

# Curriculum Vitae<sup>1</sup>

Enzo Mitidieri

## Biographical Summary

Enzo Mitidieri is a mathematician and professor with a focus on mathematical analysis. His career spans several decades and includes contributions in the fields of nonlinear differential equations. He is noted for pioneering results in the existence, nonexistence, and qualitative behavior of solutions to nonlinear PDEs.

## Academic Positions

- Researcher at the Institute of Mathematics, University of Trieste 1983–1987
- Associate Professor at the University of Udine 1988–1991
- Associate Professor at the University of Trieste 1992–1993
- Full Professor at the University of Trieste 1994–2024
- Full Professor at the University of Udine since November 2024

## Research Themes and Impact (highlights)

- **Liouville-type theorems and rigidity.** Fundamental nonexistence and classification principles for entire solutions, with applications to elliptic and parabolic problems, frequently via integral identities and comparison principles.
- **A priori estimates and blow-up.** Development of methods to derive universal bounds or to exclude nontrivial solutions, including Rellich-type identities and capacity techniques; analysis of blow-up scenarios and qualitative properties.
- **Hardy–Rellich inequalities and higher-order systems.** Sharp functional inequalities and their role in existence/nonexistence and regularity theory for quasilinear and higher-order PDE systems.

## Publications and Monographs

- Author of over 100 scientific papers in international journals
- Four monographs:
  - *A Priori Estimates and the Absence of Solutions of Nonlinear Partial Differential Equations and Inequalities* (2001, with S.I. Pokhozhaev)
  - *Blow-up for Higher-Order Parabolic, Hyperbolic, Dispersion and Schrödinger Equations* (2014, with V.A. Galaktionov and S.I. Pokhozhaev)
  - *The Pokhozhaev Legacy: The art of Nonexistence in Nonlinear PDEs and Inequalities* (in preparation since August 2015, with V.A. Galaktionov)
  - *Liouville Theorems in Nonlinear Partial Differential Equations and Inequalities* (in preparation with L. D’Ambrosio)

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<sup>1</sup>Powered by Perplexity

- Edited volumes on functional analysis and PDEs
  1. *Semigroup Theory and Applications*, Lecture Notes in Pure and Applied Mathematics (1989) N. 116, Philippe Clément, Sergio Invernizzi, Enzo Mitidieri, Ioan I. Vrabie - eds. published by M. Dekker.
  2. *Semigroup Theory and Evolution Equations: The 2nd International Conference*, Lecture Notes in Pure and Applied Mathematics- (1991), N. 135, Philippe Clément, Enzo Mitidieri, Ben de Pagter - eds. published by M. Dekker.
  3. *Reaction Diffusion Systems*, Lecture Notes in Pure and Applied Mathematics Series (1997) N. 194, Gabriella Caristi and Enzo Mitidieri - eds. published by M. Dekker.
  4. Dedicated to the memory of Pierre Grisvard, Special Issue of *Rendiconti dell'Istituto di Matematica dell'Università di Trieste*, Vol. XXVIII, (1996), 1–506, Philippe Clément, Sergio Invernizzi, and Enzo Mitidieri eds.
  5. Workshop on Blow-up and Global Existence of Solutions for Parabolic and Hyperbolic Problems. Trieste, September 27–29, 1999. *Rend. Istit. Mat. Univ. Trieste* 31 (2000), suppl. 2. Trieste, 2000. iv+278 pp. D. Del Santo, V. Georgiev and E. Mitidieri - eds.
  6. *Liouville Theorems and Detours*, Edited by Enzo Mitidieri, Ermanno Lanconelli and Stanislav I. Pohozaev, *Nonlinear Analysis: Theory, Methods & Applications*, 70(8): 2825–3056 (2009).
  7. *Variational Analysis and Its Applications*, Edited by Enzo Mitidieri and Boris S. Mordukhovich, *Nonlinear Analysis: Theory, Methods & Applications*, 75(3): 983–1736 (2012).
  8. *In Honor of Professor V. Lashmikantham*, Edited by Shair Ahmad, Siegfried Carl and Enzo Mitidieri, *Nonlinear Analysis: Theory, Methods & Applications*, 75(12): 4383–4728 (2012).
  9. *Recent Trends in Nonlinear Partial Differential Equations I: Evolution Problems*, Edited by: James B. Serrin, Enzo L. Mitidieri, University of Trieste, Italy, and Vicentiu D. Radulescu, University of Craiova, Romania, *Contemporary Mathematics*, 2013; approx. 307 pp.
  10. *Recent Trends in Nonlinear Partial Differential Equations II: Stationary Problems*, Edited by: James B. Serrin, Enzo Mitidieri, University of Trieste, Italy, and Vicentiu D. Radulescu, University of Craiova, Romania, *Contemporary Mathematics* 2013; approx. 340 pp.

## Teaching Activity

### Undergraduate:

- Courses taught between 1980 and 2024 include: *Analisi Matematica I–II*, *Analisi Reale*, *Analisi Funzionale*, *Analisi Superiore*, *Analisi di Fourier*, etc.

### Doctoral Teaching:

- Topics: Maximal monotone operators, elliptic PDEs, Volterra equations, wave equations
- Institutions: SISSA, ICTP, University of Pisa

## PhD Supervision

- Lorenzo D'Ambrosio – SISSA PhD (2002)
- Fabio Pezzolo – University of Trieste (2022)

## Conference Participation

- Delivered numerous invited talks at international events
- Plenary speaker at the Russian Academy of Sciences (Nicol'skii 100th) and RISM Conference in memory of John F. Nash

## Editorial Roles

- Associate Editor: *Journal of Mathematical Sciences* 2026.
- <https://link.springer.com/journal/10958/editorial-board>
- Editor-in-Chief: *Nonlinear Analysis A* (2009–2019)
- Associate Editor: *Nonlinear Analysis B* (2009–2019), *Abstract and Applied Analysis*, *ISRN Mathematical Analysis*
- Associate Editor: *Abstract and Applied Analysis*, *ISRN Mathematical Analysis*
- Editor-in-Chief: *Rendiconti dell'Istituto Mat. Univ. Trieste* (1997–2003)

## Editorial & Community Service (selected)

- Guest of honor for the 2015 special collection of *Nonlinear Analysis* devoted to nonlinear PDEs; contributor and organizer in numerous conferences and workshops in nonlinear analysis and PDEs.

## Administrative Roles

- Director, Dept. of Mathematics and Informatics, University of Trieste (1997–2002)
- Research Evaluation Committee (CVR), University of Trieste (2021–2024)
- PhD Committee Member for several doctoral cycles

## Visiting Professorships

Visited institutions in the USA, Netherlands, Brazil, Chile, Spain, Finland, Russia, France, and others between 1982 and 2005.

## Representative Research Projects

### EC Human Capital and Mobility Scheme (1994–1995):

- Network on reaction-diffusion equations
- Partnered with universities in Edinburgh, Crete, Delft, Madrid, Toulouse
- Research in blow-up, maximum principles, and topological methods for PDEs

## Selected Recent Publications (last 5 years)

- *Liouville theorems of semilinear elliptic inequalities in a half-space* (with L. D'Ambrosio), Journal of Differential Equations 447 (2025) 113664.
- *Characterization of positive superharmonic functions in a half-space* (with L. D'Ambrosio), Preprint, 2025
- *A view on Liouville Theorems in PDEs, Analysis and Geometry in Metric Spaces*, Vol. 12, no. 1, 2024, pp. 20240008. With sincere affection and warm regards, this paper is dedicated to Ermanno Lanconelli on the occasion of his 80th birthday, acknowledging and celebrating his profound contributions to Mathematical Analysis.

## Research Themes and Impact (highlights)

- **Liouville-type theorems and rigidity.** Fundamental nonexistence and classification principles for entire solutions, with applications to elliptic and parabolic problems, frequently via integral identities and comparison principles.
- **A priori estimates and blow-up.** Development of methods to derive universal bounds or to exclude nontrivial solutions, including Rellich-type identities and capacity techniques; analysis of blow-up scenarios and qualitative properties.
- **Hardy–Rellich inequalities and higher-order systems.** Sharp functional inequalities and their role in existence/nonexistence and regularity theory for quasilinear and higher-order PDE systems.

## Metrics and Online Profiles

### MathSciNet:

- Author ID: 125570
- Earliest Indexed Publication 1982
- Total indexed publications 108
- Total Related Publications 9
- Total Citations 4,333 in 2,497 publications
- Unique Citing Authors 1965

### ResearchGate:

- h-index: 46
- Research Interest Score: 4,574
- Citations: 7995
- Reads : 39,251

### Recognition:

- Included in *World's Top 2% Scientists 2024* list by Stanford University

## Web References

- [https://topitalianscientists.org/tis/54219/Enzo\\_Mitidieri\\_-\\_Top\\_Italian\\_Scientist\\_in\\_Mathematics](https://topitalianscientists.org/tis/54219/Enzo_Mitidieri_-_Top_Italian_Scientist_in_Mathematics)
- <https://research.com/u/enzo-mitidieri>
- <https://www.adscientificindex.com/scientist/enzo-mitidieri/1830676>
- <https://www.triesteprima.it/formazione/universita/Units.html>
- <https://zbmath.org/authors/?ml=3&ml-1-f=any&ml-1-v=&ml-1-op=and&ml-2-f=ln&ml-2-v=Mitidieri&ml-2-op=and&ml-3-f=fn&ml-3-v=>
- Enzo Mitidieri and Stanislav I. Pokhozhaev, **A Priori Estimates and the Absence of Solutions of Nonlinear Partial Differential Equations and Inequalities**, (Russian) Tr. Mat. Inst. Steklova 234 1–384 (2001); translation in Proc. Steklov Inst. Math., no. 3 (234) 1–362 (2001). **Number of requests: 9530**
- [https://www.mathnet.ru/php/journal.phtml?jrnid=tm&wshow=statlist&option\\_lang=eng&speriod=alltime#r6](https://www.mathnet.ru/php/journal.phtml?jrnid=tm&wshow=statlist&option_lang=eng&speriod=alltime#r6)
- <https://oneresearchcommunity.com/author/orcid-0000-0001-5042-9401>

## List of Publications

1. On the strong convergence of an iterative scheme related to subdifferentials, Bollettino UMI-6, 337-339 (1982).
2. Alcune osservazioni sul comportamento asintotico di una classe di equazioni di evoluzione del secondo ordine, Quaderno Matematico n.45 (1982).
3. Asymptotic behaviour of some second order evolution equations, Nonlinear Analysis T.M.A.(6), 1245-1252 (1982).
4. Some remarks on the asymptotic behaviour of the solutions of second order evolution equations, J. Math. Analysis and Appl. (107), 211-221 (1985).
5. Standing wave solutions for a system derived from the Fitzhugh-Nagumo equations for nerve conduction (with Gene Klaasen), SIAM J. Math. Anal. (4), 74-83 (1986).
6. Asymptotic behaviour of the solutions of second order difference equations associated to monotone operators (with G. Morosanu), Numer. Functional Analysis and Optimization, 8 (3-4), 419-434 (1985/86).
7. A maximum principle for an elliptic system and application to semilinear problems, SiAM J. Math. Anal. 17, 836-849 (1986).
8. Existence for nonlinear functional differential equations (with Ioan Vrabie), Hiroshima Math. J. (17), 627-649 (1987).
9. Volterra integral equations associated with a class of nonlinear operators in Hilbert Spaces (with Mario Tosques), Annales Fac. des Sciences de Toulouse, Ser. V. N. 2, 23-40 (1987).
10. Positive solutions of some coercive anticoercive elliptic systems (with Gianni Mancini), Annales Fac. des Sciences de Toulouse - Vol. VIII, N. 3, 257-292 (1987).
11. Qualitative properties of solutions of Volterra equations in Banach Spaces (with Philippe Clément), Israel J. Math. Vol. 64, N. 1, 1-24 (1988).
12. Asymptotic behaviour of the solutions of a class of functional differential equations: Remarks on a related Volterra equation, J. Math. Analysis and Appl. (127), 423-434 (1987).

13. A class of strongly nonlinear functional differential equations (with Ioan Vrabie), *Ann. Matematica Pura e Applicata (IV) - Vol. CLI*, 125-147 (1988).
14. Nonlinear integrodifferential equations in Hilbert spaces: The variational case (with Mario Tosques), *Pitman Research Notes in Mathematics*, N. 190, 306-319 (1989).
15. Nonlinear integrodifferential equations in a Banach space (with Ioan Vrabie), *Rend. Ist. Mat. Trieste - Vol. XX - Fasc. II*, 283-299 (1989).
16. Estimates from below for the solution to a class of second order evolution equations, *Diff. and Integral Equations*, 3-N. 6, 1101-1111 (1990).
17. Maximum principles for linear elliptic systems (with Djairo G. de Figueiredo), *Rend. Ist. Mat. Trieste - Vol. XXII - Fasc. E , II*, 36-66 (1990).
18. Maximum principles for cooperative elliptic systems (with Djairo G. de Figueiredo), *C.R. Acad. Sci. Paris*, t. 310, Serie I, 49-52 (1990).
19. Differential inclusions governed by non convex perturbations of  $m$ -accretive operators (with Ioan Vrabie), *Diff. and Int. Eq. - Vol. 2, N. 4*, 525-531 (1989).
20. On the definition of critical dimension, 1-12 (unpublished manuscript) (1993).
21. Maximum principles for a class of non-cooperative elliptic systems (with Gabriella Caristi), *Delft Prog. Rep. (14)*, 33-56 (1990).
22. Further results on maximum principles for non cooperative elliptic systems (with Gabriella Caristi), *Nonlinear Analysis T.M.A. (17)*, N. 6, 547-558 (1991).
23. Positive solutions of semilinear elliptic systems (with Philippe Clément and Djairo G. de Figueiredo), *Commun. in Partial Differential Equations*, (17) (5-6), 923-940 (1992).
24. On positive supersolutions of superlinear elliptic problems (with Philippe Clément), *Quaderno Matematico n. 286* (1992).
25. A Rellich type identity and applications, *Commun. in Partial Differential Equations*, (18) (1-2), 125-151 (1993). (Rapporti interni N. 25 (1990), Università di Udine, 1-35.)
26. Positive solutions for a quasilinear system via blow-up (with Philippe Clément and Raúl Manasevich), *Comm. P.D.E*, 18, 2071-2106 (1993).
27. Blow-up of positive solutions of a non-cooperative parabolic system (with Gabriella Caristi), *Differential Integral Equations* 6 (1993), no 1, 93-110.
28. Critical curve for a non variational system, notes 1993. Unpublished manuscript (new version in Singular eigenvalue problems and critical dimensions, with Stanislav Pokhozhaev).
29. Blow-up estimates of solutions of a parabolic system (with Gabriella Caristi), *Journal of Differential Equations*, 113, N.2, 265-271 (1994).
30. Existence of a maximal solution for quasimonotone elliptic system (with Guido Sweers), *Differential and Integral Equations*, Vol. 7, N. 3-6, (1994).
31. Non existence theorems for systems of quasilinear partial differential equations (with Rob van der Vorst and Guido Sweers), *Differential and Integral Equations*, Vol. 8, N. 6, 1331-1354, (1995).
32. Nonexistence of positive solutions of systems of quasilinear differential inequalities (with Gabriella Caristi), *Ann. Univ. Ferrara, - Sez. VII - Sc. Mat. Suppl. Vol. XLI* (1995), pp. 151-165.
33. Weakly coupled elliptic systems and positivity (with Guido Sweers), *Math. Nachr.* 173, 259-286 (1995).
34. Solutions homoclines d'un système Hamiltonien non-borne et superquadratique (with Philippe Clément and Patricio Felmer), *C. R. Acad. Sci. Paris*, t. 320, Serie I, 1481-1484 (1995).
35. Blow-up estimates for a class of weakly coupled parabolic systems (with Gabriella Caristi), 1-10, (1995) (unpublished manuscript).
36. Nonexistence of positive solutions of a general class of quasilinear elliptic inequalities in unbounded domains (with Stanislav Ivanovich Pokhozhaev), 1-35, (1995) (unpublished manuscript).

37. Nonexistence of positive solutions of semilinear elliptic systems in  $\mathbb{R}^n$ , *Differential Integral Equations*, Vol. 9, N. 3, 465-479, (1996).
38. Quasilinear elliptic equations with critical exponents (with Djairo de Figueiredo and Philippe Clément), *Topological Methods in Nonlinear Analysis*, Vol. 7, 1996, 133-170.
39. On a Modified Capillary Equation (with Philippe Clément, Raúl Manasevich), *Journal of Differential Equations*, Vol. 124, No. 2, Jan 1996, pp. 343-358.
40. A priori estimates for positive solutions of semilinear elliptic systems via Hardy-Sobolev inequalities (with Philippe Clément and Djairo G. de Figueiredo), *Pitman Research Notes in Mathematics*, N. 343, 73-91 (1996).
41. Nonexistence of positive solutions of quasilinear equations (with Gabriella Caristi), *Advances in Differential Equations*, Vol. 2, N. 3, 319-359, (1997).
42. On a class of semilinear elliptic systems (with Philippe Clément), *Nonlinear Evolution Equations and Applications*, Research Institute for Mathematical Science - Kyoto (1997), pp. 132-140.
43. Homoclinic Orbits for a class of infinite dimensional Hamiltonian systems (with Philippe Clément and Patricio Felmer), *Annali della Scuola Normale Superiore di Pisa, Serie IV. Vol. XXIV. Fasc. 2* (1997), pp. 367-393.
44. Existence and Non-existence of Positive Singular Solutions for a Class of Semilinear Elliptic Systems (with Marta Garcia-Huidobro, Raul Manasevich and Cecilia Yarur), *Arch. Rational Mech. Anal.* 140 (1997), pp. 253-284.
45. Global existence of solutions and formation of singularities for a class of hyperbolic systems (with Daniele Del Santo and Vladimir Georgiev), *Geometrical optics and related topics - Progress in Partial Differential Equations*, Birkhäuser, Boston-New York, F. Colombini and N. Lerner Eds., PNLDE 32, Birkhäuser, Boston (1997), pp. 117-140.
46. Strongly indefinite systems with critical Sobolev exponents (with Joost Hulshof and Rob C.A.M. van der Vorst), *Trans. Amer. Math. Soc.* 350 (1998), pp. 2349-2365.
47. Liouville Theorems for Elliptic Inequalities and Applications (with Isabeau Birindelli), *Proc. of the Royal Society of Edinburgh*, 128 A, 1217-1247 (1998).
48. Isolated Singularities of Polyharmonic Equations (with Gabriella Caristi and Ramon Soranzo), *Atti del Seminario Matematico e Fisico dell'Università di Modena*, Suppl. al Vol. XLVI (1998), pp. 257-294.
49. Nonexistence of global solutions for a hyperbolic system: the critical case (with Daniele Del Santo), *Differential Equations*, 34 (1998), pp. 1-7.
50. The absence of Global Positive Solutions to Quasilinear Elliptic Inequalities (with Stanislav Ivanovich Pohozaev), *Doklady Mathematics*, Russian Academy of Sciences, Vol. 57, No. 2 (1998), pp. 250-253.
51. Some Existence and Non-existence results for a Homogeneous Quasilinear Problem (with Philippe Clément and Raul Manasevich), *Asymptotic Analysis* 17, (1998), pp. 13-29.
52. Existence of the Principal Eigenvalue for Cooperative Elliptic Systems in a General Domain (with Isabeau Birindelli and Guido Sweers), *Differential Equations* 35, no. 3 (1999), 325-333.
53. Nonexistence of positive solutions for quasilinear elliptic problems on  $\mathbb{R}^n$  (with Stanislav I. Pokhozhaev), *Proceedings of the Steklov Institute of Mathematics*, Vol. 227 (1999), 186-216.
54. Nonexistence of Positive Solutions for a Systems of Quasilinear Elliptic Equations and Inequalities in  $\mathbb{R}^n$  (with Stanislav Ivanovich Pokhozhaev), *Doklady Mathematics*, Russian Academy of Sciences, Vol. 59, No. 3 (1999), pp. 351-355.
55. A simple approach to Hardy inequalities, *Math. Notes* 67 (2000), 479-486, translation from *Mat. Zametki* 67 (2000), 563-572.
56. Existence of Positive Solutions for a Nonvariational Quasilinear Elliptic System (with Philippe Clément, Jacqueline Fleckinger, F. de Thélin), *Journal of Differential Equations* 166, No. 2 (2000), 455-477.

57. Regularity results for positive weak solutions of a semilinear elliptic system (with A. Boccutto), *Annali di Matematica Pura e Applicata (IV)*, Vol. 179 (2001), 125–147.
58. Asymptotic Behaviour of Solutions of  $\Delta^2 u = |x|^\sigma |u|^{p-1} u$  (with Gabriella Caristi), *Quaderni Matematici*, Università di Trieste, n.496 (2001).
59. Nonexistence of weak solutions for some degenerate elliptic and parabolic problems on  $\mathbb{R}^n$  (with Stanislav I. Pokhozhaev), *Journal of Evolution Equations* 1, Number 2 (2001), 189–220.
60. Nonexistence of weak solutions for some degenerate and singular hyperbolic problems on  $\mathbb{R}^n$  (with Stanislav I. Pokhozhaev), *Proceedings of The Steklov Institute of Mathematics*, Vol. 232 (2001), 240–259.
61. Some Generalizations of Bernstein Theorem (with Stanislav Ivanovich Pokhozhaev), *Differential Equations* 38, No. 3 (2002), 373–378.
62. Existence and a-priori Estimates for Positive Solutions of  $p$ -Laplace Systems (with Céline Azizieh and Philippe Clément), *Journal of Differential Equations* 184 (2002), 422–442.
63. Fujita type theorems for quasi-linear parabolic inequalities with nonlinear gradient (with Stanislav I. Pokhozhaev), *Doklady Mathematics*, Russian Academy of Sciences, 386, No. 2 (2002), 160–165.
64. Existence and Nonexistence of Global Solutions of Higher Order Parabolic Equations with Slow Decay Initial Data (with Gabriella Caristi), *Journal of Mathematical Analysis and Applications* 279, No. 2 (2003), 711–723.
65. On systems of singular quasilinear parabolic equations and inequalities (with Stanislav Pohozaev), *Journal of Mathematical Sciences* 114, No. 4 (2003), 1529–1546.
66. Existence of Multiple Solutions for Quasilinear Systems via Fibering Method (with Yuri Bozhkov), *Journal of Differential Equations* 190, No. 1 (2003), 239–267.
67. The positivity property of solutions of some nonlinear elliptic inequalities in  $\mathbb{R}^n$  (with Stanislav I. Pokhozhaev), (preprint September 11, 2001). *Doklady Mathematics*, Russian Academy of Sciences, Vol. 393, No. 2 (2003), pp. 159–164.
68. Towards a unified approach to nonexistence of solutions for a class of differential inequalities (with Stanislav I. Pokhozhaev), *Milan Journal of Mathematics* 72 (2004), 129–162.
69. On some integral inequalities associated to Riesz potentials (with Stanislav Pokhozhaev), *Doklady Mathematics*, Russian Academy of Sciences, Vol. 70, No. 1 (2004), 623–627.
70. Hardy inequalities with optimal constants and remainder terms (with Filippo Gazzola and Hans-Christoph Grunau), *Transactions of the American Mathematical Society* 356, No. 6 (2004), 2149–2168.
71. Liouville type theorems for certain nonlinear nonlocal problems (with Stanislav I. Pokhozhaev), *Doklady Mathematics*, Russian Academy of Sciences 70, No. 3 (2004), 954–958.
72. Liouville Theorems for some Classes of Nonlinear Non-local Problems (with Stanislav Pokhozhaev), *Proceedings of the Steklov Institute of Mathematics*, Volume 248 (2005), pp. 164–185.
73. A Semilinear Fourth Order Elliptic Problem with Exponential Nonlinearity (with Gianni Arioli, Filippo Gazzola, Hans-Christoph Grunau), *SIAM Journal on Mathematical Analysis* 36, No. 4 (2005), pp. 1226–1258.
74. Existence of Multiple Solutions for Quasilinear Equations via Fibering Method (with Yuri Bozhkov), *Contributions to Nonlinear Analysis, Progr. Nonlinear Differential Equations Appl.*, 66, Birkhäuser Verlag, Basel (2006), 115–134.
75. Representation formulae and inequalities for solutions of a class of second order partial differential equations (with Lorenzo D’Ambrosio and Stanislav I. Pokhozhaev), *Transactions of the American Mathematical Society* 358 (2006), 893–910.
76. Harnack inequality and applications to solutions of biharmonic equations (with Gabriella Caristi), *Operator Theory: Advances and Applications* 168 (2006), 1–26, Birkhäuser Verlag, Basel.
77. Positivity preserving property for a class of biharmonic elliptic problems (with Elvise Berchio and Filippo Gazzola), *Journal of Differential Equations* 228, No. 1 (2006), 1–23.

78. A property of the mean of nonnegative functions (with Gabriella Caristi and Lorenzo D'Ambrosio), *Quaderno Matematico Università di Trieste* 1–2 (2006).
79. The Noether approach to Pokhozhaev's Identities (with Yuri Bozhkov), *Mediterranean Journal of Mathematics* 4 (2007), 383–405.
80. Lie Symmetries and Criticality of Semilinear Differential Systems (with Yuri Bozhkov), *Symmetry, Integrability and Geometry: Methods and Applications* 3 (2007), 17 pages.
81. Liouville Theorems for some Nonlinear Inequalities (with Gabriella Caristi and Lorenzo D'Ambrosio), *Proceedings of the Steklov Institute of Mathematics*, 260 (2008), 90–111.
82. Positivity property of solutions of some quasilinear elliptic inequalities (with Lorenzo D'Ambrosio), *Functional Analysis and Evolution Equations, The Günter Lumer Volume*, Birkhäuser (2008), 147–156.
83. Representation formulae for solutions to some classes of higher order systems and related Liouville theorems (with Gabriella Caristi and Lorenzo D'Ambrosio), *Milan Journal of Mathematics* 76, No. 1 (2008), 27–67.
84. Local estimates and Liouville Theorems for a class of Quasilinear Inequalities (with Gabriella Caristi and Stanislav I. Pokhozhaev), *Doklady Mathematics, Russian Academy of Sciences*, 77, No. 1 (2008), 85–89.
85. Conformal Killing Vector Fields and Rellich type identities on Riemannian Manifolds I (with Yuri Bozhkov), *Lecture Notes of Seminario Interdisciplinare di Matematica* 7 (2008), pp. 65–80.
86. Capacity induced by a nonlinear operator and applications (with Victor A. Galaktionov and Stanislav I. Pokhozhaev), *Georgian Mathematical Journal* 15 (2008), No. 3, 1–16.
87. Existence and nonexistence of a global solution to the Kuramoto–Sivashinsky equation (with Victor A. Galaktionov and Stanislav I. Pokhozhaev), *Doklady Mathematics, Russian Academy of Sciences*, 419, No. 4 (2008).
88. Some Liouville Theorems for Quasilinear Elliptic inequalities (with G. Caristi and S. I. Pokhozhaev), *Doklady Mathematics, Russian Academy of Sciences* 7741 (2009), 741–747.
89. Variational approach to complicated similarity solutions of higher order evolution PDEs (with Victor A. Galaktionov and Stanislav I. Pokhozhaev), *Sobolev Spaces in Mathematics II, Vol. 9* (2009), 147–197.
90. On Global solutions and blow-up for Kuramoto–Sivashinsky type models and well-posed Burnett equations (with Victor A. Galaktionov and Stanislav I. Pokhozhaev), *Nonlinear Analysis: Theory, Methods and Applications* 70, Issue 8 (2009), 2930–2952.
91. Lifespan Estimates for Solutions of Some Evolution Inequalities (with Stanislav I. Pokhozhaev), *Differential Equations*, 45, No. 10, 1473–1484 (2009).
92. Variational approach to complicated similarity solutions of higher-order nonlinear PDEs. I (with Victor A. Galaktionov and Stanislav I. Pokhozhaev) arXiv:0902.1425, 1–41 pages (2009).
93. A priori estimates, positivity results, and nonexistence theorems for quasilinear degenerate elliptic inequalities (with Lorenzo D'Ambrosio), *Advances in Mathematics*, 224, Issue 3, (2010), 967–1020.
94. Nonnegative solutions of some quasilinear elliptic inequalities and applications (with Lorenzo D'Ambrosio), *SB MATH*, 201 (6), (2010) 855–871.
95. Nonlinear capacity methods and applications (with Lorenzo D'Ambrosio and Stanislav Pohozaev), 1–180 (2011).
96. Variational approach to complicated similarity solutions of higher-order nonlinear PDEs II (with Victor A. Galaktionov and Stanislav I. Pokhozhaev). *Nonlinear Analysis: Real World Applications*, 12 (2011) 2435–2466.
97. Conformal Killing Vector Fields and Rellich type identities on Riemannian Manifolds II (with Yuri Bozhkov), *Mediterr. J. Math.* 9 (2012), 1–20.
98. Singular Eigenvalue Problems and critical dimensions (with Stanislav I. Pokhozhaev), (unpublished manuscript 1996).

99. Elliptic problems in a half space, representation of solutions and nonexistence theorems (with Lorenzo D'Ambrosio), (unpublished manuscript 2012).
100. Lane-Emden systems, Selected Papers of James Serrin, Vol. 1. Contemporary Mathematicians. pp. 785–787. (Patrizia Pucci, Vicentiu D. Radulescu, Hans Weinberger Eds.), Springer Basel 2014.
101. A priori estimates and reduction principles for quasilinear elliptic problems and applications (with Lorenzo D'Ambrosio). *Advances in Differential Equations*, 17, Numbers 9–10, (2012), 935–1000.
102. Classification of global and blow-up sign-changing solutions of a semilinear heat equation in the subcritical Fujita range (with Victor A. Galaktionov and Stanislav I. Pokhozhaev), *Advanced Nonlinear Studies* 14 (2014) 1–31.
103. Global Sign-changing Solutions of Higher Order Semilinear Heat Equations in the Subcritical Fujita Range (with Victor A. Galaktionov and Stanislav I. Pohozaev), *Advanced Nonlinear Studies* 12 (2012) 569–596.
104. Uniqueness of  $\sigma$ -regular solutions of quasilinear elliptic equations (with Lorenzo D'Ambrosio). arXiv:1211.0623 [math.AP], Submitted on 3 Nov 2012.
105. Lorenzo D'Ambrosio, Alberto Farina, Enzo Mitidieri and James Serrin, Comparison principle, uniqueness and symmetry of entire solutions of quasilinear elliptic equations and inequalities, *Nonlinear Analysis* 90 (2013) 135–158.
106. Liouville theorems for elliptic systems and applications (with Lorenzo D'Ambrosio), *Journal of Mathematical Analysis and Applications*, 413, 1, (2014) 121–138.
107. Entire solutions of quasilinear elliptic systems on Carnot groups (with Lorenzo D'Ambrosio), *Proceedings of the Steklov Institute of Mathematics*, 283 (2013), 3–19.
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*This document has been compiled to respectfully reflect the professional accomplishments of  
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