

Breve Curriculum vitae – Diego Pallara

1. DATI PERSONALI

Posizione attuale: Professore ordinario MAT/05 (Analisi Matematica) (Dipartimento di Matematica e Fisica “Ennio De Giorgi”, Università del Salento, P.O.B. 193, Lecce, 73100 Lecce).

2. STUDI E CARRIERA

Laurea in Matematica *cum laude*, Università di Lecce, 1984
1985-1987 Contratto di insegnamento, Università della Basilicata
1987-1991 Ricercatore - Università della Basilicata
1991-1993 Ricercatore - Università di Lecce
1993-1994 Professore Associato - Università della Basilicata
1994-2000 Professore Associato - Università di Lecce
2000- Professore ordinario - Università di Lecce

3. ORGANIZZAZIONE DI CONGRESSI

1. Summer school “Operator Methods for Evolution Equations and Approximation problems”, Monopoli (Bari), 16-20 settembre 2002.
2. “Metodi matematici per la segmentazione d’immagini”, Lecce, 24 gennaio 2003.
3. “Incontro di Calcolo delle Variazioni e Teoria geometrica della misura”, Lizzanello (Lecce), 30 settembre - 2 ottobre 2004.
4. “8th European-Maghrebian Workshop on Evolution Equations”, Lecce, 11-15 giugno 2012.
5. 8th Internet-Seminar “Analytic semigroups and reaction-diffusion equations”, Casalmaggiore, giugno 2005.
6. 19th Internet-Seminar “Infinite dimensional Analysis”, Casalmaggiore, giugno 2016.
7. “Lecce Conference in Calculus of Variations and Partial Differential Equation”, Lecce, 4-7 ottobre 2016.
8. Operator Semigroups: New Challenges and Applications, Joint meeting SIMAI-UMI-PTM, Wroclaw, 17-20th September, 2018.
9. “Calcolo delle Variazioni ed Equazioni alle Derivate Parziali” in occasione del 70^{mo} compleanno di Michele Carriero ed Eduardo Pascali, Lecce, 12 Ottobre 2018.

4. AMMINISTRAZIONE

1. 1994-2008 Direttore scientifico della Biblioteca del Dipartimento di Matematica, Lecce
2. 1994-2008 Coordinatore del “seminario di Analisi” del Dipartimento di Matematica
3. 1994-2007 Membro della commissione d’Ateneo “SOCRATES” per gli scambi internazionali di docenti e studenti.
4. Membro delle commissioni giudicatrici per Ricercatore (Università di Padova, Firenze, Lecce, Milano, Salerno, Napoli), Professore associato (Ancona, Lecce, Pavia, Potenza) e Professore ordinario (Bologna, Parma, Pisa, Salerno).
5. 1^o novembre 2008 al 2 marzo 2012: Direttore del Dipartimento di Matematica “Ennio De Giorgi” dell’Università del Salento.
6. Dal marzo 2012: Membro della giunta del Dipartimento di Matematica e Fisica “Ennio De Giorgi”, Università del Salento.
7. Dal marzo 2012: Membro della Commissione Scientifica del Dipartimento di Matematica e Fisica “Ennio De Giorgi”, Università del Salento.

8. Dal 30 maggio 2013 al 30 maggio 2016: Membro dell'Osservatorio della Ricerca, Università del Salento.
9. Dal marzo 2014 al novembre 2018: Membro della Commissione Master, Università del Salento.
10. Dal luglio 2016: Coordinatore del Nucleo di valutazione, Università del Salento.

5. ALCUNE CONFERENZE SU INVITO

1. Regularity of Minimizers of the Mumford-Shah Functional, Rio de Janeiro, 1997.
2. Trace Formulas for Some Singular Differential Operators, Ulm, 1997.
3. Variational Problems in Image Segmentation, Tübingen, 1997.
4. An introduction to *SBV* functions (corso di dottorato), Yokohama, 1997.
5. Semi-groupes de Feller et processus de diffusion (corso di dottorato), Marrakech, 2001.
6. On the approximation of *SBV* functions and non occurrence of the Lavrentiev phenomenon in some free discontinuity problems, Riokoku University, Kyoto, 2002.
7. Existence and compactness of semigroups generated by second-order elliptic operators, Tsukuba, 2002.
8. The sector of analyticity of the Ornstein-Uhlenbeck semigroup in L^p spaces with respect to the invariant measure, Halle, 2003.
9. Metodi diretti nel calcolo delle variazioni (corso di dottorato), Universidad Austral di Rosario (Argentina).
10. Sets with finite perimeter and the heat semigroup, Bristol, 2010.
11. Some connections between geometric measure theory and semigroups, Metz, 2011.
12. Degenerate elliptic and parabolic operators, Biefefeld, 2012.
13. Bounded variation functions in Hilbert spaces and related semigroups, Sapporo, 2012.
14. Sets of finite perimeter in Wiener spaces, ERC Workshop on Geometric Partial Differential Equations, Pisa, Centro De Giorgi, 2012.
15. Short-time behaviour of the heat semigroup and the geometry of manifolds, Herrnhut, 3-8 June, 2013.
16. Heat Semigroup and geometric measure theory in Carnot groups, Cortona, 17-21 giugno 2013.
17. Functions of bounded variation and the short-time behaviour of the heat semigroup, Pisa, 20 marzo 2014.
18. Fractional operators: perimeters and related semilinear equations, PDE's, Control theory and Inverse problems, Bologna, September 18, 2014.
19. A Meyers-Serrin theorem on manifolds and an L^1 regularity result for linear systems of PDEs, Parma 9 luglio 2015.
20. Heat Semigroup and perimeters: the local and the nonlocal cases, Bedlewo, 26 aprile 2017.
21. Infinite dimensional gradient estimates for perturbed Ornstein-Uhlenbeck semigroups in convex sets, Wroclaw, 17 settembre 2018.
22. Perimeters and short-time behaviour of the heat semigroup in different contexts, NYUAD, Abu Dhabi, 20 gennaio 2019.
23. Gradient estimates for perturbed Ornstein-Uhlenbeck semigroups in infinite dimensional convex sets, Bad Herrenalb, 7 maggio 2019.
24. On the spectrum of the Ornstein-Uhlenbeck operators, Varsavia, 22 novembre 2019.

Publicazioni

- [1] M. CARRIERO, D. PALLARA: Global Existence to Cauchy's Problem for Nonlinear Wave Equations in Space-Dimensions $n \geq 4$, *preprint Dipartimento di Matematica di Lecce* **32** (1984), 44 pp.
- [2] M. CARRIERO, D. PALLARA: Asymptotic Behavior of Solutions to a Class of Nonlinear Evolution Equations, *Preprint Dipartimento di Matematica di Lecce* **3** (1985), 45 pp.
- [3] M. CARRIERO, D. PALLARA: On Global Solutions to a Class of Semilinear Schrödinger Equations, *Preprint Dipartimento di Matematica di Lecce* **7** (1985), 9 pp.
- [4] G. METAFUNE, D. PALLARA: Teoremi di grafico chiuso e rappresentazioni di spazi funzionali, *Quaderno del Dipartimento di Matematica di Lecce* **Q2** (1985).
- [5] M. CARRIERO, A. LEACI, D. PALLARA, E. PASCALI: Euler Conditions for a Minimum Problem With Free Discontinuity Surfaces, *Preprint Dipartimento di Matematica di Lecce* **8** (1988), 24 pp.
- [6] D. PALLARA: Nuovi teoremi sulle funzioni a variazione limitata, *Atti Accad. Naz. Lincei, Rend. Cl. Sci. Fis. Natur.* **(9)1** (1990), 309-316.
- [7] D. PALLARA: Some New Results on Functions of Bounded Variation, *Rend. Accad. Naz. Sci. XL, Mem. Mat.* **(5)14** (1990), 295-321.
- [8] D. PALLARA: On the Lower Semicontinuity of Certain Integral Functionals, *Rend. Accad. Naz. Sci. XL, Mem. Mat.* **(5)15** (1991), 57-70.
- [9] L. AMBROSIO, D. PALLARA: Integral Representation of Relaxed Functionals on $BV(\mathbf{R}^n, \mathbf{R}^k)$ and Polyhedral Approximation, *Indiana Univ. Math. J.* **42** (1993), 295-321.
- [10] M. CAMPITI, G. METAFUNE, D. PALLARA: Uniformly Convergent Lagrange-type Approximation, *Concrete Analysis*, special issues of *Computers and Mathematics for Applications* **30** (1995), 269-276.
- [11] M. CAMPITI, G. METAFUNE, D. PALLARA: On Some Averages of Trigonometric Interpolating Operators, in: *Approximation Theory, Wavelets and Applications* (S. P. Singh ed.), Kluwer, 1995, 303-313.
- [12] L. AMBROSIO, D. PALLARA: Partial Regularity in Free Discontinuity Problems, in: *Progress in Partial Differential Equations: The Metz Surveys IV* (M. Chipot and I. Shafrir eds.), Pitman Res. Notes in Math. 345, 1996.
- [13] L. AMBROSIO, D. PALLARA: Partial Regularity of Free Discontinuity Sets I, *Ann. Sc. Norm. Sup. Pisa, s.IV* **24** (1997), 1-38.
- [14] L. AMBROSIO, N. FUSCO, D. PALLARA: Partial Regularity of Free Discontinuity Sets II, *Ann. Sc. Norm. Sup. Pisa, s.IV* **24** (1997), 39-62.
- [15] D. PALLARA: Regularity of Minimizers of the Mumford-Shah Functional, in: *Foundations of computational mathematics* Selected papers of a conference held at IMPA in Rio de Janeiro, January 1997 (F. Cucker and M. Shub eds.), Springer (1997), 326-345.
- [16] L. AMBROSIO, M. GOBBINO, D. PALLARA: Approximation Problems for Curvature Varifolds, *J. Geom. Anal.* **8** (1998), 1-19.
- [17] M. CAMPITI, G. METAFUNE, D. PALLARA: Degenerate Self-adjoint Evolution Equations in the Unit Interval, *Semigroup Forum* **57** (1998), 1-36.
- [18] L. AMBROSIO, N. FUSCO, D. PALLARA: Higher Regularity of Solutions of Free Discontinuity Problems, *Diff. Int. Eqs.* **12** (1999), 499-520.
- [19] G. METAFUNE, D. PALLARA, C. SEMPI: Euler convergence: probabilistic considerations, *Mathematics Magazine* **72** (1999), 314-316.
- [20] M. CAMPITI, G. METAFUNE, D. PALLARA: General Voronovskaja formula and solutions of second-order degenerate differential equations, *Rev. Roum. Math. Pures et Appl.* **44** (1999), 755-766.
- [21] M. CAMPITI, G. METAFUNE, D. PALLARA, S. ROMANELLI: Semigroups for ordinary differential operators, in: K. ENGEL, R. NAGEL: *One-parameter semigroups for linear evolution equations* Springer Graduate Texts in Mathematics **194**, 383-404, 2000.
- [22] G. METAFUNE, D. PALLARA: Trace Formulas for Some Singular Differential Operators and applications, *Math. Nachr.* **211** (2000), 127-157.
- [23] M. CAMPITI, G. METAFUNE, D. PALLARA: One-dimensional Feller semigroups with reflecting barriers, *J. Math. Anal. Appl.* **244** (2000), 233-250.
- [24] L. AMBROSIO, N. FUSCO, D. PALLARA: Functions of Bounded Variation and Free Discontinuity Problems, *Oxford Mathematical Monographs* Oxford University Press, 2000.

- [25] G. METAFUNE, D. PALLARA: Discreteness of the spectrum for a class of differential operators with unbounded coefficients in \mathbf{R}^n , *Rend. Mat. Acc. Lincei, s.9* **11** (2000), 9-19.
- [26] G. METAFUNE, D. PALLARA: On the location of the essential spectrum of Schrödinger operators, *Proc. Amer. Math. Soc.* **130** (2002), 1779-1786.
- [27] G. METAFUNE, D. PALLARA, M. WACKER: Feller semigroups in \mathbf{R}^N , *Semigroup Forum* **65** (2002), 159-205.
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- [29] G. METAFUNE, D. PALLARA, E. PRIOLA: Spectrum of Ornstein-Uhlenbeck operators in L^p spaces with respect to invariant measures, *J. Funct. Anal.* **196** (2002), 40-60.
- [30] W. ARENDT, G. METAFUNE, D. PALLARA, S. ROMANELLI: The Laplacian with Wentzell-Robin Boundary Conditions on Spaces of Continuous Functions, *Semigroup Forum* **67** (2003), 247-261.
- [31] D. PALLARA (ED.): Calculus of Variations: Topics from the Mathematical Heritage of Ennio De Giorgi, *Quaderni di Matematica* **vol. 14** (2004), Dipartimento di Matematica della seconda Università di Napoli.
- [32] L. AMBROSIO, M. MIRANDA (JR), D. PALLARA: Special Functions of Bounded Variation in Doubling Metric Measure Spaces, in: D. PALLARA (ED.), Calculus of Variations: Topics from the Mathematical Heritage of Ennio De Giorgi, *Quaderni di Matematica* **vol. 14** (2004), Dipartimento di Matematica della seconda Università di Napoli, 1-45.
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- [34] A. LUNARDI, G. METAFUNE, D. PALLARA: Dirichlet Boundary Conditions for Elliptic Operators with Unbounded Drift, *Proc. Amer. Math. Soc.* **133** (2005), 2625-2635. Erratum, *Ibid.*, **134** (2006), 2479-2480.
- [35] G. METAFUNE, D. PALLARA, A. RHANDI: Global Properties of Invariant Measures, *J. Funct. Anal.* **223** (2005), 396-424.
- [36] R.CHILL, E.FAŠANGOVÁ, G.METAFUNE, D.PALLARA: The sector of analyticity of the Ornstein-Uhlenbeck semigroup on L^p spaces with respect to invariant measure, *The Journal of the London Mathematical Society* **71** (2005), 703-722.
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- [53] L. ANGIULI, D. PALLARA, F. PARONETTO: Analytic semigroups generated in $L^1(\Omega)$ by second order elliptic operators via duality methods, *Semigroup Forum* **80** (2010), 255-271.

- [54] L. AMBROSIO, M. MIRANDA, D. PALLARA: Sets with finite perimeter in Wiener spaces, perimeter measure and boundary rectifiability, *Discrete Contin. Dyn. Syst.* **28** (2010), 591-606.
- [55] L. AMBROSIO, G. DA PRATO, D. PALLARA: BV functions in a Hilbert space with respect to a Gaussian measure, *Rend. Acc. Lincei* **21** (2010), 405-414.
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- [58] S. FORNARO, G. METAFUNE, D. PALLARA: Analytic semigroups generated in L^p by elliptic operators with high order degeneracy at the boundary, *Note Mat.* **31** (2011), 101-113.
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- [66] A. LUNARDI, M. MIRANDA, D. PALLARA: BV functions on convex domains in Wiener spaces, *Potential Anal.* **43** (2015), 23-48.
- [67] B. GÜNEYSU, D. PALLARA: Functions with bounded variation on a class of Riemannian manifolds with Ricci curvature unbounded from below, *Math. Ann.* **363** (2015), 1307-1331.
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- [69] D. GUIDETTI, B. GÜNEYSU, D. PALLARA: On some generalisations of Meyers-Serrin Theorem, *Bruno Pini Mathematical Analysis Seminar* **1** (2015), 116-127
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