

# *Curriculum Vitae and Scientific Activities of Enrico Priola*

## **1 General data**

Present position: Full Professor - Probability and Mathematical Statistics (SSD MAT/06)  
Department of Mathematics, University of Pavia, via Ferrata 5, 27100 Pavia, Italy  
Tel: 0382 985639. Fax: 0382 985602.

E-mail [enrico.priola@unipv.it](mailto:enrico.priola@unipv.it)

URL: <https://sites.google.com/site/enricopriola/Home>

## **2 Studies and career**

*Laurea degree in Mathematics* at the University of Torino (July 1992).

*Military service* absolved in 1993.

*Ph.D. in Mathematics* at the University of Milano (Italy) (1994 - 1998). Title of the Ph.D. thesis: “Partial differential equations with infinitely many variables” (February 1999; advisor: Prof. G. Da Prato, Scuola Normale Superiore of Pisa, Italy);

*Research Assistant* (Ricercatore Universitario, March 2000 - September 2006) in Mathematical Analysis at the Department of Mathematics, University of Torino.

*Associate Professor* (October 2006 - February 2019) in Mathematical Analysis at the University of Torino.

*Full Professor* (March 2019 - present) in Probability and Mathematical Statistics at the Department of Mathematics, University of Pavia.

## **3 Research awards and grants**

*Research Grant* “Equazioni di Kolmogorov” from 1 February 1999 to 29 February 2000 at Scuola Normale Superiore, Pisa.

*European Research Fellow* for three months (January and August-September 2001) at the Department of Mathematics, University of Bielefeld (Germany) (EU-TMR Project “Stochastic Analysis and its applications”, contract n. FMRX-CT960075).

*Research contract* for one month (from 3/9/2004 to 13/09/2004 and from 1/02/2005 to 15/02/2005) at the Banach International Mathematical Center of Warszawa (Poland); project “Mathematics Finance and Stochastic Control” between European Community and Banach Center (contract n. ICA1-CT-2000-70024).

*Visiting Professor* at Laboratoire MODAL’X (University of Paris X, Nanterre) for one month (May 2008).

*Visiting Fellow* at Newton Institute (Cambridge, UK) for one month (March-April 2010).

*Visiting Professor* at Department of Mathematics (University of Evry, France) for one month (May 2016).

*Senior Leader position* in the *Simons Semester “PDEs/SPDEs and Functional Inequalities”* (Banach Center of Warszawa) for one month: May 2018; contract BCSim 2018/D12.

## 4 Current research interests

(i) *Analytic and probabilistic methods for elliptic and parabolic Kolmogorov equations in finite and infinite dimensions* (Schauder estimates for local and non-local Kolmogorov equations, optimal regularity for Dirichlet problems involving unbounded coefficients; Liouville theorems; uniform gradient estimates under minimal assumptions on the coefficients; global  $L^p$ -estimates). Publications [3], [4], [5], [7], [8], [10], [12], [15], [16], [18], [20], [21], [24], [26], [27], [31], [38], [43], [44], [48], [49], [52], [55], [54], [57], [58] in the list and the PhD thesis [2].

(ii) *Stochastic differential equations and stochastic PDEs* (well-posedness, strong Feller property, SDEs and SPDEs with Lèvy noises). Publications [26], [28], [29], [30], [32], [33], [34], [35], [36], [37], [38], [39], [40], [42], [45], [46], [47], [53], [50], [51], [56], [61], [60], [59], [62].

(iii) *Markov semigroups and generators* (Cauchy problem in spaces of continuous and bounded functions; spectral properties of Markov semigroups in  $L_p$ -spaces with respect to invariant measures; conditions to ensure the analyticity of the Markov semigroup). Publications [1], [6], [11], [14], [19], [22], [49].

(iv) *Controllability of linear systems in infinite dimensions* (null controllability with vanishing energy, tracking problem for parabolic equations with boundary control). Publications [13], [17], [41].

The research activity has been supported by the following italian M.I.U.R. Research Projects: PRIN 2000-2002, PRIN 2002-2004, PRIN 2004-2006, PRIN 2007-2009 with Principal Investigator prof. G. Da Prato; PRIN 2010-2012 with PI prof. A Lunardi; PRIN 2013-2016 with PI prof. M. Fuhrman; PRIN 2015-2019 with PI prof. A. Lunardi.

The research activity has been supported by the following GNAMPA italian projects: “Analytic properties of Markov semigroups” (2003-2004), “Problems with degenerate diffusions” (2008), “Regularity properties of nonlinear PDEs related to control problems” (2010), “Multiplicative control for nonlinear diffusion models” (2014), “Degenerate or singular diffusion processes related to the control of stochastic dynamics” (2015), “Control, regularity and viability for some diffusive equations” (2016).

Local research support starting from 2004 by Department of Mathematics, University of Torino (the research topics are “Dynamical Systems” and “Nonlinear differential equations and applications”).

Coordinator of the GNAMPA project 2017 entitled “Singular stochastic systems: well-posedness and control problems”.

Local research support starting from March 2019 by Department of Mathematics, University of Pavia (research topic: “Stochastic differential equations”).

## 5 Participation to conferences as invited speaker

1. “Optimal Regularity in Elliptic, Hypoelliptic and Parabolic Problems” (Levico Terme (TN), from 5/10 to 10/10/1998); title of the talk: “Schauder estimates for a homogeneous Dirichlet problem in a half space of a Hilbert space”.

2. "Workshop - Partial Differential Operators" (Torino, from 8/05 to 10/05/2000), title of the talk: "*On a Dirichlet problem involving an Ornstein-Uhlenbeck operator*".
3. "II-European - Maghreb Workshop on Semigroup Theory, Evolution Equations and Applications" (Aquila, from 25/06 to 30/06/2000), title of the talk: "*On Dirichlet problems involving operators with unbounded coefficients*".
4. "Third International Conference on Differential Equations in Banach Spaces" (Bologna, from 3/07 to 7/07/2000), title of the talk: "*Optimal regularity results for Dirichlet problems involving the Ornstein-Uhlenbeck operators*".
5. "Tulka-Conference on Evolution Equations and Semigroups" (Blaubeuren, from 13/06 to 16/06/2001), title of the talk: "*Spectrum of Ornstein-Uhlenbeck operators*".
6. "Stochastic Evolution Equations and Applications" (Mathematisches Forschungsinstitut Oberwolfach, from 30/09 to 6/10/2001), title of the talk: "*Liouville theorems for Ornstein-Uhlenbeck processes*".
7. "Evolution Equations and Semigroups" (Cortona, from 8/04 to 12/04/2002), title of the talk: "*Null controllability with vanishing energy*".
8. "Workshop on elliptic and hypoelliptic operators" (Torino, 19 and 20/06/2003), title of the talk: "*Liouville theorems for elliptic operators*".
9. "Workshop on Kolmogorov equations" (Pisa, 17 and 18/10/2003), title of the talk: "*Liouville theorems for second order operators*".
10. "PDEs in Rough Environments" (Schmittgen, from 1/12 to 5/12/2003), title of the talk: "*Liouville theorems for second order operators*".
11. "Stochastic Partial Differential Equations and Applications - VII" (Levico (TN), from 4/01 to 8/01/2004), title of the talk: "*Liouville theorems in infinite dimensions*".
12. "IFIP 7.2 Boundary Control and Optimization" (Pisa, from 26/02 to 28/02/2004), title of the talk: "*Liouville theorems for nonlocal operators*".
13. "4th European Maghreb Workshop on Semigroup Theory, Evolution Equations, and Applications" (Freudenstadt (Germany), from 29/03 to 3/04/2004), title of the talk: "*Some classes of non-analytic Markov semigroups*".
14. "Evolution Equations: Inverse and Direct Problems" (Cortona, from 21/06 to 25/06/2004), title of the talk: "*Gradient estimates for parabolic problems with unbounded coefficients*".
15. "Workshop on Kolmogorov equations" (Parma, 25 and 26/11/2004), title of the talk: "*Gradient estimates for Dirichlet parabolic problems in unbounded domains*".
16. "Harnack inequalities and positivity for solutions of Partial Differential equations" (Cortona, from 12 to 18/06/2005), title of the talk: "*Uniform gradient estimates for second order parabolic equations*".
17. "Stochastic partial differential equations and random media: from theory to applications II" (Bielefeld, from 12 to 16/09/2005) title of the talk: "*Gradient estimates for diffusion semigroups with singular coefficients*".
18. "Stochastic Partial Differential Equations," (Pisa, from 3 to 8/04/2006, title of the talk: "*On bounded solutions to convolution equations*".
19. "Meeting on Subelliptic PDE's and Applications to Geometry and Finance" (Cortona, from 12 to 17/06/2006) title of the talk: "*Liouville Theorem for Kolmogorov equations*".
20. "Workshop on Kolmogorov equations" (Parma, from 1 al 3/11/2006) title of the talk: "*Schauder estimates for a class of degenerate Kolmogorov equations*".
21. "Liouville Theorems in Riemannian and Sub-Riemannian settings" (Bologna, from 23 to 24/11/2006) title of the talk: "*Liouville theorems for Kolmogorov equations*".

22. “Equazioni di Kolmogorov e misure invarianti” (Bologna, from 12 to 13/04/2007) title of the talk: “*Schauder estimates for a class of Kolmogorov equations*”.
23. “Stochastic Partial Differential Equations and Applications - VIII” (Levico (TN), from 6/01 to 12/01/2008), title of the talk: “*New Schauder estimates with applications to SPDEs*”.
24. Workshop “Kolmogorov equations” (Pisa, Centro di Ricerca Matematica “Ennio De Giorgi”, from 8/01 to 10/01/2009), title of the talk: “*Schauder estimates for parabolic equations with unbounded coefficients*”.
25. Workshop “Deterministic and Stochastic Dynamics, Fractals, Turbulence” (EU FP6 Marie Curie ToK programme SPADE2 in IMPAN Banach Center of Warszawa from 14/05 to 18/05/2009); title of the talk: “*Well-posedness of the transport equation by stochastic perturbation*”.
26. Indam Intensive Period “Geometric properties of nonlinear local and nonlocal problems” (Dipartimento di Matematica “F. Brioschi”, Politecnico di Milano, Dipartimento di Matematica “F. Casorati”, Università di Pavia e IMATI CNR, from 8/06 to 12/06/2009); title of the talk: “*Elliptic and parabolic second-order PDEs with growing coefficients*”.
27. “First CIRM-HCM Joint Meeting: Stochastic Analysis, SPDEs, Particle Systems, Optimal Transport” (Levico Terme, from 24/01 to 30/01/2010); title of the talk: “*Well-posedness of the transport equation by stochastic perturbation*”.
28. Workshop “Stochastic Partial Differential Equations (SPDEs) and their Applications” (Newton Institute in Cambridge from 29/03 to 1/04/2010); <http://www.newton.ac.uk/event/spdw02/speakers>; title of the talk: “*Well-posedness of the transport equation by stochastic perturbation*”.
29. Workshop “7th Euro-Maghreb Workshop on Evolution Equations” (University of Annaba (Algeria) from 29/05 to 2/06/2010); title of the talk: “*Well-posedness of the transport equation by stochastic perturbation*”.
30. “Second Meeting of Women of the Laplacian” (Monopoli (Italy), Hotel Cala Corvino, from 3/06 to 6/06/2010); title of the talk: “*Uniqueness in Law for Stochastic Boundary Value Problems*”.
31. “Kolmogorov equations in Physics and Finance” (University of Modena from 08/09 to 10/09/2010); title of the talk: “*Pathwise uniqueness for singular SDEs driven by stable processes*”.
32. “Nonlinear analysis and calculus of variations” (Politecnico of Torino, 08/04/2011); title of the talk: “*Well-posedness of the transport equation by stochastic perturbation.*”
33. Workshop “Topics in Stochastic control” (Politecnico of Milano, 11-13/07/2011); title of the talk: “*Pathwise uniqueness for singular SDEs driven by stable processes.*”
34. Workshop PRIN 2008, “Deterministic and stochastic methods in evolution problems” (University of Parma from 7/09 to 9/09/2011); title of the talk: “*Lipschitz regularizing effect for parabolic equations with irregular coefficients.*”
35. “Evolution Equations: Randomness and Asymptotics” (Bad Herrenalb, 10-14/10/2011); title of the talk: “*Lipschitz regularizing effect for parabolic equations with irregular coefficient.*”
36. “8th Euro - Maghrebian Workshop on Evolution Equations” (Lecce, 11-15/06/2012); title of the talk: “*Global Lipschitz regularizing effects for parabolic equations with singular coefficients.*”
37. “Nonlocal Operators: Analysis, Probability, Geometry and Applications” (Bielefeld, 9-14/07/2012); title of the talk: “*Uniqueness for singular SDEs driven by stable processes.*”

38. “Stochastic Partial Differential Equations (SPDEs) Follow-up Meeting” (Cambridge, 10-14/09/2012); title of the talk: “*Strong uniqueness for stochastic evolution equations in Hilbert spaces perturbed by a bounded measurable drift.*”
39. “Stochastic Analysis and Control. 50 years of scientific activities of Professor Jerzy Zabczyk” (Bedlewo, Poland, 5-10/05/2013); title of the talk: “*Null Controllability with Vanishing Energy for boundary control systems.*”
40. “Probability and PDE’s” (Pisa, 20-25/05/2013); title of the talk: “*Well-posedness of the stochastic transport equation.*”
41. “Geometric methods in PDE’s: Indam Meeting in occasion of the 70th birthday of Ermanno Lanconelli” (Cortona, 27-31/05/2013); title of the talk: “*Regularity results for degenerate Ornstein-Uhlenbeck operators and applications to SDEs*”.
42. “The 7th International Conference on Levy Processes: Theory and Applications” (Wroclaw, Poland, 15-16/07/2013); title of the talk: “*Structural properties and exponential ergodicity for equations with Levy noise*”.
43. “Stochastic Partial Differential Equations and Applications - IX” (Levico di Trento, 6-11/01/2014); title of the talk: “*On strong uniqueness for stochastic evolution equations*”.
44. “Stochastic Processes and Differential Equations in Infinite Dimensional Spaces” (Imperial College, Londra, 31/03-03/04/2014); title of the talk: “*Strong uniqueness for stochastic evolution equations with possibly unbounded measurable drift term*”.
45. “Stochastic Analysis, Controlled Dynamical Systems and Applications” (Jena, Germany, 9-13/03/2015); title of the talk: “*On weak uniqueness for some degenerate SDEs by global  $L^p$  estimates*”.
46. “Control Theory and Related Topics” (Milano, 13-14/04/2015); title of the talk: “*On weak uniqueness for some degenerate SDEs by global  $L^p$  estimates*”.
47. “New advances in PDE’s, Inverse Problems and Control Theory” (Parma, 6-10/07/2015); title of the talk: “*On  $L^p$ -estimates for some possibly degenerate parabolic operators*”.
48. “Workshop on Stochastic Analysis and Numerical Perspectives” (Sophia Antipolis, Inria, 24-25/09/2015); title of the talk: “*Some uniqueness results for SDEs with jumps and Hölder continuous drift term*”.
49. “Probabilistic models - from discrete to continuous” (Warwick, 29/03 - 02/04/2016); title of the talk: “*Some uniqueness results for additive SDEs with jumps and Hölder continuous drift term*”.
50. “Workshop XIX Internet Seminar - Infinite Dimensional Analysis” (Casalmaggiore (CR), 30/05 - 03/06/2016); title of the talk: “*An Introduction to Cylindrical Ornstein-Uhlenbeck Processes with Stable Noise*”.
51. “SPDE’s and Applications - X” (Levico Terme (TN), 30/05 - 04/06/16); title of the talk: “*On stochastic kinetic equation*”.
52. “8th International Conference on Stochastic Analysis and Its Applications” (Beijing, 13/06 - 17/06/2016); title of the talk: “*Uniqueness results for additive SDEs with jumps and Hölder continuous drift term*”.
53. “3rd Nonlocal Operators and PDEs Conference” (Bedlewo (Poland), 27/06 - 01/07/2016); title of the talk: “*Some uniqueness results for SDEs with jumps and Hölder continuous drift term*”.
54. “Stochastic analysis and stochastic PDEs” (Pisa, 25/07/16); title of the talk: “*Uniqueness for SDEs with jumps and Hölder continuous drift*”.
55. “Kolmogorov-Fokker-Planck Equations: theoretical issues and applications” (Modena, 10/04 - 11/04/2017); title of the talk: “*Well-posedness of semilinear stochastic wave equations with Hölder continuous coefficients*”.

56. “Partial Differential Equations and Applications” (Bologna, 22/05-26/05/2017); title of the talk: “*Parabolic estimates and Poisson process*”.
57. “Stochastic analysis and its applications” (Bedlewo, Poland, 28/05 - 03/06/2017); title of the talk: “*Parabolic estimates and Poisson process*”.
58. “LMS Durham Symposium on Stochastic Analysis” (Durham, UK, 10/07 - 15/07/2017); title of the talk: “*Parabolic estimates and Poisson process*”.
59. “Stochastic Analysis and Related Topics” (Swansea, UK, 24/07 - 26/07/17); title of the talk: “*Parabolic estimates and Poisson process*”.
60. “Workshop on PDEs/SPDEs and Functional Inequalities” (Bedlewo, Poland, 22/04 - 28/04/18); title of the talk: “*Gradient estimates for SDEs without monotonicity type conditions*”.
61. “Equazioni di evoluzione: risultati recenti e prospettive” (Lecce, 18/06 - 19/06/18); title of the talk: “*Gradient estimates for SDEs without monotonicity type conditions*” .
62. “Harmonic Analysis for Stochastic PDEs” (Delft, Holland, 10/07 - 13/07/18); title of the talk: “*Strong well-posedness for some classes of stochastic evolution equations in Hilbert spaces*”.
63. “3 days on Evolution PDEs 2019” (Agropoli, 19/06-21/06/18); title of the talk: “*Schauder estimates for drifted fractional operators in the supercritical case*”.
64. “Recent Trends in Stochastic Analysis and SPDEs” (Pisa, 18/07-20/07/19) title of the talk: “*Schauder estimates for drifted fractional operators in the supercritical case*”.
65. “Stochastic Fluid Dynamics” (Bonn, 11/11-15/11/2019) title of the talk: “*An optimal regularity result for Kolmogorov equations with applications to some singular SPDEs*”.

## 6 Invited seminars

- 1997** Scuola Normale Superiore, Pisa, Italy (November 1997);
- 1998** Department of Mathematics, Polytechnic of Turin, Italy (March 1998);
- 1999** Department of Mathematics, University of Trento, Italy (March 1999), Department of Mathematics, University of Rome “La Sapienza”, Italy (June 1999), IM PAN Banach Center of Warszawa, Poland (July 1999);
- 2001** Department of Mathematics, University of Bielefeld, Germany (August 2001), Department of Mathematics, University of Bonn, Germany (September 2001), Department of Mathematics, University of Lecce, Italy (April 2001);
- 2002** IM-Pan Banach Center of Warszawa, Poland (December 2002);
- 2003** Department of Mathematics, University of Turin, Italy (January 2003), Department of Mathematics, University of Lecce, Italy (July 2003), IM PAN Banach Center of Warszawa (October 2003);
- 2004** Department of Mathematics, University of Bologna, Italy (January 2004);
- 2005** IM PAN Banach Center of Warszawa (February and December 2005), Department of Mathematics, University of Delft (February 2005).
- 2006** Department of Mathematics, University of Turin, Italy (December 2006).
- 2007** Department of Mathematics, University of Rome “Tor Vergata”, Italy (April 2007), IM PAN Banach Center of Warszawa (May 2007).
- 2008** Laboratoire MODAL’X, University of Paris-Nanterre (May 2008), Institut “Henry Poincaré”, Paris (May 2008), Department of Mathematics, University of Turin (September 2008), Department of Mathematics, University of Lecce (December 2008).

**2010** Newton Institute, Cambridge UK (April 2010); <http://www.newton.ac.uk/programmes/SPD/seminars/040114001.html>, Department of Mathematics, University of Rome “Tor Vergata” (May 2010), Department of Mathematics, University of Bielefeld (July 2010), IM PAN Banach Center of Warszawa (September 2010).

**2011** Department of Mathematics, University of Warwick (March 2011, invited by prof. Martin Hairer), Department of Mathematics, University of Parma (April 2011), Department of Mathematics, University of Pavia (September 2011).

**2012** Department of Mathematics, University of Milano-Bicocca (February 2012), Department of Mathematics, University of Pisa (March 2012), Department of Mathematics, University of Nice, France (April 2012).

**2013** Department of Informatics, University of Verona (January 2013), Department of Mathematics, University of Torino (April 2013), Department of Mathematics, University of Rome “Tor Vergata” (June 2013).

**2014** Department of Mathematics, University of York UK (March 2014), Department of Mathematics, University of Bologna (June 2014), Department of Mathematics, University of Swansea UK (September 2014).

**2016** Department of Mathematics, University of Evry (France; May 2016).

**2017** Department of Mathematics, University of Evry (France; May 2017).

**2018** Scuola Normale Superiore di Pisa (June 2018).

## 7 Organizing and editorial activities

- Member of the organization committee for the International School “Does noise simplify or complicate the dynamics of nonlinear systems?” (April 13-17, 2004) and workshop “Nonlinear dynamics and noise in biological systems” (April 19-21, 2004) Torino.
- Member of the organization committee for the session “Stochastic control” at “XXII IFIP TC 7 Conference on System Modeling and Optimization” (July 18-22, 2005) Torino.
- Co-organizer together with S. Bonaccorsi (Trento) of Internet-Seminar 2006-07 “From Brownian motion to stochastic differential equations”. Final workshop at Hotel Bellavista (Levico (TN), Italy; June 10-14 2007); see <http://www.math.kit.edu/iana3/seite/istem/en>.
- Member of the organization committee for the conference “Forty years of Analysis in Torino. A conference in honor of Angelo Negro” (Torino, June 2013).
- Co-organizer together with K. Bogdan (Wroclaw) of the session “Stochastic Analysis and Nonlocal PDEs” at the first joint meeting UMI-SIMAI-PTM (Wroclaw, Poland, September 17-20 2018).
- Editorial board member of “*Abstract and Applied Analysis*” (<http://www.hindawi.com/journals/aaa/>) from July 2012 to May 2017.
- Editorial board member of “*Evolution Equations and Control Theory*” (<http://aimsciences.org/journal/A0000-0000>, October 2018 - present).
- Editorial board member of “*Note di Matematica*” (<http://siba-ese.unisalento.it/index.php/notemat/about/editorialTeam>, January 2020 - present).
- Editorial board member of “*Communications on Pure & Applied Analysis*” (<https://www.aimsciences.org/journal/1534-0392>, January 2021 - present).

## 8 Postgraduate taught courses

- 2003/2004, *Deterministic and stochastic dynamical systems*, Ph.D. degree in Mathematics, University of Torino;
- 2003/2004, *Stochastic differential equations*, Ph.D. in Mathematics, University of Lecce, Italy;
- 2005, *An introduction to the Wiener process and stochastic differential equations*, mini-course, University of Firenze, Italy;
- 2005/2006, *Equations of fluid mechanics*, Ph.D. in Mathematics, University of Torino;
- 2006/2007, *From Brownian motion to stochastic differential equations*, internet Ph.D. course, University of Torino and Trento;
- 2007/2008, *Lectures on Navier-Stokes equations*, Ph.D. in Mathematics, University of Lecce;
- 2015/2016, *Infinite Dimensional Analysis*, Ph.D. in Pure and Applied Mathematics, University of Torino and Polytechnic of Torino;
- 2017/2018, *Applications of Rough Paths Theory*, Ph.D. in Pure and Applied Mathematics, University of Torino and Polytechnic of Torino.

## 9 Other informations

Referee activity. We mention *Annali Scuola Normale Superiore di Pisa Classe di Scienze*, *Annals of Probability*, *Annales de l'Institut Henri Poincaré (B) Probabilités et Statistiques*, *Archiv der Mathematik*, *Infinite Dimensional Analysis - Quantum Probability and Related Fields*, *Journal of Differential Equations*, *Journal of Evolution Equations*, *Journal of Functional Analysis*, *Nonlinear Analysis Theory Methods and Applications*, *Nonlinear Differential Equations and Applications (NoDEA)*, *SIAM Journal on Control and Optimization*, *Studia Mathematica*, *Transactions of AMS*.

Reviewer for National Science Centre (NCN) - Poland; OPUS grants (2017).

PhD advisor together with S. Menozzi (Paris-Saclay, UEVE, LaMME) of L. Marino (international PhD program between the University IDEX Paris-Saclay and the consortium Milano Bicocca - Pavia - INdAM).

Member of PhD programs in Mathematics by the University of Torino in the period 2008-2018 (“Scienza e Alta Tecnologia” cycle XXIV; “Dottorato in Matematica” cycles XXVIII and XXIX; “Dottorato in Matematica Pura ed Applicata” cycles XXX, XXXI, XXXII, XXXIII, XXXIV). Currently he is a member of the program “Dottorato consortile Milano Bicocca - Pavia - INdAM in Matematica” (XXXV and XXXVI).

Member of committees for the final doctoral degree examination. PhD dissertations: “Markov Semigroups and Invariant Measures” by V. Manco (Lecce, December 2008); “New approaches to mean field game theory” by V. De Mattei (Pisa, May 2017); “Non linear and non local diffusion equations. Qualitative theory and asymptotic behaviour” by A. Audrito (Torino, July 2018), “Stochastic equations with fractional noise: continuity in law and applications” by L. Giordano (Milano, February 2020)

Italian Scientific Habilitation ASN 2012 (December 2013) and further ASN 2018 (July 2018) for full professorship in the area 01/A3, Mathematical Analysis, Probability and Statistics.



## List of publications

- [1] E. Priola, On a class of Markov type semigroups in spaces of uniformly continuous and bounded functions, **Studia Mathematica**, 136 (3) (1999), 271-295.
- [2] E. Priola, Partial differential equations with infinitely many variables, PhD thesis in Mathematics, 1999 (<https://iris.unito.it/handle/2318/1559581>), Università di Milano (Abstract: Boll. Unione Mat. Ital., Sez. A, Mat. Soc. Cult. (8) 3 Suppl. (2000) 189-192).
- [3] E. Priola, L. Zambotti, New optimal regularity results for infinite dimensional elliptic equations, **Bollettino U.M.I.**, 8 (3-B) (2000), 411-429.
- [4] E. Priola, Uniform approximation of uniformly continuous and bounded functions on Banach spaces, **Dynamic Systems and Applications**, 9 (2000), 181-198.
- [5] E. Priola, The fundamental solution for a degenerate parabolic Dirichlet problem, *Workshop "Partial differential equations"* (Torino, May 2000), Univ. Turin (2000), 137-148.
- [6] E. Priola, The Cauchy problem for a class of Markov-type semigroups, **Communications in Applied Analysis**, 5, n. 1 (2001), 49-75.
- [7] E. Priola, Schauder estimates for a homogeneous Dirichlet problem in a half space of a Hilbert space, **Nonlinear Analysis, Ser. A: Theory Methods**, 44, n. 5 (2001), 679-702.
- [8] E. Priola, A counterexample to Schauder estimates for elliptic operators with unbounded coefficients, **Atti dell'Accademia Nazionale dei Lincei di Roma, Classe di Scienze Fisiche, Matematiche e Naturali**, s. 9, v. 12 (2001), 15-25.
- [9] C. Costantini, E. Priola, Filters, nets and cofinal types, **Rendiconti dell'Istituto Matematico dell'Università di Trieste**, 33 (2001), n. 1-2 (2002), 1-18.
- [10] E. Priola, Dirichlet problems in a half space of a Hilbert space, **Infinite Dimensional Analysis, Quantum Probability and Related Topics**, 5, n. 2 (2002), 257-291.
- [11] G. Metafune, D. Pallara, E. Priola, Spectrum of Ornstein-Uhlenbeck operators in  $L_p$  spaces with respect to invariant measures, **Journal of Functional Analysis**, 196, n. 1 (2002), 40-60.
- [12] E. Priola, On a Dirichlet problem involving an Ornstein-Uhlenbeck operator, **Potential Analysis**, 18 (2003), 251-287.
- [13] E. Priola, J. Zabczyk, Null controllability with vanishing energy, **SIAM Journal on Control and Optimization**, 42 (2003), 1013-1032.
- [14] G. Metafune, E. Priola, Some classes of non-analytic Markov semigroups, **Journal of Mathematical Analysis and Applications**, 294 (2004), 596-613.
- [15] S. Fornaro, G. Metafune, E. Priola, Gradient estimates for Dirichlet parabolic problems in unbounded domains, **Journal of Differential Equations**, 205 (2004), 329-353.
- [16] E. Priola, J. Zabczyk, Liouville theorems for nonlocal operators, **Journal of Functional Analysis**, 216 (2004), 455-490.
- [17] L. Pandolfi, E. Priola, Tracking control of parabolic systems, *Proceedings 21st IFIP TC 7 Conference "System Modeling and Optimization"*, Kluwer Academic Publisher (2005), 135-146.
- [18] E. Priola, J. Zabczyk, Harmonic functions for generalised Mehler semigroups, *"Stochastic Partial Differential Equations and Applications VII"*, *Lecture Notes in Pure and Applied Mathematics*, 245, CRC Press. (2005), 243-256.
- [19] J. Van Neerven, E. Priola, Norm discontinuity and spectral properties of Ornstein-Uhlenbeck semigroups, **Journal of Evolution Equations**, 5, n. 4 (2005), 557-576.

- [20] E. Priola, F. Wang, Gradient estimates for diffusion semigroups with singular coefficients, **Journal of Functional Analysis**, 236 (2006), no. 1, 244-264.
- [21] E. Priola, J. Zabczyk, On bounded solutions to convolution equations, **Proceedings of the American Mathematical Society**, 134 (2006), no. 11, 3275-3286.
- [22] E. Priola, Formulae for the derivatives of degenerate diffusion semigroups, **Journal of Evolution Equations**, 6 (2006), no. 4, 577-600.
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