematics, Politecnico di Milano Via E. Bonardi 9, 20133 Milano, Italy

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# **RESEARCH INTERESTS**

Main:	Variational methods for evolution equations and stochastic evolution equations.
	Nonlinear PDEs and stochastic PDEs, nonlinear evolution systems.
	Phase-field models (deterministic and stochastic), tumour growth dynamics.
Specific:	Well-posedness, regularity, asymptotics, long-time behaviour, optimal control.

## WORK EXPERIENCE

Assistant Professor – RTDa Department of Mathematics, Politecnico di Milano, Italy	Mar 2021 - Present
<b>Project Leader – Postdoctoral Researcher</b> PI of the Research Grant: Stochastic Cahn-Hilliard equation: analysis and applications Lise Meitner Grant M 2876, Austrian Science Fund (FWF) Faculty of Mathematics, University of Vienna, Austria	Jul 2020 - Presen
<b>Postdoctoral University Assistant</b> Faculty Assistant: Applied Mathematics and Modelling Group (Prof. U. Stefanelli) Faculty of Mathematics, University of Vienna, Austria	Jul 2019 - June 2020
<b>Postdoctoral Researcher</b> Project participant: Applied Mathematics and Modelling Group (Prof. U. Stefanelli) Faculty of Mathematics, University of Vienna, Austria	Sep 2018 - Jun 2013
<b>Teaching Assistant</b> Department of Mathematics, University College London, UK	Sep 2015 - Jul 2018
<b>Tutor and Teaching Assistant</b> University of Pavia, Italy	Sep 2012 - Jul 2015
DUCATION         Italian National Abilitation – Associate Professor         Abilitazione Scientifica Nazionale: seconda fascia         Settore Concorsuale 01/A3: analisi matematica, probabilità e statistica matematica	9 Nov 2020 - 9 Nov 202.
<b>PhD in Mathematics</b> University College London, London, UK Supervisor: Prof. Carlo Marinelli Thesis: "A variational approach to some classes of singular stochastic PDEs"	Sep 2015 - 28 Jul 201
University College London, London, UK Supervisor: Prof. Carlo Marinelli	- Oct 2013 - 14 Jul 201

# GRANTS, HONOURS AND AWARDS

#### Grants.

- Research grant: "Stochastic Cahn-Hilliard equation: analysis and applications". Principal Investigator. Lise-Meitner project M-2876 N, Austrian Science Fund (FWF), 2020-2022. Value: 159K EUR. Duration: 2 years. Peer-reviewed.
- Grant for organization of the workshop: "Stochastic Partial Differential Equations". Together with: Sandra Cerrai, Martin Hairer, Carlo Marinelli, Eulalia Nualart, Ulisse Stefanelli. Erwin Schrödinger International Institute for Mathematics and Physics, 7–11 March 2022, Vienna, Austria. Value: 13K EUR.
- Research grant: "Sistemi con interazione spaziale: convergenza, controllo e applicazioni". Project participant (PI: Giovanni Alessandro Zanco). Indam-Gnampa project, 2020. Value: 2475 EUR. Duration: 1 year.
- Research grant: "Trasporto ottimo per dinamiche con interazione". Project participant (PI: Carlo Orrieri). Indam-Gnampa project, 2019. Value: 4300 EUR. Duration: 1 year.

#### Awards.

- "Wren Fund Scholarship" award: academic excellence in the academic year 2017-2018. University College London (UK), 2018. Value: 1000 GBP.
- "Premio di laurea Prof. Luigi Berzolari" award: best Master's thesis in Mathematics in 2015-2016-2017. University of Pavia (Italy), 2018. Value: 2400 EUR.
- Contribution costs of attendance: 4th Barcelona Summer School on Stochastic Analysis. 9-13 July 2018, Centre de Recerca Matemàtica, Barcelona (Spain).
- Contribution costs of attendance: International Workshop on BSDEs, SPDEs and their Applications. 3-7 July 2017, University of Edinburgh (UK).
- Contribution costs of attendance: 3rd Barcelona Summer School on Stochastic Analysis. 27 June - 2 July 2016, Centre de Recerca Matemàtica, Barcelona (Spain).
- Contribution costs of attendance: "Optimal Control for Evolutionary PDEs and Related Topics". Indam meeting, 20-24 June 2016, Cortona (Italy).
- "Lighthill Scholarship" award: academic excellence in the academic year 2015-2016. University College London (UK). Value: 500 GBP.
- Teaching assistantship. Years 2015-2019, University College London, UK.
- "Premio Andreani-Manna" award: best average mark in Mathematics, Physics and Natural Sciences. "T. Taramelli" High School (Pavia, Italy), 2011.
- "Premio maturità 2010" award: honours in the final score of the High School Diploma. Ministero della Pubblica Istruzione (Italy), 2010.
- "Dote merito" award: honours in the final score of the High School Diploma. *Regione Lombardia (Italy), 2010.*

#### Honours.

- Honours in the final score of the Master's Degree. University of Pavia (Italy), 2015.
- Honours in the final score of the Bachelor's Degree. University of Pavia (Italy), 2013.
- Honours in the final score of the High School Diploma. "T. Taramelli" High School (Pavia, Italy), 2010.

# PROFESSIONAL SERVICE

# Referee activity.

since $2021$	Interfaces and Free Boundaries, EMS
	Journal of Mathematical Analysis and Applications, Elsevier
since $2020$	International Journal of Control, Taylor & Francis
	Journal of Functional Analysis, Elsevier
	Zeitschrift für Analysis und Ihre Anwendungen, EMS
	Nonlinear Analysis Real World Applications, Elsevier
	Open Mathematics, De Gruyter
	Potential Analysis, Springer
	Bollettino dell'Unione Matematica Italiana, Springer
	Discrete and Continuous Dynamical Systems (A and B), AIMS
	Asymptotic Analysis, IOS Press
	Mathematical Control and Related Fields, AIMS
	Mathematics, MDPI
since $2019$	Mathematics, AIMS
	Nonlinearity, IOP Publishing
	Stochastic Processes and their Applications, Elsevier
since $2018$	Applied Mathematics and Optimization, Springer
	Journal of Evolution Equations, Springer
since $2017$	Nonlinear Analysis, Elsevier
	Mathematical Methods in the Applied Sciences, John Wiley & Sons Ltd

## Organizational activity.

- Organizer workshop "Stochastic Partial Differential Equations". Together with: Sandra Cerrai, Martin Hairer, Carlo Marinelli, Eulalia Nualart, Ulisse Stefanelli. Erwin Schrödinger International Institute for Mathematics and Physics, 7–11 March 2022, Vienna, Austria.
- Organizer special session "Stochastic systems with interaction". Together with: Carlo Orrieri. Second Italian Meeting on Probability and Mathematical Statistics, 17-20 June 2019, Vietri (SA), Italy.

# INTERNATIONAL COLLABORATION

## Visiting affiliations.

07–10 Jan 2020	Università di Pavia and Milano (Italy)
04–06 Sep 2019	University College London (UK)
11–13 Jul 2019	Department Mathematik, Universität Erlangen-Nürnberg (Germany)
24–28 Apr 2018	Max Planck Institute for Mathematics in the Sciences, Leipzig (Germany)
16–20 Apr 2018	Applied Mathematics and Modelling Group, University of Vienna (Austria)
13–15 Nov 2017	Sapienza Università di Roma (Italy)
06–10 Nov 2017	Università di Pavia (Italy)
26–30 Sep 2016	Laboratoire de Probabilités et Modèles Alatoires, Paris (France)

## Main cooperation partners.

Prof. Dr. P. Colli	Università di Pavia, pierluigi.colli@unipv.it
Prof. Dr. C. Marinelli	University College London, c.marinelli@ucl.ac.uk
Dr. C. Orrieri	Università di Trento, carlo.orrieri@unitn.it
Prof. Dr. E. Bonetti	Università di Milano, elena.bonetti@unimi.it
Prof. Dr. G. Tomassetti	Università "Roma Tre", giuseppe.tomassetti@uniroma3.it
Prof. Dr. E. Rocca	Università di Pavia, elisabetta.rocca@unipv.it
Prof. Dr. U. Stefanelli	University of Vienna, ulisse.stefanelli@univie.ac.at
Dr. E. Davoli	Technical University of Vienna, elisa.davoli@tuwien.ac.at
Dr. H. Ranetbauer	University of Vienna, helene.ranetbauer@univie.ac.at

University of Vienna, lara.trussardi@univie.ac.at
Università di Pavia, andrea.signori02@universitadipavia.it
University of Vienna, anastasia.molchanova@univie.ac.at
$University \ of \ Hradec \ Králové, \ \texttt{alexander.menovschikov} @uhk.cz$

## FULL LIST OF PUBLICATIONS

#### Submitted papers.

35. P. Colli, T. Fukao, L. Scarpa. The Cahn-Hilliard equation with forward-backward dynamic boundary condition via vanishing viscosity. Submitted (2021), arXiv:2106.01010

- 34. E. Rocca, L. Scarpa, A. Signori. Parameter identification for nonlocal phase field models for tumor growth via optimal control and asymptotic analysis. Submitted (2020), arXiv:2009.11159
- L. Scarpa, U. Stefanelli. Doubly nonlinear stochastic evolution equations II. Submitted (2020), arXiv:2009.08209
- C. Marinelli, L. Scarpa. On the positivity of local mild solutions to stochastic evolution equations. Submitted (2019), arXiv:1912.13259

## Accepted and published papers.

- A. Menovschikov, A. Molchanova, L. Scarpa. An extended variational theory for nonlinear evolution equations via modular spaces. SIAM J. Math. Anal. (to appear). arXiv:2012.05518
- C. Marinelli, L. Scarpa.
   Well-posedness of monotone semilinear SPDEs with semimartingale noise. Séminaire de Probabilités (to appear). arXiv:1805.07562
- 29. L. Scarpa.

The stochastic viscous Cahn-Hilliard equation: well-posedness, regularity and vanishing viscosity limit. *Appl. Math. Optim.* 84 (2021), no. 1, 487–533. DOI: 10.1007/s00245-020-09652-9

28. L. Scarpa.

The stochastic Cahn-Hilliard equation with degenerate mobility and logarithmic potential. *Nonlinearity* 34 (2021), no. 6, 3813–3857. DOI: 10.1088/1361-6544/abf338

## 27. L. Scarpa, A. Signori.

On a class of non-local phase-field models for tumor growth with possibly singular potentials, chemotaxis, and active transport.

Nonlinearity 34 (2021), no. 5, 3199-3250. DOI: 10.1088/1361-6544/abe75d

26. E. Davoli, L. Scarpa, L. Trussardi.

Local asymptotics for nonlocal convective Cahn-Hilliard equations with  $W^{1,1}$  kernel and singular potential. J. Differential Equations 289 (2021), 35–58. DOI: 10.1016/j.jde.2021.04.016

- 25. L. Scarpa.
  - Analysis and optimal velocity control of a stochastic convective Cahn-Hilliard equation. J. Nonlinear Sci. 31 (2021), no. 2, 45. DOI: 10.1007/s00332-021-09702-8
- 24. C. Marinelli, L. Scarpa, U. Stefanelli.

An alternative proof of well-posedness of stochastic evolution equations in the variational setting. *Rev. Roumaine Math. Pures Appl.* 66 (2021), no. 1, 209–221. 23. E. Davoli, L. Scarpa, L. Trussardi. Nonlocal-to-local convergence of Cahn-Hilliard equations: Neumann boundary conditions and viscosity terms. Arch. Ration. Mech. Anal. 239 (2021), no. 1, 117–149. DOI: 10.1007/s00205-020-01573-9 22. L. Scarpa, U. Stefanelli. Stochastic PDEs via convex minimization. Comm. Partial Differential Equations 46 (2021), no. 1, 66–97. DOI: 10.1080/03605302.2020.1831017 21. C. Orrieri, E. Rocca, L. Scarpa. Optimal control of stochastic phase-field models related to tumor growth. ESAIM Control Optim. Calc. Var. 26 (2020), Paper No. 104, 46 pp. DOI: 10.1051/cocv/2020022 20. L. Scarpa, U. Stefanelli. An order approach to SPDEs with antimonotone terms. Stoch. Partial Differ. Equ. Anal. Comput. 8 (2020), no. 4, 819–832. DOI: 10.1007/s40072-019-00161-7 19. C. Marinelli, L. Scarpa. Refined existence and regularity results for a class of semilinear dissipative SPDEs. Infin. Dimens. Anal. Quantum Probab. Relat. Top. 23 (2020), no. 2, 2050014. DOI: 10.1142/S0219025720500149 18. C. Marinelli, L. Scarpa. Fréchet differentiability of mild solutions to SPDEs with respect to the initial datum. J. Evol. Equ. 20 (2020), no. 3, 1093–1130. DOI: 10.1007/s00028-019-00546-0 17. L. Scarpa, U. Stefanelli. Doubly nonlinear stochastic evolution equations. Math. Models Methods Appl. Sci. 30 (2020), no. 5, 991–1031. DOI: 10.1142/S0218202520500219 16. E. Davoli, H. Ranetbauer, L. Scarpa, L. Trussardi. Degenerate nonlocal Cahn-Hilliard equations: well-posedness, regularity and local asymptotics. Ann. Inst. H. Poincaré Anal. Non Linéaire 37 (2020), no. 3, 627–651. DOI: 10.1016/j.anihpc.2019.10.002 15. E. Bonetti, P. Colli, L. Scarpa, G. Tomassetti. Bounded solutions and their asymptotics for a doubly nonlinear Cahn-Hilliard system. Calc. Var. Partial Differential Equations 59 (2020), no. 2, Paper no. 88, 25 pp. DOI: 10.1007/s00526-020-1715-9 14. C. Marinelli, L. Scarpa. Ergodicity and Kolmogorov equations for dissipative SPDEs with singular drift: a variational approach. Potential Anal. 52 (2020), no. 1, 69-103. DOI: 10.1007/s11118-018-9731-5 13. L. Scarpa. Optimal distributed control of a stochastic Cahn-Hilliard equation. SIAM J. Control Optim. 57 (2019), no. 5, 3571–3602. DOI: 10.1137/18M1222223 12. S. Melchionna, H. Ranetbauer, L. Scarpa, L. Trussardi. From nonlocal to local Cahn-Hilliard equation. Adv. Math. Sci. Appl. 28 (2019), no. 1, 197-211. 11. C. Orrieri, L. Scarpa. Singular stochastic Allen-Cahn equations with dynamic boundary conditions. J. Differential Equations 266 (2019), no. 8, 4624–4667. DOI: 10.1016/j.jde.2018.10.007 10. L. Scarpa. Existence and uniqueness of solutions to singular Cahn-Hilliard equations with nonlinear viscosity terms and dynamic boundary conditions. J. Math. Anal. Appl. 469 (2019), no. 2, 730–764. DOI: 10.1016/j.jmaa.2018.09.034 9. C. Marinelli, L. Scarpa. A note on doubly nonlinear SPDEs with singular drift in divergence form. Accad. Naz. Lincei Rend. Lincei Mat. Appl. 29 (2018), no. 4, 619–633. DOI: 10.4171/RLM/825 8. C. Marinelli, L. Scarpa. Strong solutions to SPDEs with monotone drift in divergence form. Stoch. Partial Differ. Equ. Anal. Comput. 6 (2018), no. 3, 364–396. DOI: 10.1007/s40072-018-0111-3

- E. Bonetti, P. Colli, L. Scarpa, G. Tomassetti.
   A doubly nonlinear Cahn-Hilliard system with nonlinear viscosity. Commun. Pure Appl. Anal. 17 (2018), no. 3, 1001–1022. DOI: 10.3934/cpaa.2018049
- C. Marinelli, L. Scarpa.
   A variational approach to dissipative SPDEs with singular drift.
   Ann. Probab. 46 (2018), no. 3, 1455–1497. DOI: 10.1214/17-AOP1207
- 5. L. Scarpa.

On the stochastic Cahn-Hilliard equation with a singular double-well potential. Nonlinear Anal. 171 (2018), 102–133. DOI: 10.1016/j.na.2018.01.016

4. L. Scarpa.

Well-posedness for a class of doubly nonlinear stochastic PDEs of divergence type. J. Differential Equations 263 (2017), no. 4, 2113–2156. DOI: 10.1016/j.jde.2017.03.041

3. P. Colli, L. Scarpa.

From the viscous Cahn-Hilliard equation to a regularized forward-backward parabolic equation. *Asympt. Anal.* 99 (2016), no. 3–4, 183–205. DOI: 10.3233/ASY-161380

2. P. Colli, L. Scarpa.

Existence of solutions for a model of microwave heating. Discrete Contin. Dyn. Syst. Ser. A 36 (2016), no. 6, 3011–3034. DOI: 10.3934/dcds.2016.36.3011

1. L. Scarpa.

A doubly nonlinear evolution problem related to a model for microwave heating. *Adv. Math. Sci. Appl.* 24 (2014), no. 2, 251–275.

## Proceedings.

P1 C. Marinelli, L. Scarpa.

On the well-posedness of SPDEs with singular drift in divergence form.
Stochastic Partial Differential Equations and Related Fields,
A. Eberle, M. Grothaus, W. Hoh, M. Kassmann, W. Stannat, and G. Trutnau, eds.
Springer International Publishing (2018), 225-235. DOI: 10.1007/978-3-319-74929-7\_12

## Theses.

- T3 L. Scarpa. A variational approach to some classes of singular stochastic PDEs. PhD Thesis (2018)
- T2 L. Scarpa. Global existence results for PDE problems arising from microwave heating. Master's Degree Thesis (2015)
- T1 L. Scarpa. Funzioni di variabile complessa e applicazioni. Bachelor's Degree Thesis (2013)

# DISSERTATIONS, TALKS AND SEMINARS

## 2021

- Invited talk. "Weighted Energy-Dissipation principle for nonlinear stochastic evolution equations". 8th European Congress of Mathematics, Minsymposium on Stochastic Evolution Equations, 20-26 June 2021, Portorož, Slovenia
- Invited talk. "Optimal control of stochastic phase-field models for tumor growth". Oberwolfach Workshop - Challenges in Optimization with Complex PDE-Systems, 14-20 February 2021, Mathematisches Forschungsinstitut Oberwolfach (MFO), Germany

# 2020

• Invited talk. "From nonlocal to local phase-field models: asymptotic analysis and applications". Deutsche Mathematiker-Vereinigung (DMV) meeting, 14-17 September 2020, Technical University Chemnitz, Germany

- Invited talk. "On a class of nonlocal phase-field models for tumour growth".
   15th International Conference on Free Boundary Problems,
   31 August 4 September 2020 (postponed), Humboldt-Universität, Berlin, Germany
- Invited talk. "Nonlocal-to-local convergence of phase-field models: asymptotic analysis and applications". 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications, 5-9 June 2020 (postponed), Atlanta, United States of America
- Invited talk. "Weighted Energy-Dissipation principle for nonlinear stochastic evolution equations". Second Edinburgh-Vienna Workshop on Advances in PDEs, 25-28 May 2020 (postponed), International Centre for Mathematical Sciences (ICMS), Edinburgh, United Kingdom
- Invited lecture. "Analisi matematica di alcune equazioni non lineari alle derivate parziali". University of Pavia, 6 April 2020 (postponed), Pavia, Italy
- Invited seminar. "From nonlocal to local phase-field models: asymptotic analysis and applications". University of Milano, 9 January 2020, Milano, Italy

2019

- Invited seminar. "Nonlocal-to-local convergence of viscous Cahn-Hilliard equations with Neumann boundary conditions". University of Pavia, 3 October 2019, Pavia, Italy
- Invited seminar. "Existence and regularity results for the stochastic Cahn-Hilliard equation". Universität Erlangen-Nürnberg, 2 July 2019, Erlangen, Germany
- Invited lecture. "A variational approach to singular stochastic PDEs: methods and applications". Technische Universität Wien, Interview for tenure-track position, 1 July 2019, Vienna, Austria
- Invited talk. "Optimal control of a stochastic phase-field model for tumor growth". Second Italian Meeting on Probability and Mathematical Statistics, 17-20 June 2019, Vietri (SA), Italy
- Invited talk. "Nonlocal-to-local convergence of Cahn-Hilliard equations". Recent advances in Phase-Field modeling: from Engineering to Biology, 6-10 May 2019, Pavia, Italy
- Invited seminar. "Optimal control of a stochastic phase-field model for tumor growth". Technische Universität Wien, 6 March 2019, Vienna, Austria

# 2018

- Contributed talk. "A variational approach to some classe of singular SPDEs". 4th Barcelona Summer School on Stochastic Analysis, 9-13 July 2018, Barcelona, Spain
- Invited talk. "A doubly nonlinear Cahn-Hilliard system with nonlinear viscosity". 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, 5-9 July 2018, Taipei, Taiwan
- Invited talk. "A variational approach to some classe of singular SPDEs".
   12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, 5-9 July 2018, Taipei, Taiwan
- PhD dissertation. "A variational approach to some classes of singular stochastic PDEs". University College London, 14 June 2018, London, UK
- Invited seminar. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". Max Planck Institute for Mathematics in the Sciences, 27 April 2018, Leipzig, Germany
- Invited seminar. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". University of Vienna, 17 April 2018, Austria

2017

- Invited seminar. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". Sapienza Università di Roma, 14 November 2017, Roma, Italy
- Invited seminar. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". University of Pavia, 7 November 2017, Pavia, Italy

- Contributed talk. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". International Workshop on BSDEs, SPDEs and Applications, 3-7 July 2017, University of Edinburgh, UK
- Contributed talk. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". ICL-UCL Day, 3 April 2017, Imperial College London, UK

2016

- MPhil-PhD transfer. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". University College London, 19 October 2016, London, UK
- Invited seminar. "Well-posedness of semilinear SPDEs with singular drift: a variational approach". Laboratoire de Probabilités et Modèles Alatoires, 28 September 2016, Paris, France
- Invited seminar. "Parabolic stochastic partial differential equations". University College London, 10 March 2016, London, UK

2015

• MSc dissertation. "Global existence results for PDE problems arising from a model of microwave heating". University of Pavia, 14 July 2015, Pavia, Italy

## 2013

• BSc dissertation. "Funzioni di variabile complessa e applicazioni". University of Pavia, 15 July 2013, Pavia, Italy

# SUPERVISION

## Master students

- Federico Bertacco: University of Trento (Italy), Internship at University of Vienna (Austria), a.y. 2019-2020. Thesis: "On the Stochastic Allen-Cahn Equation with Logarithmic Potential". Currently: PhD student in stochastic analysis at Imperial College London (Prof. Hairer).
- Laura Galvagni: University of Trento (Italy), Internship at University of Vienna (Austria), a.y. 2019-2020. Thesis: "Continuous-time Optimal Stochastic Control with Financial Applications".

# TEACHING

## Academic year 2020-2021

• MSc course: Stochastic Partial Differential Equations MSc Degree in Mathematics, Faculty of Mathematics, University of Vienna, Austria

# Academic year 2019-2020

- MSc-PhD course: Nonlinear Evolution Equations MSc-PhD-level course in Mathematics, Faculty of Mathematics, University of Vienna, Austria
- Problem Classes: Mathematical Analysis BSc degree in Mathematics, Faculty of Mathematics, University of Vienna, Austria

## Academic year 2017-2018

- Lectures and Problem Classes: Stochastic Processes, Interest Rates and Credit Modelling MSc degree in Financial Mathematics, Department of Mathematics, University College London, UK
- Pure and Applied Tutorials: Analysis, Algebra, Mathematical Methods, Applied Mathematics BSc degree in Mathematics, Department of Mathematics, University College London, UK
- Marking (scripts and exams): Analysis 1-2-3, Mathematics for related disciplines Department of Mathematics, University College London, UK

# Academic year 2016-2017

• Lectures and Problem Classes: Stochastic Processes, Interest Rates and Credit Modelling MSc degree in Financial Mathematics, Department of Mathematics, University College London, UK

- Applied Tutorials: Mathematical Methods, Applied Mathematics BSc degree in Mathematics, Department of Mathematics, University College London, UK
- Marking (scripts and exams): Analysis 1-2-3, Mathematics for related disciplines Department of Mathematics, University College London, UK

#### Academic year 2015-2016

- Lectures and Problem Classes: Stochastic Processes, Interest Rates and Credit Modelling MSc degree in Financial Mathematics, Department of Mathematics, University College London, UK
- Applied Tutorials: Mathematical Methods, Applied Mathematics BSc degree in Mathematics, Department of Mathematics, University College London, UK
- Marking (scripts and exams): Analysis 1-2-3, Mathematics for related disciplines Department of Mathematics, University College London, UK

## Academic year 2014-2015

- Lectures and Problem Classes: Mathematical Analysis 4 (Measure Theory, Functional Analysis) BSc degree in Mathematics, Department of Mathematics, University of Pavia, Italy
- Tutorials and Problem Classes: General Mathematics BSc degree in Economics, Department of Economics, University of Pavia, Italy
- Tutorials and Problem Classes: Decision and Choices MSc degree in Economics, Department of Economics, University of Pavia, Italy

#### Academic year 2013-2014

- Tutorials and Problem Classes: Mathematical Analysis Department of Biotechnology, University of Pavia, Italy
- Tutorials and Problem Classes: Probability BSc degree in Mathematics, Department of Mathematics, University of Pavia, Italy

#### Academic year 2012-2013

• Tutorials and Problem Classes: General Mathematics Department of Natural Sciences, University of Pavia, Italy

# ATTENDED CONFERENCES, SCHOOLS AND WORKSHOPS

- Oberwolfach Workshop Challenges in Optimization with Complex PDE-Systems. 14-20 February 2021, Mathematisches Forschungsinstitut Oberwolfach (MFO), Germany
- 1st Austrian Calculus of Variations Day. 17-18 October 2019, Faculty of Mathematics, University of Vienna, Austria
- Second Italian Meeting on Probability and Mathematical Statistics. 17-20 June 2019, Vietri sul Mare (SA), Italy
- Recent advances in Phase-Field modeling: from Engineering to Biology. 8-10 May 2019, University of Pavia, Italy
- 4th Barcelona Summer School on Stochastic Analysis.
   9-13 July 2018, Centre de Recerca Matemàtica, Barcelona, Spain
- 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications. 5-9 July 2018, Taipei, Taiwan
- International Workshop on BSDEs, SPDEs and their Applications. 3-7 July 2017, University of Edinburgh, UK
- 3rd Barcelona Summer School on Stochastic Analysis.
  27 June 2 July 2016, Centre de Recerca Matemàtica, Barcelona, Spain

- Indam meeting on "Optimal Control for Evolutionary PDEs and Related Topics". 20-24 June 2016, Cortona (Arezzo), Italy
- 10th International meeting on "Stochastic Partial Differential Equations and Applications". 29 May 3 June 2016, Levico Terme, Italy

## GENERAL SKILLS AND METRICS

Languages	Italian (native speaker), English (fluent, IELTS 7.5, C1-C2 equivalent), French (upper intermediate, DELF B2), Spanish (lower intermediate, DELE B1) German (elementary, A1 Sprachenzentrum Wien)
Programming	MatLab, C, $IAT_EX$ , R
IT Sofwares & Tools	Windows, OS, Microsoft Office, iWork, Web browsers
Google Scholar	210 Citations, h-index 9
Scopus	130 Citations, h-index 7