

**Pubblicazioni di Ermanno Lanconelli** (all'1 Agosto 2006)

1. Tracce su rette coordinate di un certo spazio funzionale Ann. Mat. Pura Appl., IV. Ser. 78, 13-40 (1968).
2. Tracce in  $L_p$  di un certo spazio funzionale Atti Sem. Mat. Fis. Univ. Modena 17, 79-108 (1968).
3. Valutazioni in  $B_p$  della soluzione del problema di Cauchy per l'equazione delle onde Boll. Unione Mat. Ital., IV. Ser. 1, 780-790 (1968).
4. Valutazioni in  $L_p(\mathbb{R}^n)$  della soluzione del problema di Cauchy per l'equazione di Schroedinger Boll. Unione Mat. Ital., IV. Ser. 1, 591-607 (1968).
5. Sui moltiplicatori negli spazi di Besov Boll. Unione Mat. Ital., IV. Ser. 1, 767-779 (1968).
6. Sui moltiplicatori in  $L_p$  ed in  $B_p^0$  e applicazioni al problema di Cauchy Atti Accad. Naz. Lincei, Rend., Cl. Sci. Fis. Mat. Nat., VIII. Ser. 47, 441-445 (1969).
7. Alcuni teoremi di regolarizzazione per la soluzione del problema di Cauchy Boll. Unione Mat. Ital., IV. Ser. 3, 248-268 (1970).
8. Sui moltiplicatori in  $L_p$  e in  $B_p^0$  e applicazioni al problema di Cauchy. Rend. Mat., VI. Ser. 3, 33-88 (1970).
9. Su una classe di moltiplicatori di  $\mathcal{F}L_p$  ed applicazioni. Atti Accad. naz. Lincei, VIII. Ser., Rend., Cl. Sci. Fis. Mat. natur. 51, 133-139 (1971).
10. Sui moltiplicatori dell'integrale di Fourier ed applicazioni. Boll. Unione Mat. Ital., IV. Ser. 5, 165-179 (1972)
11. Sul problema di Dirichlet per l'equazione del calore. Ann. Mat. pura appl., IV. Ser. 97, 83-114 (1973).
12. Sul problema di Dirichlet per equazioni paraboliche del secondo ordine a coefficienti discontinui. Atti Accad. naz. Lincei, VIII. Ser., Rend., Cl. Sci. fis. Mat. natur. 56, 441-445 (1974).
13. Sul problema di Dirichlet per equazioni paraboliche del secondo ordine a coefficienti discontinui. Ann. Mat. pura appl. IV. Ser. 106, 11-38 (1975).
14. Sul modulo di continuità alla frontiera della soluzione del problema di Dirichlet relativo ad una classe di operatori parabolici. Ann. Sc. norm. super. Pisa, Cl. Sci., IV. Ser. 2, 335-358 (1975).
15. Sul confronto della regolarità dei punti di frontiera rispetto ad operatori lineari parabolici diversi. Ann. Mat. Pura Appl., IV. Ser. 114, 207-227 (1977).
16. Un'osservazione sugli operatori differenziali ipoellittici del secondo ordine. Boll. Unione Mat. Ital., V. Ser., A 15, 470-480 (1978)
17. Sugli operatori ipoellittici del secondo ordine con simbolo principale di segno variabile. Boll. Unione Mat. Ital., V. Ser., B 16, 291-313 (1979).
18. Regolarità holderiana delle soluzioni deboli di certe equazioni ellittiche fortemente degeneri. Sem di Analisi Matematica, Ist. Mat. di Bologna, a.a. 1981-1982, IX.1-IX.27
19. De Giorgi's theorem for a class of strongly degenerate elliptic equations. Atti Accad. Naz. Lincei, VIII. Ser., Rend., Cl. Sci. Fis. Mat. Nat. 72, 273-277 (1982)(with B.Franchi).
20. Hölder regularity theorem for a class of linear nonuniformly elliptic operators with measurable coefficients. Ann. Sc. Norm. Super. Pisa, Cl. Sci., IV. Ser. 10, 523-541 (1983)(with B. Franchi)
21. Stime sub-ellittiche e metriche riemanniane singolari. Sem. di Analisi Matematica, Ist. Mat. di Bologna, a.a. 1982-1983, pp.VII.1-VII.17

22. Une metrique associee a une classe d'operateurs elliptiques degeneres. Linear partial and pseudo differential operators, Conv. Torino/Italy 1982, Rend. Semin. Mat., Fasc. Spec., 105-114 (1983)(avec B.Franchi)
23. An embedding theorem for Sobolev spaces related to non-smooth vector fields and Harnack inequality. Commun. Partial Differ. Equations 9, 1237-1264 (1984)(with B. Franchi)
24. Une condition geometrique pour l'inegalite de Harnack. (A geometric condition for Harnack's inequality). J. Math. Pures Appl., IX. Ser. 64, 237-256 (1985) (with B.Franchi)
25. Existence and uniqueness of ground states of quasilinear elliptic equations. Atti Accad. Naz. Lincei, VIII. Ser., Rend., Cl. Sci. Fis. Mat. Nat. 79, 121-126 (1985) (with B.Franchi and J. Serrin)
26. Existence and uniqueness of ground state solutions of quasilinear elliptic equations. Nonlinear diffusion equations and their equilibrium states I, Proc. Microprogram, Berkeley/Calif. 1986, Publ., Math. Sci. Res. Inst. 12, 293- 300 (1988) (with B.Franchi and J.Serrin)
27. Radial symmetry of the ground states for a class of quasilinear elliptic equations. Nonlinear diffusion equations and their equilibrium states I, Proc. Microprogram, Berkeley/Calif. 1986, Publ., Math. Sci. Res. Inst. 12, 287-292 (1988)(with B.Franchi)
28. Wiener's criterion for parabolic equations with variable coefficients and its consequences. Trans. Am. Math. Soc. 308, No.2, 811-836 (1988) (with N. Garofalo)
29. Asymptotic behaviour of fundamental solutions and potential theory of parabolic operators with variable coefficients. Math. Ann. 283, No.2, 211-239 (1989) (with N. Garofalo)
30. Formule di media per operatori ipoellittici del secondo ordine. Sem. di Analisi Matematica, Dip. di Mat. Univ. di Bologna, a.a. 1988-1989, pp. XI.1-XI.22, Tecnoprint, Bologna
31. Wiener's criterion for divergence form parabolic operators with  $C^1$ -Dini continuous coefficients. Duke Math. J. 59, No.1, 191-232 (1989)(with E.Fabes and N.Garofalo)
32. Frequency functions on the Heisenberg group and the uncertainty principle and unique continuation. Ann. Inst. Fourier 40, No.2, 313-356 (1990)(with N.Garofalo)
33. Level sets of the fundamental solution and Harnack inequality for degenerate equations of Kolmogorov type. (Trans. Am. Math. Soc. 321, No.2, 775-792 (1990)(with N.Garofalo)
34. Zero-order perturbations of the subelliptic Laplacian on the Heisenberg group and their uniqueness properties. Bull. Am. Math. Soc., New Ser. 23, No.2, 501-511 (1990)(with N.Garofalo)
35. Existence and nonexistence results for semilinear equations on the Heisenberg group. Indiana Univ. Math. J. 41, No.1, 71-98 (1992)(with N.Garofalo)
36. Existence, nonexistence and regularity results for semilinear equations on the Heisenberg group. Methods of Real Analysis and Partial Differential Equations, Quaderno 14, Accad. Pontiniana, Napoli (1992),35-38.
37. Soluzioni deboli non variazionali per una classe di equazioni di tipo Kolmogorov-Fokker-Planck. Sem. di Analisi Matematica, Dip.di Mat. Univ. di Bologna, a.a. 1992-1993, pp. XI.1-XI.22,

Tecnoprint, Bologna

38. Harnack's inequality for sum of squares of vector fields plus a potential. *Am. J. Math.* 115, No.3, 699-734 (1993)(with G.Citti e N.Garofalo)
39. Partial differential equations II. Papers presented at the conference, held in Torino, Italy, May 28-29, 1993. Lanconelli, E.(ed.); Negro, A.(ed.); Rodino, L.(ed.) *Rendiconti del Seminario Matematico*, Torino 52, No. 1. Torino: Universita e Politecnico di Torino, p. 1-101 (1993).
40. On a class of hypoelliptic evolution operators. *Rend. Semin. Mat.*, Torino 52, No.1, 29-63 (1994)(con S.Polidoro)
41. Existence and uniqueness of nonnegative solutions of quasilinear equations in  $\mathbb{R}^n$ . *Adv. Math.* 118, No.2, 177-243, Art. No.0021 (1996)(with B.Franchi and J.Serrin)
42. A boundary value problem for a class of quasi-linear operators of Fokker-Planck type. *Ann. Univ. Ferrara, sez. VIIIm Suppl.v.XL*, 65-84 (1995)(with F. Lascialfari)
43. On a class of Kolmogorov-Fokker-Planck operators. Alvino, A. (ed.) et al., *Progress in elliptic and parabolic partial differential equations. Reports of the conference, Capri, Italy, September 19-23, 1994.* Harlow: Longman. Pitman Res. Notes Math. Ser. 350, 173-183 (1996).
44. On the Poisson kernel for the Kohn Laplacian. *Rendiconti di Matematica, Serie VII*, v. 17, 659-677 (1997)(with F.Uguzzoni)
45. Asymptotic behavior and non-existence theorems for semilinear Dirichlet problems involving critical exponent on unbounded domains of the Heisenberg group. *Bollettino U.M.I.* v.8 1-B, 139-168 (1998)(with F.Uguzzoni)
46. On the fundamental solution for hypoelliptic second order partial differential equations with non-negative characteristic form. *Ricerche di Matematica, Vol. 47,n.1(1999)*,81-106 (with A.Pascucci)
47. An embedding theorem for non smooth vector fields of step two. *Matematiche* 54, Suppl., 111-124 (1999)(with A.Montanari)
48. Superparabolic functions related to second order hypoelliptic operators. *Potential Anal.* 11, No.3, 303-323 (1999)(con A.Pascucci)
49. On the  $C^\infty$  solvability of the Dirichlet problem for the prescribed Levi curvature equation. *Rend. Accad. Naz. Lincei,s.9.v.10(1999)*(with G.Citti e A.Montanari)
50. On the Poincare' inequality for vector fields. *Arkiv för Matematik*, 38, 327-342 (2000) (with D.Morbidelli).
51. Non-existence results for semilinear Kohn-Laplace equations in unbounded domains. *Comm. Partial Differential Equations*, 25,1703-1739 (2000) (with F.Uguzzoni)
52. Critical semilinear equations on the Heisenberg group, *Annali Univ. Ferrara, Special issue in memory of L. Cattabriga.* Vol. 45,187-195(1999).
53. X-elliptic operators and X-control distances. *Ricerche di Matematica, Napoli, II special issue in memory of Ennio De Giorgi*, v.49, 223-243 (2000) (with A.E.Kogoj)
54. Liouville-type Theorems for Real Sub-Laplacians. *Manuscripta Math.* v.105, 111-124 (2001)(con A.Bonfiglioli)
55. Maximum principle on unbounded domains for sub-Laplacian: a Potential Theory approach. *Proc. Amer. Math. Soc.*130, 2295-2304 (2002)(with A.Bonfiglioli).

56. Uniform Gaussian estimates for the fundamental solutions for heat operators on Carnot Groups. *Adv. Differential Equations* 7, 1153-1192 (2002) (with F.Uguzzoni and A.Bonfiglioli)
57. Smoothness of Lipschitz continuous graphs with non vanishing Levi curvature. *Acta Mathematica*, 188, 87-128 (2002)(with G.Citti e A.Montanari).
58. A note on one dimensional symmetry in Carnot groups. *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei (9) Mat. Appl.* 13,17-22(2002) (with I.Birindelli)
59. Linear and nonlinear ultraparabolic equations of Kolmogorov type arising in diffusion theory and in finance, in the book "Nonlinear Problems in Mathematical Physics and Related Topics, II." 243-265, *Int.Math. Ser.(N.Y.)*,2, Kluwer/Plenum,New York 2002 (with A.Pascucci and S. Polidoro)
60. Degree theory for VMO maps on metric spaces and applications to Hormander operators *Ann. Sc. Norm. Sup. Pisa (5) v.1* (2002),569-601(with F.Uguzzoni)
61. Subharmonic functions on Carnot groups. *Math. Annalen*, v. 325, (2003), 97-122 (with A.Bonfiglioli)
62. Maximum principle,nonhomogeneous Harnack inequality and Liouville type theorems for X-Elliptic operators. *Comm. Partial Differential Equations*, 28 (2003)1833-1862 (with C.E.Gutierrez)
63. Levi's parametrix for some sub-elliptic non-divergence form operators. *Electronic Research Announcements of the AMS*, 9, January 31, 2003. pages 10-18. (with A. Bonfiglioli e F. Uguzzoni)
64. A negative answer to a symmetry problem on the Heisenberg group. *Calculus of Variations and PDE*, 18 (2003) 357-372 (with I.Birindelli)
65. Fundamental solutions for non-divergence form operators on stratified groups. *Trans. AMS*, 356, 7, (2004) 2709-2737 (con A. Bonfiglioli e F. Uguzzoni).
66. Nonlinear equations on Carnot groups and curvatures problems for CR manifolds, *Atti Convegno Internazionale "Renato Caccioppoli and Modern Analysis"* Roma, *Accad. Naz. Lincei*, 3-4 Giugno 2002, *Rend.Mat. Acc. Lincei* 14, 3 (2003)227-238.
67. Classical, viscosity and average solutions to PDE's with nonnegative characteristic form,*Rend. Accad. Naz. Lincei*, 15 ,1 (2004) 17-28. (with C.E. Gutierrez)
68. Pseudoconvex Fully Nonlinear Partial Differential Operators. Strong Comparison Theorems. *J. Differential Equations* 202 (2004) 306-331 (with A. Montanari)
69. An invariant Harnack inequality for a class of hypoelliptic ultraparabolic equations, *Mediterr. J. of Math* 1 (2004) 51-80 (with A.E.Kogoj)
70. One-side Liouville Theorems for a class of hypoelliptic ultraparabolic equations, *Contemporary Math.* 368 (2005), 305-312 (with A.E.Kogoj)
71. Strutture sub-riemanniane in alcuni problemi di Analisi, testo della Conferenza Generale al XVII Congresso Nazionale dell' UMI. Milano, 11 Settembre 2004. *Bollettino UMI*, .
72. On first order linear PDE systems all of whose solutions are harmonic functions, *Tsukuba Math. J.*, to appear ( with S. Dragomir).
73. An Alexander type Theorem for Reinhardt domains of  $C^2$ , *Contemporary Math*, 400 (2006) 129-145 (with J. Hounie).
74. Link of homogeneous groups and applications to Hörmander operators, Pro-

- ceedings AMS, to appear (with A.E.Kogoj).
75. Dirichlet problem with  $L^p$  boundary data for real sub-Laplacians, *Le Matematiche*, 60 (2005), 269-277.(with A.Bonfiglioli),
  76. Dirichlet problem with  $L^p$  boundary data and Hardy spaces on Carnot groups, submitted (with A.Bonfiglioli).
  77. A sphere theorem for a class of Reinhardt domains of  $C^{n+1}$ , (with J. Hounie), *Forum Math.*, to appear.
  78. Covering theorems, inequalities on metric spaces and applications to PDE's, submitted (with G.Di Fazio and C.E.Gutierrez).
  79. Liouville Theorems in halfspaces for parabolic hypoelliptic equations, *Ricerche di Matematica*, to appear (with A.E. Kogoj).
  80. Gauge functions, Eikonal equations and Bocher theorem on stratified groups, *Calculus of Variations and PDEs*, to appear(with A.Bonfiglioli).
  81. Heat kernel for non-divergence operators of Hormander type, *CRAS*, to appear (with M.Bramanti-L.Brandolini-F. Uguzzoni).

#### **Testi Universitari**

1. *Lezioni di Analisi Matematica 1*, Pitagora Ed. 1994
2. *Lezioni di Analisi Matematica 2, I parte*, Pitagora Ed. 1995
3. *Primi elementi della teoria degli spazi di Hilbert*, Pitagora Ed. 1996
4. *Lezioni di Analisi Matematica 2, II parte*, Pitagora Ed.1997