

Curriculum vitae of Francesco Altomare

Francesco Altomare was born on May 18th, 1951, in Giovinazzo (Bari, Italy). He graduated in Mathematics from the University of Bari in 1975. He was a senior research fellow from 1975 until 1978 at the Institute of Mathematical Analysis of the University of Bari. From 1978 until 1985 and then until 1987 he has been assistant professor and associated professor at the Faculty of Sciences of the University of Bari. He became full professor at the Faculty of Sciences of the University of Basilicata (Potenza) in 1987 and in 1990 he has held a professorship at the University of Bari where he is currently employed.

He served as

- Director of the Institute of Mathematics at the University of Basilicata from 1987 to 1990.
- Director of the Graduate School in Mathematics at the University of Bari from 1993 to 1995.
- Head of the Interuniversity Department of Mathematics of the University and the Polytechnic of Bari from 1997 to 1999 .
- Coordinator of the Ph.D. School in Mathematics of the University of Bari from 1999 to 2003.
- Head of the Department of Mathematics of the University of Bari from 2012 to 2015.
- Member of the Academic Senate of the University of Bari from 2012 to 2018.
- Member of the Scientific Committee of Italian Mathematical Union from 2012 to 2015.

He is member of the Italian Mathematical Union as well as of the European Mathematical Society.

He has carried out various academic and scientific assignments at several Italian universities as well as at the Italian Mathematical Union

Research activities and Mathematics popularization

The main areas of researches as well as of the scientific interests of Francesco Altomare are

- Real and Functional Analysis (Choquet representation theory, Choquet boundaries, continuous function spaces, function algebras and Banach algebras, locally convex vector lattices, positive linear forms and applications to abstract Potential Theory and Harmonic Analysis.
- Operator Theory and Evolution Equations (Positive operators, semigroups of operators, differential operators and applications to evolution equations)

- Approximation Theory (Korovkin-type approximation theory, positive approximation processes, approximation of semigroups by means of positive operators).

The main results of the above-mentioned researches are documented in more than 90 papers published in scientific journals, conference proceedings and special issues as well as in the monographs

- Korovkin-type Approximation Theory and its Applications (jointly with M. Campiti), de Gruyter Series Studies in Mathematics, 17, W. de Gruyter & Co. Publ. Comp., Berlin, New York, 1994. MR 95g:41001.
- Korovkin-type Theorems and Approximation by Positive Linear Operators, Surveys in Approximation Theory, Vol. 5, 2010, 92-164, free available online at <http://www.math.technion.ac.il/sat/papers/13/>, ISSN 1555-578X
- Markov Operators, Positive Semigroups and Approximation Processes (jointly with M. Cappelletti Montano, V. Leonessa and I. Raşa), de Gruyter Studies in Mathematics, 61, Walter de Gruyter GmbH, Berlin/Munich/Boston, 2014, ISBN 978-3-11-037274-8.

He is also involved in giving several popular conferences on Mathematics and its links with other cultural fields, addressed to students and teachers of high secondary schools.

Visiting activities

Francesco Altomare was a research visiting at the Universities of Paris VI (1980 and 1981), Tübingen(1983) and Münster (1985). In 1985 he also awarded a NATO research grant. On 2004 he spent a research period at the Mathematical Institute of Oberwolfach under the RiP program.

He was invited to deliver lectures and postgraduate short courses as well as to develop joint researches at several Italian and foreign universities (Napoli, Lecce, Cosenza, Potenza, Roma, Milano, Bologna, Trieste, Salerno, Palermo, Perugia, Sofia, Annaba, Erlangen, Konya, Passau, Valencia, Praga, Paseky, Siegen, Vienna, Baku).

Conferences

He also participated in about sixty international meetings as invited speaker (Italy, Germany, U.S.A., Brasil, Rumania, Spain, Hungary, Czech Republic, Russia, Taiwan, Austria, Japan, Tunisia, Turkey, Azerbaijan). Among the more recent ones we quote:

- 1) International Conference on Mathematical Analysis and its Applications, Kaohsiung (Taiwan), 17-21 Gennaio, 2000 (Transition semigroups on weighted function spaces).
- 2) Colloquium on Analysis, Wien, March 10-11 , 2000, Lototsky – Schnabl operators and Feller Semigroups).

- 3) 3rd International Conference on Differential Equations in Banach Spaces, Bologna, July 3-7, 2000 (Some remarks on second order differential operators on weighted function spaces).
- 4) TULKA Conference on Semigroups and Evolution Equations, Blaubeuren, Germany, June 13-17, 2001 (On a class of evolution equations of interest in Mathematical Finance).
- 5) 1st Intern. Workshop on Functional Analytic Methods in Economics and Finance, Diamante (CS), June 28-30, 2001 (Degenerate evolution problems and related Markov processes occurring in Mathematical Finance).
- 6) Convegno INDAM su "Evolution equations and semigroups", Cortona, 7-12 aprile 2002, (Positive semigroups on weighted spaces of continuous functions and Markov processes).
- 7) T. Popoviciu Itinerant Seminar on Functional Equations, Approximation and Convexity, May 22-26, 2002, Cluj-Napoca, Romania, (Methods of measure theory for approximation problems by positive linear operators).
- 8) 5th Congress of Romanian Mathematicians, June 22-28, 2003, Pitești, Romania (Affine projections on adapted subalgebras).
- 9) 4th International Conference on Constructive Approximation, Witten – Bommerholz, Germany, 15 – 20 febbraio, 2004, (On some simple methods to construct positive approximation processes satisfying prescribed asymptotic formulae).
- 10) Fejér – Riesz Conference, Eger, Hungary, June 8 – 14, 2005, (Locally Convex Riesz Spaces and generalized affine functions).
- 11) 2nd International Workshop on Functional Analysis Methods in Economics and Finance, Cetraro (CS), Italy, July 7-9, 2005, (Positive operators and initial-boundary problems associated with the Black-Scholes equation).
- 12) International Conference on Numerical Analysis and Approximation Theory, Cluj-Napoca, Romania, July 5 – 8, 2006 (Continuous selections of Borel measures and positive approximation processes).
- 13) 2nd International Symposium on Banach and Function Spaces, Kitakyushu, Japan, September 14 – 17, 2006 (On a class of vector lattices of functions spaces and related approximation/density problems).
- 14) Autumn Congress of the Mathematical Society of Japan 2006, Osaka, Japan, September 19 – 22, 2006 (Positive operators associated with continuous selections of Borel measures and their limit Feller semigroups).

- 15) VIII International Meeting on Approximation Theory, Ubeda, Spain, November 7 – 11, 2007 (Asymptotic formulae for Bernstein operators and for other classes of positive linear operators).
- 16) Functional Analysis: Methods and Applications, FAMA 2008, Amantea, Cosenza, Italy, June 4 – 7, 2008 (Asymptotic formulae for positive linear operators and smoothness).
- 17) Conferenze Scientifiche di Analisi Matematica. Omaggio a Calogero Vinti. Perugia, 13 dicembre 2008. (Operatori ellittici degeneri, semigrupperi di Feller e loro approssimazione tramite operatori positivi).
- 18) 1st Jaen Conference on Approximation Theory, Computer Aided Geometric Design, Numerical Methods and Applications, Ubeda, Spain, July 4-9, 2010 (Asymptotic formulae and positive semigroups of operators).
- 19) 2nd International Conference on Numerical Analysis and Approximation Theory (NAAT 2010), Cluj-Napoca, Romania, September 23-26, 2010 (Approximation problems by positive linear operators in function spaces on unbounded domains).
- 20) International Conference on Evolution Equations and Operator Semigroups, Bari, Italy, July 14 – 15, 2011 (Lipschitz contractions, unique ergodicity and asymptotics of Markov semigroups).
- 21) 4th International Symposium on Banach and Function Spaces, Kitakyushu, Japan, September 12 – 15, 2012 (On some convergence criteria for nets of positive operators on continuous function spaces).
- 22) Positivity VII, Leiden, The Netherlands, July 22 – 26, 2013 (On positive linear operators preserving polynomials)
- 23) International Workshop on Approximation Theory and Applications, Riferredo, Potenza, Italy, September 12 – 13, 2013 (Bernstein-Schnabl operators: new achievements and perspectives).
- 24) Harmonic Meeting, dedicated to Professor Ivan Netuka, Prague, Czech Republic, June 25 – 29, 2014 (Differential operators, positive semigroups and approximation problems related to positive operators).
- 25) 3rd International Conference on Numerical Analysis and Approximation Theory (NAAT 2014), Cluj-Napoca, Romania, September 17 - 20, 2014 (Bernstein- Schnabl operators, approximation problems and initial-lateral value problems for diffusion equations on $[0,1]$).

26) New Trends in Numerical Analysis (NETNA 2015, Falerna, Italy, June 18 – 21, 2015 (Initial-boundary value problems for diffusion equations and approximation by positive linear operators)

27) The Theory of Function Approximation and Related Tasks of Analysis, P.P. Korovkin Centennial Conference, Kaluga, Russia, October 9-10, 2015 (Positive operators and approximation problems for continuous functions and for solutions to PDE of evolution type).

28) 15th International Conference on Applied Mathematics and Computer Sciences (ICAMS 2016), Cluj-Napoca, Romania, July 5 – 7, 2016 (On a class of initial-boundary differential problems on $[0,1]$ related to generalized Kantorovich operators).

29) V International Conference on Operator Theory, Hammamet, Tunisia, April 30 -- May 3rd, 2018 (Positive operators, Feller semigroups and evolution equations)

30) International Conference on Mathematics, Minisymposium on Approximation Theory, Istanbul, Turkey, July 3 - 6, 2018 (Iterates of Positive Linear Operators and Related Convergence Problems)

31) Selcuc University, Konya, Turkey, July 6, 2018 (Initial-boundary value differential problems for diffusion equations on $[0,1]$ and approximation by positive linear operators).

32) IV International Conference on Numerical Analysis and Approximation Theory, Cluj-Napoca, Romania, September 6 -- 9, 2018 (Positive Approximation Processes and Initial-Boundary Value Differential Problems)

33) 8th International Eurasian Conference on Mathematical Sciences and Applications, Baku, Azerbaijan, August 27 – 30, 2019 (Differential Operators, Markov Semigroups and Positive Approximation Processes).

Master thesis, research fellows and Ph.D. students

He was the supervisor of about seventy master thesis.

He supervised the scientific activities of seven undergraduate and postgraduate research fellows and the following six Ph.D. students:

1. Sabrina Diomedede, University of Napoli, 1998 – 2002.

Ph.D. thesis: Positive approximation processes on continuous function spaces.

2. Mirella Cappelletti Montano, University of Bari, 2000 – 2003.

Ph.D. thesis: Approximation problems for positive operators on adapted spaces.

3. Rachida Amiar, University of Annaba (Algeria), 1998 – 2005.

Ph.D. thesis Méthode des opérateurs positifs pour l'étude des equations de diffusion.

4. Vita Leonessa, University of Bari, 2002 – 2005.

Ph.D. thesis: Positive operators associated with continuous selections of Borel measures.

5. Sabina Milella, University of Bari, 2002 – 2005.

Ph.D. thesis: Evolution equations on real intervals, semigroups and their approximation.

6. Graziana Musceo, University of Bari , 2003 – 2006.

Ph.D. thesis: Positive semigroups in weighted spaces of continuous functions.

Journals editorial activities

He contributes to Mathematical Reviews as a reviewer and acts as a referee for several national and international journals.

Since 2004 he is the founding Editor-in-Chief of the international journal Mediterranean Journal of Mathematics.

He is a member of the Editorial Board of the following journals:

- Conferenze del Seminario di Matematica dell'Università di Bari (1990 - 2003).
- Revue d'Analyse Numérique et de Théorie de l'Approximation (Romania) (since 1998).
- Mathematical Reports (Romania) (2000 - 2012).
- Journal of Applied Functional Analysis (U.S.A.) (2004 - 2015),
- Journal of Interdisciplinary Mathematics (India) (2004 - 2018),
- Numerical Functional Analysis and Optimization (U.S.A.) (since 2008),
- Bollettino dell'Unione Matematica Italiana, (2008 - 2012).
- Studia Mathematica Universitatis Babeş-Bolyai (Romania) (since 2009).
- Demonstratio Mathematica (Polonia) (since 2017).
- Constructive Mathematical Analysis (Turkey) (since 2018).

Research centers

Francesco Altomare was member of the Scientific Committee of the Center for Studies on Functional Analysis and Approximation Theory (University of Basilicata - Potenza) and on the Scientific Committee of the Institute for Researches on Applied Mathematics of the National Council of Researches (Bari).

Research projects

He is or has been the co-ordinator of the research projects

- “Topological structures and functional analytic methods in operator theory” financed by the University of Bari from the year 1994 until now.
- an interuniversity research project “Operator Methods for Evolution Equations and Approximation Problems” between the Universities of Bari and Lecce and the Polytechnic of Bari financed by the National Group for Mathematical Analysis, Probability and their Applications for the year 2002.
- “Positive Operators, Semigroups and Applications to Evolution Equations and Approximation Problems” financed by the University of Bari for the years 2003-2004,
- a national research project “Operator theory, Semigroups and Applications to Evolution Equations and Approximation Problems” financed by the Italian Ministry for Education for the years 2003/04 – 2004/05 (PRIN-COFIN 2003).
- the project “Positive Operators, Evolution Equations and Approximation Problems” financed by the Italian Ministry for Education for the years 2003/04 – 2004/05 (FIRB 2004).

Conferences Organization

He contributed to the organization of the following international meetings and was co-editor of the corresponding proceedings:

- “Trends in Functional Analysis and Approximation Theory”, Acquafredda di Maratea (September 11-16, 1989).
- “Recenti sviluppi in Analisi Matematica e sue Applicazioni “, dedicated to Prof. Aquaro on occasion of his 70^o birthday, Bari (November 8-9, 1990).
- “ 2nd International Conference on Functional Analysis and Approximation Theory “, Acquafredda di Maratea (PZ), (September 14-19, 1992).
- “ 3rd International Conference on Functional Analysis and Approximation Theory “, Acquafredda di Maratea (PZ), (September 23-28, 1996).
- “ 4th International Conference on Functional Analysis and Approximation Theory “, Acquafredda di Maratea (PZ), (September 22-28, 2000).
- Special Session on Semigroups of Operators and Applications during the 1st Joint International Meeting AMS-UMI Pisa, Italy - June 12-16, 2002
- International Summer School on “Operator Methods for Evolution Equations and Approximation Problems”, Monopoli (Bari-Italy), September 15 – 22, 2002.
- “ 5th International Conference on Functional Analysis and Approximation Theory “, Acquafredda di Maratea (PZ), (June 16 – 23, 2004).
- International Conference for the Presentation of Mediterranean Journal of Mathematics, Bari, 21 – 22 gennaio 2005.

- International Conference on Functional Analysis and Operator Theory, Mondello (Palermo), 19-24 Sept. 2005
- He has been the President of the Organizing Committee of the XVIII Congress of the Italian Mathematical Union, Bari, 24 – 29 settembre 2007.
- 6th International Conference on Functional Analysis and Approximation Theory , Acquafredda di Maratea (PZ), (September 24 –30, 2009).

Editorial activities

Mathematical Journals

Since 2004 he is the Editor-in-Chief Mediterranean Journal of Mathematics, published by Birkhäuser Verlag, Basel,

Published volumes: Six issues for year.

Proceedings

[1] F.Altomare et al. Eds, Trends in Functional Analysis and Approximation Theory, Proceedings of the Conference held in Acquafredda di Maratea, September 10-15, 1989, Atti del Seminario Matematico e Fisico dell'Università di Modena, Monograf, Bologna 1991. MR 92f: 00028.

[2] F.Altomare and G.Mastroianni Eds., Functional Analysis and Approximation Theory II, Proceedings of the Second International Conference on Functional Analysis and Approximation Theory held in Acquafredda di Maratea (Potenza), September 14-19, 1992, Rend. Circ. Mat. Palermo, Serie II, Suppl. 33, 1993, Voll. I and II.

[3] F.Altomare et al. Eds., Functional Analysis and Approximation Theory III, Proceedings of the 3rd International Conference on Functional Analysis and Approximation Theory held in Acquafredda di Maratea (Potenza), September 23 - 28, 1996, Suppl. Rend. Circ. Mat. Palermo, n. 52 (1998), Voll. I and II.

[4] F.Altomare et al. Eds., Functional Analysis and Approximation Theory IV, Proceedings of the 4th International Conference on Functional Analysis and Approximation Theory held in Acquafredda di Maratea (Potenza), September 22 - 28, 2000, Rend. Circ. Mat. Palermo, Serie II, Suppl. 68(2002), Voll. I and II.

[5] F. Altomare et al. Eds., Operator Methods for Evolution Equations and Approximation Problems, Proceedings of the International Summer School on Operator Methods for Evolution Equations and Approximation Problems, Monopoli – Italy, September 15-22, 2002, Aracne Editrice, Roma, 2003.

- [6] F. Altomare et al. Eds., *Functional Analysis and Approximation Theory V*, Proceedings of the 5th International Conference on Functional Analysis and Approximation Theory held in Acquafredda di Maratea (Potenza), June 16 – 23, 2004, *Rend. Circ. Mat. Palermo, Serie II, Suppl.* 76(2005), pp. 1 – 700.
- [7] International Mediterranean Congress of Mathematics Almeria 2005, Almeria, Spain, June 6-10, 2005, *Mediterr. J. of Math.*, Vol. 3(2006), no2, pp. 119 – 345.
- [8] A special Issue dedicated to the memory of Professor Aldo Cossu (1922 – 2005), *Mediterr. J. of Math.*, Vol. 3(2006), no. 3-4, pp. 347 – 592.
- [9] F. Altomare, 18th Congress of Unione Matematica Italiana (Bari, September 24 – 29, 2007), *UMI Proceedings Vol. 3*, pp. 1 – 518, Unione Matematica Italiana, Bologna, 2008.
- [10] F. Altomare et al. Eds., *Functional Analysis and Approximation Theory VI*, Proceedings of the 6th International Conference on Functional Analysis and Approximation Theory held in Acquafredda di Maratea (Potenza), September 24 – 30, 2009, *Rend. Circ. Mat. Palermo, Serie II, Suppl.* 82(2010), pp. 1 – 460.

Publications list of Francesco Altomare

Monographs

[1] F. Altomare and M. Campiti, *Korovkin-type Approximation Theory and its Applications*, de Gruyter Series Studies in Mathematics, 17, W. de Gruyter & Co. Publ. Comp., Berlin, New York, 1994. MR 95g:41001.

[2] F. Altomare, *Korovkin-type Theorems and Approximation by Positive Linear Operators*, Surveys in Approximation Theory, Vol. 5, 2010, 92-164, free available online at <http://www.math.technion.ac.il/sat/papers/13/>, ISSN 1555-578X

[3] F. Altomare, M. Cappelletti Montano, V. Leonessa and I. Raşa, *Markov Operators, Positive Semigroups and Approximation Processes*" de Gruyter Studies in Mathematics, 61, Walter de Gruyter GmbH, Berlin/Munich/Boston, 2014, ISBN 978-3-11-037274-8..

Research articles

1977

[1] Proiettori positivi, famiglie risolventi e problema di Dirichlet, *Ricerche di Matematica*, Vol. XXXVI, 1977, fasc. 1°, 63-78. MR 58 # 30099

1978

[2] Operatori di Lion generalizzati e famiglie risolventi, *Boll. U.M.I.* in (5), 15-B (1978), 60-79.

[3] Operatori di Lion sul prodotto di spazi compatti, semigruppì di operatori positivi e problema di Dirichlet, *Ricerche di Matematica*, Vol. XXVIII, 1978, fasc. 1°, 33-58. MR 80d: 47048

1979

[4] Theoremes de convergence de type Korovkin relativement a une applications lineaire positive, *Boll. U.M.I.* (5) 16-B (1979).MR 81d: 41028.

1980

[5] Teoremi di approssimazione di tipo Korovkin in spazi di funzioni, *Rendiconti di Matematica*, (3) 1980 Vol. 13, Serie VI, 409-429. MR 82h: 41029.

[6] Su alcuni aspetti della teoria dell'approssimazione di tipo Korovkin, *Quaderni dell'Istituto di Analisi Matematica dell'Università di Bari*, 1980.

[7] Quelques remarques sur les ensembles de Korovkin dans les espaces des fonctions continues complexes, *Seminaire Initiation a l'Analyse*, 20e année, 1980/81, n. 4, p. 12. MR 83j: 41026

1981

[8] Frontières abstraites et convergence de familles filtrées de formes linéaires sur les algèbres de Banach commutatives, *Séminaire Initiation a l'Analyse* (G. Choquet, M. Rogalski, J. Saint Raimond), 21e Année, 1981/82, n. 6, 16 p. ZBL 514-43032

1982

[9] (with C. Boccaccio) On Korovkin-type theorems in spaces of continuous complex valued functions, *Boll. U.M.I.* (6) 1-B (1982), 75-86. MR 83j: 41028.

[10] On the Korovkin approximation theory in commutative Banach algebras, *Rendiconti di Matematica*, (4) 1982, Vol. 2, Serie VII, 755-767. MR 84g: 41019.

1983

[11] (with R. Nagel) Semigrupperi di operatori positivi, *Quaderni del Dipartimento di Matematica dell'Università di Bari*, n. 2, 1983.

1984

[12] On the universal convergence sets, *Annali di Matematica Pura Appl.*, (IV) 1984, Vol. CXXXVIII, pp. 223-243. MR 86h: 41024.

[13] Korovkin closures in spaces of continuous affine functions, *Semesterbericht Funktional Analysis*, Tübingen, Winter sem. 84/85.

1985

[14] Sur quelques problèmes de probabilités du type aiguille de Buffon, *Pub. Inst. Stat. Univ.* 30(1985), no. 1-2, 1-14.

1986

[15] Korovkin closures in Banach algebras, *Operator Theory: Advances and Applications*, Vol. 17, 35-42, Birkhauser Verlag, Basel, 1986. MR 88g: 41019.

1987

[16] Nets of positive operators in spaces of continuous affine functions, *Boll. Un. Mat. Ital.* (7) 1-B (1987), 217-233. MR 88k: 46024.

[17] Korovkin-type theorems for positive functionals in spaces of continuous affine functions, *Rend. Circ. Mat. Palermo* (2) 36 (1987), 167-181. MR 90c: 46035.

[18] Approximation of finitely defined operators in function spaces, *Note Mat.* 7 (1987), 211-229. MR 90i: 47029.

1989

[19] Positive linear forms and their determining subspaces, *Ann. Math. Pura Appl.* 154 (4) (1989), 243-258. MR 91d: 46003.

[20] Limit semigroups of Bernstein-Schnabl operators associated with positive projections, *Ann. Sc. Norm. Sup. Pisa, Serie IV*, (16) 2 (1989), 259-279. MR 91a: 47036.

[21] (with I. Raşa) Approximation by positive operators in the space $C^{(p)}([a,b])$, *Anal. Numér. Théor. Approx.* 18, 1 (1989), 1-11. MR 91i: 41018.

[22] On a sequence of Bernstein-Schnabl operators defined on a cylinder, *Approximation Theory VI: Volume 1*, C.K. Chui, L.L. Schumaker and J.D. Wards (eds.), pp. 5-8, Academic Press. N.Y., 1989.

[23] (with M. Campiti) A bibliography on the Korovkin type Approximation Theory (1952-1987), *Functional Analysis and Approximation*, P.L. Papini Ed., pp. 34-79, Pitagora Editrice, Bologna 1989. MR 90m: 41001.

1991

[24] Convergence subspaces associated with discrete measures, *Atti Sem. Mat. Fis. Univ. Modena*, 39 (1991), 473-486. MR 93 c: 28012.

[25] Positive projections, approximation processes and degenerate diffusion equations, *Atti del Convegno "Recenti sviluppi in Analisi Matematica e sue applicazioni"*, dedicato al Prof. G. Aquaro in occasione del suo 70° compleanno, Bari, 8-9 Novembre 1990, *Conf. Sem. Mat. Univ. Bari*, 241 (1991), 43-68. MR 93i: 41015.

[26] Lototsky-Schnabl operators on the unit interval, *C.R.Acad.Sci.Paris*, t.313, Serie I, p.371-375, 1991, MR 92j: 41035.

[27] On some approximation processes and their associated parabolic problems, *Rend. Sem. Mat. Fis. Univ. Milano*, 59(1991), 231-255. (1994).

1992

[28] Lototsky-Schnabl operators on the unit interval and degenerate diffusion equations, in: *Progress in Functional Analysis* (K.D.Bierstedt, J.Bonet, J.Horvath and M.Maestre Eds.), *Proceedings of the International Functional Analysis Meeting on the occasion of the 60th birthday of Professor M.Valdivia*, Peniscola, Spain, 22-27

October ,1990, North -Holland Math. Studies 170, pp. 259-277, North-Holland Publishing Co., Amsterdam,1992. MR 93e: 41034.

[29] Lototsky-Schnabl operators on compact convex sets and their associated limit semigroup, Mh. Math., 114, (1992), 1-13. MR 94c: 47044.

[30] (with S. Romanelli) On some classes of Lototsky-Schnabl operators, Note Mat. 12 (1992), 1-13.

1994

[31] Approximation theory and evolution equations, Proceedings of the meeting "Swabian-Apulian meeting on operator semigroups and evolution equations", Ruvo di Puglia (Italy), March 28 - April 2, 1994, Conf. Sem. Mat. Univ. Bari, 258(1994), 1-26.

1995

[32] Approximation theory methods for the study of diffusion equations, Approximation Theory (Witten, 1995), 9 - 26, Math. Res., 86, Akademie - Verlag, Berlin, 1995. MR 96m:41032.

1996

[33] (with I. Carbone) On a new sequence of positive linear operators on unbounded intervals, Proceedings of the Workshop "Functional Analysis: Methods and Applications" (Cosenza, 1995) Rend. Circ. Mat. Palermo (2) Suppl. No. 40 (1996),23-36. MR 97g:41037.

1997

[34] (with A. Attalienti) Forward diffusion equations and positive operators, Math. Z. 225 (1997), 211 -229. MR 98i:41029.

[35] (with I. Carbone) On some degenerate differential operators on weighted function spaces, J. Math. Anal. Appl. 213(1997), 308 - 333. MR 98i:47036

[36] On some sequences of positive linear operators on unbounded intervals, Approximation and Optimization, Vol.1 (Cluj - Napoca, 1996) 1 - 16, Transilvania, Cluj-Napoca, 1997. MR 98k:41040.

1998

[37] (with I. Raşa) Towards a characterization of a class of differential operators associated with positive projection, Atti Sem. Mat. Fis. Univ. Modena, Supplemento al n. XLVI, (1998), 3-38. MR 99h:35072.

[38] (with I. Raşa) On a Class of Differential Operators Associated with Positive Projections, *Rend. Circ. Mat. Palermo* (2) Suppl. 56(1998), 79 - 89.

1999

[39] (with I. Raşa) Feller Semigroups, Bernstein - type Operators and Generalized Convexity Associated with Positive Projections, *New Developments in Approximation Theory* (Dortmund 1998), 9-32, *Internat. Ser. Numer. Math.*, 132, Birkhauser, Basel, 1999. MR 2000m:41036

[40] (with E. Mangino) On a generalization of Baskakov operators, *Rev. Roumaine Math. Pures Appl.*, 44(1999), 5-6, 683-705. MR 2002c: 41033.

2000

[41] Degenerate evolution equations on weighted function spaces, Markov processes and positive operators, *Séminaire de la Théorie de la Meilleure Approximation, Convexité et Optimization, 1960 – 2000*, Editura SRIMA, Cluj-Napoca, Romania, 2000, pp.29-58.

2001

[42] (with E. Mangino) On a class of elliptic - parabolic equations on unbounded intervals, *Positivity*, 5(2001), 239-257. MR 2002d: 35082.

[43] (with I. Carbone) Markov processes and diffusion equations on unbounded intervals, *Taiwanese J. of Math.*, 5 (2001), 1, 141-167. MR 2001m: 60171.

[44] (with S. Diomede) Contractive Korovkin subsets in weighted spaces of continuous functions, *Rend. Circ. Mat. Palermo, Serie II*, **50** (2001), pp. 547-568. MR 2002j:41021.

2002

[45] (with A. Attalienti) Degenerate evolution equations in weighted continuous function spaces, Markov processes and the Black-Scholes equation - Part I, *Result. Math.* 42(2002), 193-211. MR2003k :34103

[46] (with A. Attalienti) Degenerate evolution equations in weighted continuous function spaces, Markov processes and the Black-Scholes equation - Part II, *Result. Math.* 42(2002), 212-228. MR 2003k:34104

[47] (with R. Amiar) Asymptotic formulae for positive linear operators, *Mathematica Balkanica, New Series*, 16(2002), Fasc. 1-4, 283-304. MR 2003k: 41033.

[48] (with S. Diomede) Methods of measure theory for approximation problems by positive linear operators, *Proceedings of the T. Popoviciu Itinerant Seminar*, E. Popoviciu Ed., 31-51, Editura SRIMA, Cluj-Napoca, Romania, 2002.

2003

[49] (with S. Diomedè) Positive operators and approximation in function spaces on completely regular spaces, *Int. J. of Math. and Math. Sci.* 61(2003), 3841-3871. MR 2004m: 41027

2005

[50] (with I. Raşa) On some classes of diffusion equations and related approximation problems, trends and Applications in *Constructive Approximation*, (Eds) M.G de Bruin, D.H. Mache & J. Szabados, *Internat. Series of Numerical Mathematics*, Vol 151 (2005), Birkhäuser Verlag, Basel, pp. 13 – 26.

[51] (with I. Raşa) On a Class of Exponential-type Operators and their Limit Semigroups, *J. of Approx. Theory* 135(2005), no. 2, 258 - 275.

[52] (with R. Amiar) Approximation by Positive Operators of the C_0 -Semigroups Associated with One-Dimensional Diffusion Equations - Part I, *Numer. Func. Anal. Optim.* 26 (2005), 1, 1 - 16.

[53] (with R. Amiar) Approximation by Positive Operators of the C_0 -Semigroups Associated with One-Dimensional Diffusion Equations - Part II, *Numer. Func. Anal. Optim.* 26 (2005), 1, 16 – 33, Corrigendum: *Numer. Func. Anal. Optim.* 27 (2006), 3-4, 497-498.

[54] (with M. Cappelletti Montano) Affine projections on adapted subalgebras of continuous functions, *Positivity* 9 (2005), no. 4, 625 - 643.

[55] (with M. Cappelletti Montano) Regular vector lattices of continuous functions and Korovkin-type theorems — Part I, *Studia Math.* 171 (3) (2005), 239 – 260.

[56] (with S. Diomedè) Asymptotic formulae for positive linear operators on convex sets of Banach spaces, *J. of Concrete and Appl. Analysis*, 3(2005), no. 4, 413-435..

2006

[57] (with M. Cappelletti Montano) Regular vector lattices of continuous functions and Korovkin-type theorems — Part II, *Studia Math.* 172 (1) (2006), 69 – 90.

[58] (with V. Leonessa) On a sequence of positive linear operators associated with a continuous selection of Borel measures, *Mediterr. J. Math.*, 3(2006), no. 3 - 4, 363 - 382.

[59] (with V. Leonessa e S. Milella) Continuous selections of Borel measures and Bernstein-Schnabl operators, Proc. Intern. Conf. Numer. Anal. and Approx. Th.(NAAT 2006), Cluj-Napoca (Romania), July 5-8, 2006.

2007

[60] (with M. Cappelletti Montano) On some density theorems in regular vector lattices of continuous functions, Collect. Math. 58, 2 (2007), 131 – 149.

[61] (with V. Leonessa) Continuous selections of Borel measures, positive operators and degenerate evolution problems, Rev. Anal. Numer. Theor. Approx., 36(2007), no. 1, 9 –23.

2008

[62] (with M. Cappelletti Montano) On a class of locally convex vector lattices of continuous function spaces and related approximation/density problems, Proc. Intern. Symp. on Banach and Function Spaces II (ISBFS 2006), Kitakyushu (Japan), 14 – 17 September, 2006, Yokohama Publishers, Yokohama, 2008, pp. 25 – 50.

[63] (with G. Musceo) Markov processes and positive semigroups on some classes of weighted continuous function spaces, Rend. Circ. Mat. Palermo, 57 (2008), 61 - 82.

[64] (with S. Milella) Integral-type operators on continuous function spaces on the real line, J. of Approx. Theory 152 (2008), 107 - 124.

[65] (with V. Leonessa and I. Raşa) On Bernstein-Schnabl operators on the unit interval, J. for Anal. and its Appl. 27(2008)3, 353 – 379.

[66] (with G. Musceo) Positive semigroups generated by degenerate second-order differential operators, Funkcialaj Ekvacioj, 51(2008), 431 - 458.

[67] (with S. Milella) On a sequence of integral operators on weighted L^p spaces, Analysis Math. 34(2008), 237 – 259.

2009

[68] Asymptotic formulae for Bernstein-Schnabl operators and smoothness, Bollettino U.M.I., (9) II (2009), 135 – 150, Corrigendum: Bollettino U.M.I., (9) IV (2011), 259 – 262.

[69] (with S. Milella) On the C_0 -semigroups generated by second-order differential operators on the real line, Taiwanese J. Math., 13(2009), no. 1, 25-46.

[70] (with V. Leonessa and S. Milella) Cores for second-order differential operators on real intervals, Commun. Appl. Analysis, 13(2009), no. 4, 477-496.

[71] (with V. Leonessa and S. Milella) Bernstein-Schnabl operators on noncompact real intervals, *Jaén J. Approx.*, 1(2) (2009), 223 - 256.

[72] (with V. Leonessa) An invitation to the study of evolution equations by means of positive linear operators, *Lecture Notes of Seminario Interdisciplinare di Matematica*, Vol. 8 (2009), pp. 1- 41.

2010

[73] (con S. Milella) Degenerate differential equations and modified Szász-Mirakjan operators, *Rend. Circ. Mat. Palermo*, **59** (2010), 227-250, DOI: 10.1007/s12215-010-0017-z

[74] (con M. Cappelletti Montano e V. Leonessa) On a generalization of Kantorovich operators on simplices and hypercubes, *Adv. Pure Appl. Math.* **1** (2010), 359 – 385.

[75] (con G. Musceo) Degenerate second-order differential operators with generalized reflecting barriers boundary conditions, to appear in *Math. Reports*, Vol. 12 (62) (2010), no. 2.

[76] (with S. Diomede) Asymptotic formulae for positive linear operators: direct and converse results, *Jaén J. Approx.*, 2(2) (2010), 255 - 287.

2011

[77] (con M. Cappelletti Montano e S. Diomede) Degenerate elliptic operators, Feller semigroups and modified Bernstein-Schnabl operators, *Math. Nachr.* **284**, No. 5–6, 587 – 607 (2011) / DOI 10.1002/mana.200810196

[78] (con M. Cappelletti Montano e V. Leonessa) Iterates of multidimensional Kantorovich-type operators and their associated positive C_0 -semigroups, *Studia Univ. Babeş-Bolyai Math.* 56(2011), no. 2, 219 – 235.

[79] (with S. Milella and G. Musceo) On a class of positive C_0 -semigroups on weighted continuous function spaces, *Note Mat.* **31** (2011), no. 1, 15-27.

[80] (with S. Milella and G. Musceo) Multiplicative perturbations of the Laplacian and related approximation problems, *J. Evol. Equ.* 11(2011), 771 - 792, DOI: 10.1007/s00028-011-0110-6,

2012

[81] (with I. Raşa) Lipschitz contractions, unique ergodicity and asymptotics of Markov semigroups, *Bollettino U.M.I.* (9) **V** (2012), 1 - 17.

2013

[82] On some convergence criteria for nets of positive operators on continuous function spaces, *J. Math. Anal. Appl.* 398 (2013) 542 - 552, DOI 10.1016/j.jmaa.2012.09.010.

[83] (with M. Cappelletti Montano e V. Leonessa) On a generalization of Szász-Mirakjan-Kantorovich operators, *Results Math.* **63** (2013), no. 3, 837 - 863, DOI: 10.1007/s00025-012-0236-z

2014

[84] (with M. Cappelletti Montano, V. Leonessa and I. Raşa) On differential operators associated with Markov operators, *J. Funct. Anal.* 266 (2014), no. 6, 3612 - 3631, DOI: 10.1016/j.jfa.2014.01.001, ISSN: 0022-1236.

[85] (with M. Cappelletti Montano, V. Leonessa and I. Raşa) On Markov operators preserving polynomials, *J. Math. Anal. Appl.* 415 (2014), no. 1, 477 - 495, DOI: 10.1016/j.jmaa.2014.01.069, ISSN: 0022-247X

2016

[86] On some classes of Fleming-Viot type differential operators on the unit interval, *Stud. Univ. Babeş-Bolyai Math.* 61(2016), no. 3, 291 – 303.

2017

[87] (with M. Cappelletti Montano, V. Leonessa and I. Raşa) A generalization of Kantorovich operators for convex compact subsets, *Banach J. of Math. Anal.*, 11(3) (2017), 591 – 614

[88] (with M. Cappelletti Montano, V. Leonessa and I. Raşa) Differential operators and approximation processes generated by Markov operators, in: Constanda C., Dalla Riva M., Lamberti P., Musolino P. (eds.) *Methods in Science and Engineering*, Volume 1, Chapter 2, pp. 9 – 19, Birkhäuser, 2017.

2018

[89] (with M. Cappelletti Montano, V. Leonessa and I. Raşa) Elliptic differential operators and positive semigroups associated with generalized Kantorovich operators *J. of Math. Anal. and Appl.* 458 (2018) pp. 153-173.

2019

- [90] (with M. Cappelletti Montano and V. Leonessa), On the positive semigroups generated by Fleming-Viot type differential operators, *Comm. Pure and Appl. Anal.* **18** (1) (2019) pp.323-340, DOI: 10.3934/cpaa.2019017
- [91] Iterates of Markov operators and constructive approximation of semigroups, *Constructive Mathematical Analysis*, **2**(2019), no. 1, pp.22-39, DOI 10.33205/cma.491601.

Miscellanea

1997

[1] Korovkin - type theorem, in “Encyclopaedia of Mathematics”, Kluwer Academic Publishers, Dordrecht, 1997.

[2] Korovkin - type approximation theory, in “Encyclopaedia of Mathematics”, Kluwer Academic Publishers, Dordrecht, 1997.

2000

[3] Bauer simplex, in “Encyclopaedia of Mathematics”, Kluwer Academic Publishers, Dordrecht, 2000.

2016

[4] Giovanni Aquaro. ATTI DELLA ACCADEMIA DELLE SCIENZE DI TORINO. CLASSE DI SCIENZE FISICHE MATEMATICHE E NATURALI, vol. 150 (2016) , p. 109-111, ISSN: 0001-4419