

MATTEO MURATORI

CURRICULUM VITÆ

LAST UPDATED: JUNE 2019

PERSONAL INFORMATION

Place and date of birth	Born in Brescia (Italy) on April 24 th , 1986
Citizenship	Italian
Work Address	Dipartimento di Matematica, Politecnico di Milano Via Bonardi 9, 20133 Milano (Italy)
e-mail	<code>matteo.muratori@polimi.it</code>
Phone	+39 02.2399.4587
Affiliations	Member of the GNAMPA Research Group (Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni – Italian Group for Mathematical Analysis, Probability and their Applications) and of the UMI (Unione Matematica Italiana – Italian Mathematical Union)

EDUCATION

2000-2005	Scientific-Technological High School Diploma (100/100), Liceo Scientifico Leonardo, Brescia (Italy).
2005-2008	B.Sc. in Computer Engineering (110/110 cum laude), Politecnico di Milano.
2008-2011	M.Sc. in Mathematical Engineering (110/110 cum laude), Politecnico di Milano.
2012-2014	Ph.D. in “Mathematical Models and Methods in Engineering” at Politecnico di Milano (Advisor: Prof. Gabriele Grillo) with the Doctor Europæus certification, in co-tutorship with Université Paris 1 Panthéon-Sorbonne (Advisor: Prof. Bruno Nazaret), Paris (France).

Title of the Thesis: “Weighted Functional Inequalities and Nonlinear Diffusions of Porous Medium Type”

Defended on: February 26th 2015 at Politecnico di Milano

Final grade: summa cum laude

Committee: Prof. Gabriele Grillo, Prof. Bruno Nazaret, Prof. Michel Pierre (ENS Cachan), Prof. Giuseppe Savaré (Università di Pavia), Prof. Juan Luis Vázquez (Universidad Autónoma de Madrid), Prof. Vincenzo Vespi (Università di Firenze)

Referees: Prof. José Antonio Carrillo (Imperial College London), Prof. Panagiota Daskalopoulos (Columbia University), Prof. Giuseppe Mingione (Università di Parma)

Ph.D. Thesis available online at:

<https://hal.archives-ouvertes.fr/tel-01289874>

POSITIONS

- 01/01/2015 - 30/06/2015 Research Fellow in Mathematical Analysis at Università degli Studi di Milano, Milan (Italy).
- 01/07/2015 - 31/01/2017 Research Fellow in Mathematical Analysis at Università degli Studi di Pavia, Pavia (Italy).
- 01/02/2017 - 20/12/2018 Assistant Professor of Mathematical Analysis at Politecnico di Milano.
- 21/12/2018 - present Assistant Professor of Mathematical Analysis, with Tenure Track, at Politecnico di Milano.

GRANTS, FELLOWSHIPS, AWARDS AND QUALIFICATIONS

- February 2013 A €1000 grant (International Mobility Contribution) from the Ph.D. School of Politecnico di Milano, as a financial support for the co-tutorship program.
- June 2013 A €4500 grant (Bando Vinci) from the “Università Italo-Francese” (Italian-French University), as a financial support for the co-tutorship program.
- September 2014 A one-year research fellowship in Mathematical Analysis at Università degli Studi di Milano.
- March 2015 A €3500 grant from the GNAMPA, as a financial support for the GNAMPA Project 2015 “Analisi Globale, PDEs e Strutture Solitoniche” (Global Analysis, PDEs and Soliton Structures), P.I. Prof. Fabio Punzo.
- May 2015 A one-year research fellowship in Mathematical Analysis at Università degli Studi di Pavia, renewable for one more year.
- February 2016 Qualification aux fonctions de Maître de Conférences, Section 26 - Mathématiques Appliquées et Applications des Mathématiques (Qualification to participate in public competitions for permanent researcher positions in the area of Applied Mathematics and Applications of Mathematics in France). Period of validity: from 09/02/2016 to 31/12/2020.
- May 2016 Renewal of the research fellowship at Università degli Studi di Pavia.
- November 2016 A three-year position as a fixed-term Assistant Professor in Mathematical Analysis at Politecnico di Milano (Ricercatore a tempo determinato Junior a tempo pieno).
- March 2017 A €2400 grant from the GNAMPA, as a financial support for the GNAMPA Project 2017 “Equazioni Diffusive Non-Lineari in Contesti Non-Euclidei e Disuguaglianze Funzionali Associate” (Nonlinear Diffusion Equations in Non-Euclidean Contexts and Related Functional Inequalities), Principal Investigator.
- November 2017 Awarding of the “INdAM-SIMAI-UMI” Prize 2017 as author of one of the best Italian Ph.D. Theses in Pure Mathematics.
- November 2017 Abilitazione Scientifica Nazionale per la funzione di Professore di II fascia nel settore concorsuale Analisi Matematica, Probabilità e Statistica Matematica (Qualification to participate in public competitions for Associate Professor positions in the area of Mathematical Analysis, Probability and Mathematical Statistics in Italy). Period of validity: from 28/11/2017 to 28/11/2023.

- March 2018 A €3000 grant from the GNAMPA, as a financial support for the GNAMPA Project 2018 “Problemi Analitici e Geometrici Associati a EDP Non-Lineari Ellittiche e Paraboliche” (Analytic and Geometric Problems Associated with Nonlinear Elliptic and Parabolic PDE’s), Principal Investigator.
- December 2018 A three-year position as a fixed-term Assistant Professor in Mathematical Analysis, with Tenure Track, at Politecnico di Milano (Ricercatore a tempo determinato Senior a tempo pieno).

PAPERS ON REFEREED JOURNALS

- [1] G. Grillo, M. Muratori and M. M. Porzio, *Porous media equations with two weights: smoothing and decay properties of energy solutions via Poincaré inequalities*, Discrete Contin. Dyn. Syst. 33 (2013), 3599–3640.
- [2] G. Grillo and M. Muratori, *Sharp short and long time L^∞ bounds for solutions to porous media equations with homogeneous Neumann boundary conditions*, J. Differential Equations 254 (2013), 2261–2288.
- [3] G. Grillo, M. Muratori and F. Punzo, *Conditions at infinity for the inhomogeneous filtration equation*, Ann. Inst. H. Poincaré Anal. Non Linéaire 31 (2014), 413–428.
- [4] G. Grillo and M. Muratori, *Sharp asymptotics for the porous media equation in low dimensions via Gagliardo-Nirenberg inequalities*, Riv. Math. Univ. Parma (N.S.) 5 (2014), 15–38.
- [5] G. Grillo and M. Muratori, *Radial fast diffusion on the hyperbolic space*, Proc. Lond. Math. Soc. 109 (2014), 283–317.
- [6] G. Grillo, M. Muratori and F. Punzo, *On the asymptotic behaviour of solutions to the fractional porous medium equation with variable density*, Discrete Contin. Dyn. Syst. 35 (2015), 5927–5962.
- [7] G. Grillo, M. Muratori and F. Punzo, *Fractional porous media equations: existence and uniqueness of weak solutions with measure data*, Calc. Var. Partial Differential Equations 54 (2015), 3303–3335.
- [8] G. Grillo and M. Muratori, *Smoothing effects for the porous medium equation on Cartan-Hadamard manifolds*, Nonlinear Anal. 131 (2016), 346–362.
- [9] M. Muratori, *The fractional Laplacian in power-weighted L^p spaces: Integration-by-parts formulas and self-adjointness*, J. Funct. Anal. 271 (2016), 3662–3694.
- [10] M. Bonforte, J. Dolbeault, M. Muratori and B. Nazaret, *Weighted fast diffusion equations (Part I): Sharp asymptotic rates without symmetry and symmetry breaking in Caffarelli-Kohn-Nirenberg inequalities*, Kinet. Relat. Models 10 (2017), 33–59.
- [11] M. Bonforte, J. Dolbeault, M. Muratori and B. Nazaret, *Weighted fast diffusion equations (Part II): Sharp asymptotic rates of convergence in relative error by entropy methods*, Kinet. Relat. Models 10 (2017), 61–91.
- [12] J. Dolbeault, M. J. Esteban, M. Loss and M. Muratori, *Symmetry for extremal functions in subcritical Caffarelli-Kohn-Nirenberg inequalities*, C. R. Math. Acad. Sci. Paris 355 (2017), 133–154.

- [13] G. Grillo, M. Muratori and J. L. Vázquez, *The porous medium equation on Riemannian manifolds with negative curvature. The large-time behaviour*, Adv. Math. 314 (2017), 328–377.
- [14] A. R. Fotache and M. Muratori, *Smoothing effects for the filtration equation with different powers*, J. Differential Equations 263 (2017), 3291–3326.
- [15] J. Dolbeault, M. Muratori and B. Nazaret, *Weighted interpolation inequalities: a perturbation approach*, Math. Ann. 369 (2017), 1237–1270.
- [16] G. Grillo, M. Muratori and F. Punzo, *The porous medium equation with large initial data on negatively curved Riemannian manifolds*, J. Math. Pures Appl. 113 (2018), 195–226.
- [17] G. Grillo, M. Muratori and F. Punzo, *The porous medium equation with measure data on negatively curved Riemannian manifolds*, J. Eur. Math. Soc. (JEMS) 20 (2018), 2769–2812.
- [18] G. Grillo, M. Muratori and F. Punzo, *Blow-up and global existence for the porous medium equation with reaction on a class of Cartan-Hadamard manifolds*, J. Differential Equations 266 (2019), 4305–4336.
- [19] M. Muratori and F. Punzo, *Porous medium equations on manifolds with critical negative curvature: unbounded initial data*, to appear on Appl. Anal., <https://doi.org/10.1080/00036811.2018.1441996>.
- [20] G. Grillo, M. Muratori and J. L. Vázquez, *The porous medium equation on Riemannian manifolds with negative curvature: the superquadratic case*, to appear on Math. Ann., <https://doi.org/10.1007/s00208-018-1680-1>.

PREPRINTS

- [21] M. Muratori and A. Roncoroni, *Sobolev-type inequalities on Cartan-Hadamard manifolds under curvature bounds*, submitted, preprint arXiv: <https://arxiv.org/abs/1805.02726>.
- [22] G. Grillo, K. Ishige and M. Muratori, *Nonlinear characterizations of stochastic completeness*, submitted, preprint arXiv: <https://arxiv.org/abs/1806.03105>.
- [23] M. Muratori and G. Savaré, *Gradient flows and Evolution Variational Inequalities in metric spaces. I: structural properties*, submitted, preprint arXiv: <https://arxiv.org/abs/1810.03939>.
- [24] G. Grillo, M. Muratori and F. Punzo, *Uniqueness of very weak solutions for a fractional filtration equation*, submitted, preprint arXiv: <https://arxiv.org/abs/1905.07717>.

SCIENTIFIC COMMUNICATIONS

June 11th, 2013 *Short and long time bounds for solutions to the Porous Media Equation with homogeneous Neumann boundary conditions* (Invited Talk), Journées STAB, 11-12 June 2013, Université Paris-Dauphine, Paris (France).

- September 3rd, 2013 *Fine asymptotics for radial solutions of the Fast Diffusion Equation on the hyperbolic space* (Invited Talk), 3rd Italian-Japanese Workshop on Geometric Properties for Parabolic and Elliptic PDE's, 2-6 September 2013, Tokyo Institute of Technology, Tokyo (Japan).
- November 27th, 2014 *Fractional porous medium equation with power-type weights: asymptotic behaviour of solutions* (Invited Talk), PDEs and Global Analysis at Unimi, 27-28 November 2014, Università degli Studi di Milano.
- March 28th, 2015 *Fractional porous medium equations with measure data* (Invited Talk), Conference on Partial Differential Equations (COPDE 2015), 25-29 March 2015, Technische Universität München, Munich (Germany).
- April 13th, 2015 *Pointwise conditions at infinity for a weighted filtration equation in \mathbb{R}^d* (Poster Session), Lions-Magenes Days, 13-14 April 2015, Università degli Studi di Pavia.
- 25-29 May, 2015 *On the self-adjointness of the fractional Laplacian in weighted L^2 spaces* (Poster Sessions), Geometric Properties for Parabolic and Elliptic PDE's, 4th Italian-Japanese Workshop, 25-29 May 2015, Palinuro, Salerno (Italy).
- July 6th, 2015 *Symmetry results for a family of Caffarelli-Kohn-Nirenberg inequalities* (Contributed Talk), Equadiff 2015, Université Claude Bernard Lyon 1, 6-10 July 2015, Lyon (France).
- July 21st, 2015 *Self-adjointness of the fractional Laplacian in weighted L^2 spaces and applications to nonlinear diffusions of porous medium type* (Poster Session), Frontiers of Mathematics and Applications IV – 2015, 20-24 July 2015, Universidad Internacional Menéndez Pelayo, Santander (Spain).
- September 15th, 2016 *Subcritical Caffarelli-Kohn-Nirenberg inequalities: a complete characterization of the symmetry region* (Invited Talk), Partial Differential Equations and Related Topics, 12-16 September 2016, Alghero (Italy).
- February 9th, 2017 *Disuguaglianze di Caffarelli-Kohn-Nirenberg in forma d'interpolazione: simmetria e asimmetria radiale (Caffarelli-Kohn-Nirenberg inequalities of interpolation form: radial symmetry and asymmetry)* (Contributed Talk), XXVII Convegno Nazionale di Calcolo delle Variazioni (XXVII Italian Congress on Calculus of Variations), 6-10 February 2017, Levico Terme, Trento (Italy).
- February 17th, 2017 *Fractional Laplacians in weighted L^p spaces and applications to nonlinear diffusions* (Invited Talk), Partial Differential Equations and Related Analytic-Geometric Inequalities, 17-18 February 2017, Politecnico di Milano.
- May 16th, 2017 *The porous medium equation with large initial data on negatively curved Riemannian manifolds* (Invited Talk), 5th Italian-Japanese Workshop on Geometric Properties for Parabolic and Elliptic PDE's, 15-19 May 2017, Osaka City University, Osaka (Japan).
- June 20th, 2017 *Pointwise estimates for solutions of the porous medium equation on negatively curved Riemannian manifolds* (Invited Talk), Harnack's Inequalities and Nonlinear Operators – A conference to celebrate the 70th birthday of Emmanuele DiBenedetto, 19-23 June 2017, Cortona, Arezzo (Italy).
- July 24th, 2017 *Asymptotics of the porous medium equation on negatively curved Riemannian manifolds* (Invited Talk), Equadiff 2017, Slovak University of Technology in Bratislava, 24-28 July 2017, Bratislava (Slovakia).

- March 10th, 2018 *Nonlinear diffusions of porous medium type: well-posedness, smoothing effects and functional inequalities* (Invited Talk), Workshop on Applied Mathematics in Fukushima (10th Anniversary), Fukushima University, 9-10 March 2018, Fukushima (Japan).
- April 12th, 2018 *Gradient flows in abstract metric spaces: evolution variational inequalities and stability* (Invited Talk), BIRS Workshop on “Entropies, the Geometry of Nonlinear Flows, and their Applications”, Banff International Research Station, 8-13 April 2018, Banff, Alberta (Canada).
- May 25th, 2018 *Sobolev-type inequalities on Cartan-Hadamard manifolds under curvature bounds, and nonlinear diffusions* (Invited Talk), Brescia-Trento Nonlinear Days (Second Edition), 25th May 2018, Università Cattolica, Brescia (Italy).
- June 4th, 2018 *Long-time asymptotics of the porous medium equation on Riemannian manifolds with (very) negative curvature* (Invited Talk), PDEs Spring Workshop, 4th June 2018, Universidad Autónoma de Madrid, Madrid (Spain).
- July 7th, 2018 *Sobolev inequalities on Cartan-Hadamard manifolds and applications to nonlinear diffusions* (Invited Talk), The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications (S.S. “Asymptotics for Nonlinear Diffusion Equations and Related Topics”), 5-9 July 2018, National Taiwan University, Taipei (Taiwan).
- July 8th, 2018 *Fractional porous medium equations: well-posedness and asymptotics* (Invited Talk), The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications (S.S. “Nonlocal Nonlinear Partial Differential Equations and Applications”), 5-9 July 2018, National Taiwan University, Taipei (Taiwan).
- September 18th, 2018 *From stochastic completeness to nonlinear diffusions and back* (Invited Talk), UMI-SIMAI-PTM Joint Meeting (S.S. “Advances in Nonlinear Elliptic and Parabolic PDEs: From Local to Nonlocal Problems”), 17-20 September 2018, Wrocław (Poland).
- February 4th, 2019 *Flussi gradiente in spazi metrici: proprietà strutturali e di stabilità (Gradient flows in metric spaces: structure and stability properties)* (Contributed Talk), XXIX Convegno Nazionale di Calcolo delle Variazioni (XXIX Italian Congress on Calculus of Variations), 4-8 February 2019, Levico Terme, Trento (Italy).
- May 21st, 2019 *Nonlinear diffusion equations of fast-diffusion type and relations with stochastic completeness* (Invited Talk), 6th Italian-Japanese Workshop on Geometric Properties for Parabolic and Elliptic PDE’s, 20-24 May 2019, Cortona, Arezzo (Italy).
- May 30th, 2019 *Blow-up vs. global existence for the porous medium equation on certain Cartan-Hadamard manifolds* (Invited Talk), Partial Differential Equations in Analysis and Mathematical Physics, 30th May - 1st June 2019, Santa Margherita di Pula, Cagliari (Italy).

SEMINARS

- June 15th, 2012 *Spazi di Sobolev pesati, disuguaglianze funzionali e applicazioni a diffusioni non-lineari (Weighted Sobolev spaces, functional inequalities and applications to nonlinear diffusions)*, Politecnico di Milano.

- February 1st, 2013 *Diffusione veloce su domini: comportamento asintotico in variabili riscalate (Fast diffusion on domains: asymptotic behaviour in rescaled variables)*, Politecnico di Milano.
- April 22nd, 2015 *Weighted functional inequalities and asymptotic behaviour of solutions to some nonlinear equations of porous medium type*, Università degli Studi di Milano.
- November 10th, 2015 *Existence and uniqueness results for the porous medium equation with measure data on Cartan-Hadamard manifolds*, Università degli Studi di Pavia.
- March 1st, 2016 *Some symmetry results for optimal functions of Caffarelli-Kohn-Nirenberg inequalities*, Università della Calabria, Rende, Cosenza (Italy).
- April 13th, 2016 *Symmetry results in Caffarelli-Kohn-Nirenberg interpolation inequalities*, Politecnico di Milano.
- May 8th, 2017 *The porous medium equation with growing data on negatively curved Riemannian manifolds*, Università degli Studi di Torino, Turin (Italy).
- November 6th, 2017 *Asymptotics of the porous medium equation on Riemannian manifolds with negative and very negative curvature*, Sapienza Università di Roma, Rome (Italy).
- January 10th, 2018 *Sobolev-type inequalities on Cartan-Hadamard manifolds and applications to some nonlinear diffusions*, Politecnico di Milano.
- February 13th, 2018 *Effetti regolarizzanti per equazioni diffusive degeneri in contesti Euclidei e non (Smoothing effects for degenerate diffusion equations in Euclidean and non-Euclidean settings)*, seminar held on the occasion of the awarding of the “INdAM-SIMAI-UMI” Prize 2017, INdAM Roma, Rome (Italy).
- April 16th, 2019 *Nonlinear diffusion equations on noncompact Riemannian manifolds: uniqueness issues and stochastic completeness*, Ryukoku University, Seta, Otsu (Japan).
- April 25th, 2019 *The porous medium equation on noncompact Riemannian manifolds with initial datum a measure*, The University of Tokyo, Tokyo (Japan).

CONFERENCES (WITHOUT COMMUNICATION) AND SCHOOLS ATTENDED

- 19-20 September 2011 *Nonlinear PDEs and Functional Inequalities*, Universidad Autónoma de Madrid, Madrid (Spain).
- 17-20 January 2012 *A Week on Fractional Diffusion*, School by X. Cabré and J.-M. Roquejoffre, Politecnico di Milano.
- 1-3 March 2012 *Trends in Mathematical Analysis*, Politecnico di Milano.
- 25-29 June, 2012 *Topics in Nonlinear Parabolic Equations*, School by P. Daskalopoulos, J. Dolbeault and G. Mingione, Centro di Ricerca Matematica Ennio De Giorgi, Pisa (Italy).
- 16-28 July 2012 *Trends in Nonlinear Elliptic and Parabolic Equations*, School by S. Terracini and J. L. Vázquez, Cortona, Arezzo (Italy).
- 12-16 November 2012 *New Trends in Nonlinear Parabolic Equations*, Università degli Studi di Parma, Parma (Italy).
- February 28th - March 1st, 2013 *Mathematics in a Complex World*, Politecnico di Milano.

- 19-21 June 2013 *Nonlinear Elliptic and Parabolic Differential Equations*, Politecnico di Milano.
- 5-6 December 2013 *Problemi Differenziali di Evoluzione (Differential Problems of Evolution)*, Politecnico di Milano.
- 18-20 June 2014 *Conference in Honor of Ivar Ekeland*, Université Paris-Dauphine, Paris (France).
- 13-14 April 2015 *Control Theory & Related Topics*, Politecnico di Milano.
- 18-22 January 2016 *XXVI Convegno Nazionale di Calcolo delle Variazioni (XXVI Italian Congress on Calculus of Variations)*, Levico Terme, Trento (Italy).
- 4-8 July 2016 *Nonlocal and Nonlinear Diffusions and Interactions: New Methods and Directions*, School by J. A. Carrillo, M. Del Pino, A. Figalli, G. Mingione and J. L. Vázquez, Cetraro, Cosenza (Italy).
- 19-21 October 2016 *Workshop on Recent Trends in the Analysis of PDEs*, Università degli Studi di Pavia.
- 26-30 June 2017 *CIME-CIRM Course on New Trends on Analysis and Geometry in Metric Spaces*, Levico Terme, Trento (Italy).
- 12th January 2018 *A Geometry Day in Como (6th Edition)*, Università degli Studi dell'Insubria, Como (Italy).
- 10-11 September 2018 *Recent Advances in Random Processes – A Conference in Honor of Paolo Baldi's 70th Birthday*, Rome (Italy).
- 14-17 January 2019 *Alessio Figalli, Fields Medallist 2018*, Centro di Ricerca Matematica Ennio De Giorgi, Pisa (Italy).
- 21st February 2019 *Decima Giornata di Studio Università di Pavia – Politecnico di Milano: Equazioni Differenziali e Calcolo delle Variazioni (Tenth Conference Day Università di Pavia – Politecnico di Milano: Differential Equations and Calculus of Variations)*, Politecnico di Milano.
- 27-30 May 2019 *Analytic and Geometric Aspects of PDEs*, Politecnico di Milano.

STAYS AT OTHER UNIVERSITIES

- 26-28/10/2011 Universidad Autónoma de Madrid, Madrid (Spain). Visiting Prof. J. L. Vázquez.
- 1/4 - 6/7/2013 Université Paris 1 Panthéon-Sorbonne and CEREMADE – Université Paris-Dauphine, Paris (France). Visit scheduled in the co-tutorship program.
- 3-16/11/2013 Université Paris 1 Panthéon-Sorbonne, Paris (France). Visit scheduled in the co-tutorship program.
- 3/5 - 5/7/2014 Université Paris 1 Panthéon-Sorbonne, Paris (France). Visit scheduled in the co-tutorship program.
- 31/1 - 5/2/2016 Universidad Autónoma de Madrid, Madrid (Spain). Visiting Prof. J. L. Vázquez.
- 29/2 - 4/3/2016 Università della Calabria, Rende, Cosenza (Italy). Visiting Prof. F. Punzo.
- 6-10/6/2016 Università della Calabria, Rende, Cosenza (Italy). Visiting Prof. F. Punzo.
- 3-14/3/2018 Tohoku University, Sendai (Japan). Visiting Prof. K. Ishige.
- 3-15/6/2018 Universidad Autónoma de Madrid, Madrid (Spain). Visiting Prof. F. Quirós.

- 4-14/4/2019 and 20/4 - 2/5/2019 The University of Tokyo, Tokyo (Japan). Visiting Prof. K. Ishige.
- 15-19/4/2019 Ryukoku University, Seta, Otsu (Japan). Visiting Prof. T. Kawakami.

TEACHING ACTIVITY

- Academic Years 2011-2012, 2012-2013 and 2013-2014 Teaching Assistant (Exercise Sessions) of “Metodi Analitici e Statistici per l’Ingegneria Fisica” (“Analytical and Statistical Methods for Engineering Physics”: Foundations of Complex Analysis, Functional Analysis, Fourier Series and Transform), 20 hours, Prof. I. Fragalà, Undergraduate Course for the B.Sc. in Engineering Physics, Politecnico di Milano.
- Academic Year 2014-2015 Teaching Assistant (Exercise Sessions) of “Equazioni Differenziali” (“Differential Equations”: Foundations of Ordinary and Partial Differential Equations), 20 hours, Prof. T. Collini, Undergraduate Course for the B.Sc. in Civil Engineering, Politecnico di Milano.
- Academic Years 2015-2016 and 2016-2017 Teaching Assistant (Exercise Sessions) of “Analisi Matematica 3” (“Mathematical Analysis 3”: Ordinary Differential Equations and Complex Analysis), 14 hours, Prof. G. Savaré, Undergraduate Course for the B.Sc. in Mathematics, Università degli Studi di Pavia.
- Academic Year 2016-2017 Teaching Assistant (Exercise Sessions) of “Metodi Matematici” (“Mathematical Methods”: Foundations of Complex Analysis, Discrete and Continuous Signals, Fourier Series and Transform, Laplace Transform, Z -Transform), 14 hours, Prof. G. Savaré, Undergraduate Course for the B.Sc. in Computer Engineering and Bioengineering, Università degli Studi di Pavia.
- Academic Year 2016-2017 Teaching Assistant (Exercise Sessions) of “Analisi Matematica 2” (“Mathematical Analysis 2”: Equivalent to Calculus 2 to 4), 40 hours, Prof. D. Pierotti, Undergraduate Course for the B.Sc. in Engineering Physics, Politecnico di Milano.
- Academic Years 2017-2018 and 2018-2019 Lecturer of “Analisi Matematica 2” (“Mathematical Analysis 2”: Equivalent to Calculus 2 to 4), 48 hours, Undergraduate Course for the B.Sc. in Automation and Control Engineering, Politecnico di Milano.
- Academic Year 2018-2019 Teaching Assistant (Exercise Sessions) of “Real and Functional Analysis”, 16 hours, Prof. M. Grasselli, Graduate Course for the M.Sc. in Mathematical Engineering, Politecnico di Milano.

OTHER ACTIVITIES

I acted as a referee for the following journals: “Boundary Value Problems”, “Analysis, Geometry and Number Theory”, “Proceedings of the Royal Society of Edinburgh”, “Nonlinear Analysis”, “Asymptotic Analysis”, “Journal of Dynamics and Differential Equations”, “Advances in Differential Equations”, “Nonlinear Differential Equations and Applications (NoDEA)”, “Journal of Dynamical and Control Systems”, “Journal of Functional Analysis”, “Studia Mathematica”, “Acta Applicandæ Mathematicæ”, “Advances in Mathematics”, “Mathematical Methods in the Applied Sciences”, “Annali di Matematica Pura e Applicata”.