

Publications:

Over 150 total scientific publications and presentations, including 85 refereed research articles and 18 books.

Selected Scientific Articles

1. O. Olteanu, *Convexité et prolongement d'opérateurs linéaires*, C. R. Acad. Sci. Paris, Série A, **286**(1978), 511-514.
2. O. Olteanu, *Sur les fonctions convexes définies sur les ensembles convexes bornés de R^n* , C. R. Acad. Sci. Paris, Série A, **290**(1980), 837-838.
3. O. Olteanu, *Une propriété des fonctions convexes d'une variable réelle*, Rev. Roumaine Math. Pures Appl., **27**(1982), 1059-1060.
4. O. Olteanu, *Théorèmes de prolongement d'opérateurs linéaires*, Rev. Roumaine Math. Pures Appl., **28**, 10(1983), 953-983.
5. O. Olteanu, *A partially ordered function space and the reflexivity of Banach spaces*, Rev. Roumaine Math. Pures Appl., **33**, 9(1988), 767-768.
6. O. Olteanu, *Application des théorèmes de prolongement d'opérateurs linéaires au problème des moments et à une généralisation d'un théorème de Mazur-Orlicz*, C. R. Acad. Sci. Paris, Série I, **313**(1991), 739-742.
7. C. Dumitrescu, O. Olteanu, *The inverse of a convex operator. Newton's method for convex operators*, U.P.B. Sci. Bull., Mechanical Engineering, **53**, 3-4(1991), 23-29.
8. O. Olteanu, *A strong separation theorem in normed linear spaces*, Mathematica (Cluj), **35(58)**, 1(1993), 59-63.
9. O. Olteanu, *Uniform approximation of certain continuous functions*, Stud. Cerc. Mat., **46**, 5(1994), 533-541.
10. O. Olteanu, *Applications of a general sandwich theorem for operators to the moment problem*, Rev. Roumaine Math. Pures Appl., **41**, 7-8(1996), 513-521.
11. O. Olteanu, *Two sandwich theorems for linear operators and the moment problem*, Balkan Journal of Geometry and Its Applications, **1**, 2(1996), 75-85.
12. O. Olteanu, *Applications of the Mazur-Orlicz theorem*, Stud. Cerc. Mat., **49**, 5-6(1997), 345-353.
13. O. Olteanu, *Jensen type inequalities related to the Gamma function and a new integral formula*, Rev. Roumaine Math. Pures Appl., **46**, 5(2001), 687-703.

14. O. Olteanu, *Extension of linear operators and moment problems in spaces of analytic functions*, Rev. Roumaine Math. Pures Appl., **47**, 5-6(2002), 737-742.
15. L. Lemnete Ninulescu, O. Olteanu, *Applications of the solution of an abstract moment problem to the classical moment problem in the space $C([a,b])$* , Mathematical Reports, **4(54)**, 2(2002), 207-217.
16. O. Olteanu, *Moment problems in sequence spaces*, U.P.B. Sci. Bull., Series A, **64**, 1(2002), 3-12.
17. O. Olteanu, *Some applications of elementary analysis to algebra and arithmetics*, U.P.B. Sci. Bull., Series A, **64**, 2(2002), 9-22.
18. O. Olteanu, Gh. Simion, *A new geometric aspect of the implicit function principle and some applications of the Newton's method for convex operators*. Mathematical Reports, **5(55)**, 1(2003), 61-84.
19. L. Lemnete Ninulescu, O. Olteanu, *Extension of linear operators, distanced convex sets and the moment problem*, Mathematica (Cluj), **46(69)**, 1(2004), 81-88.
20. O. Olteanu, *New aspects of the classical moment problem*, Rev. Roumaine Math. Pures Appl., **49**, 1(2004), 63-77.
21. C. Ambrozie, O. Olteanu, *A sandwich theorem, the moment problem, finite-simplicial sets and some inequalities*, Rev. Roumaine Math. Pures Appl., **49**, 3(2004), 189-210.
22. A. Olteanu, O. Olteanu, *Applications of Newton's method for convex "decreasing" functions and operators*, U.P.B. Sci. Bull. Series A, **66**, 1(2004), 3-12.
23. J.M. Mihăilă, A. Olteanu, O. Olteanu, *Applications of Newton's method for convex monotone operators*, Math. Reports **7(57)**, 3(2005), 219-231.
24. A. Olteanu, O. Olteanu, *Some exponential-type functional equations solved by a geometrical general method*, U.P.B. Sci. Bull., Series A, **67**, 1(2005), 35-48.
25. A. Olteanu, O. Olteanu *Algebraic functional equations solved by a geometrical general method*. Proceedings of The 3rd International Colloquium "Mathematics in Engineering and Numerical Physics", October 7-9, 2004, Bucharest, Romania, Balkan Society of Geometers, Geometry Balkan Press, 2005, pp. 208-217.
26. L. Lemnete Ninulescu, A. Olteanu, O. Olteanu, *Applications of the solutions of two abstract moment problems to the classical moment problem*, Mathematica (Cluj), **48(71)**, 2(2006), 173-182.
27. V. Balan, A. Olteanu, O. Olteanu, *On Newton's method for convex operators with some applications*, Rev. Roumaine Math. Pures Appl., **51**, 3(2006), 277-290.

28. A. Olteanu, O. Olteanu, *Solving some special functional equations by a general “geometrical” method, and an approach of the complex case*, Proceedings of the International Conference on Complex Analysis and Related Topics. The Xth Romanian-Finish Seminar (Cluj-Napoca, Romania, August 14-16, 2005). Rev. Roumaine Math. Pures Appl., **51**, 5-6(2006), 735-745.
29. A. Olteanu, O. Olteanu, *Solving some special functional equations by a general geometrical method*, Annals of University of Craiova **33**, (2006), 54-66.
30. J.M. Mihăilă, O. Olteanu, C. Udriște, *Markov-type and operator-valued multidimensional moment problems, with some applications*, Rev. Roumaine Math Pures Appl., **52**, 4(2007), 405-428.
31. J.M. Mihăilă, O. Olteanu, C. Udriște, *Markov-type moment problems for arbitrary compact and for some non-compact Borel subsets of \mathbb{R}^n* , Rev. Roumaine Math Pures Appl., **52**, 5-6(2007), 655-664.
32. A. Olteanu, O. Olteanu, *Solving some functional and operatorial equations*, APPLIED SCIENCES, **10** (2008), 193-198.
33. A. Olteanu, O. Olteanu, *Some unexpected problems of the Moment Problem*. Proc. Of the 6-th Congress of Romanian Mathematicians, Bucharest, 2007, Vol I, Scientific contributions, Romanian Academy Publishing House, Bucharest, 2009, pp. 347-355.
34. O. Olteanu, C. Radu, *Moment problems on unbounded subsets of \mathbb{R}^n , optimization and some applications*, BSGP 16, Geometry Balkan Press, Bucharest, 2009, 114-125 (electronic version).
35. O. Olteanu, *Extremal problems and related Dirichlet problems*, Diff. Geometry-Dynamical Systems **12** (2010), 166-176.
36. O. Olteanu, *Optimal control problems related to kinematics*, BSGP **17**, Geometry Balkan Press, Bucharest, 2010, 166-176 (electronic version).
37. O. Olteanu, *Moment problems on bounded and unbounded domains*, International Journal of Analysis, Vol. 2013, Article ID 524264, pp. 1-7. <http://dx.doi.org/10.1155/2013/524264>
38. O. Olteanu, *New results on Markov moment problem*, International Journal of Analysis, Vol. 2013, Article ID 901318, 17 pages, <http://dx.doi.org/10.1155/2013/901318>
39. O. Olteanu, *Analytic solutions of special functional equations*, International Journal of Analysis and Applications, **1**, 1 (2013), 18-32.
40. O. Olteanu, *Exact geometric solutions and approximating analytic solutions of functional equations*, International Journal of Mathematical Analysis, **7**, 47 (2013), 2303-2311. <https://doi.org/10.12988/ijma.2013.36143>
41. O. Olteanu, *Newton’s method for convex operators and applications*, International Journal of Analysis and Applications, **4**, 1 (2014), 11–20.

42. O. Olteanu, *Optimization related to the Markov moment problem and bounds concerning Newton's method for operators*, Communications in Optimization Theory, 2 (2014), 1-17.
43. O. Olteanu, *Approximation and Markov moment problem on concrete spaces*, Rendiconti del Circolo Matematico di Palermo, (2014) 63: 161-172 DOI 10.1007/s12215-014-0149-7
<https://doi.org/10.1007/s12215-014-0149-7>
44. O. Olteanu, A. Olteanu, *Applications of extension theorems of linear operators to Mazur – Orlicz and moment problems*, U.P.B. Sci. Bull., Series A, **76**, 3(2014), 31-42.
45. O. Olteanu, *Markov moment problems and related approximation*, Mathematical Reports, **17(67)**, 1 (2015), 107-117.
- 46 O. Olteanu, *Applications of Hahn-Banach principle to the moment problem*, Poincare Journal of Analysis&Applications,1(2015),1-28. <https://doi.org/10.46753/pjaa.2015.v02i01.001>
47. O. Olteanu, *Invariant subspaces and invariant balls of bounded linear operators*, Bull. Math. Soc. Sci. Math. Roumanie, **59** (107) 3 (2016), 261-271.
48. O. Olteanu, J.M. Mihăilă, *Operator - valued Mazur - Orlicz and moment problems in spaces of analytic functions*, U.P.B. Sci. Bull., Series A, **79**, 1 (2017), 175-184.
49. O. Olteanu, *Markov moment problems in concrete spaces*, Poincare Journal of Analysis & Applications, Vol.2017,(1),35-42. <https://doi.org/10.46753/pjaa.2017.v04i01.004>
50. O. Olteanu, *Mazur-Orlicz theorem in concrete spaces and inverse problems related to the moment problem*, U.P.B. Sci. Bull. Series A, **79**, 3 (2017), 151-162.
51. O. Olteanu, L. Lemnete-Ninulescu, *Two elementary analytic functions and their relationship with Hardy and Bergman spaces*, Journal of Progressive Research in Mathematics, **13**, 3 (2018), 2322-2328.
52. O. Olteanu, J.M. Mihăilă, *Extension and decomposition of linear operators dominated by continuous increasing sublinear operators*, U.P.B. Sci. Bull. Series A, **80**, 3 (2018), 133-144.
53. Olteanu O. and Mihăilă, J.M., *Polynomial approximation on unbounded subsets and some applications*, Asian Journal of Science and Technology, 9, 10 (2018), 8875-8890.
54. O. Olteanu, J.M. Mihăilă, *A class of concave operators and related optimization*, U.P.B. Sci. Bulletin Series A, **81**, 3 (2019), 165-176.
55. O. Olteanu, J.M. Mihăilă, *Minimizing and evaluating weighted means of special mappings*, MathLAB Journal **4** (2019), 77-86.
56. O. Olteanu, J.M. Mihăilă, *Markov moment problem in concrete spaces revisited*, MathLAB Journal **5** (2020), 82-91.

57. O. Olteanu, *On Newton's method for convex functions and operators and its relationship with contraction principle*, MathLAB Journal **6** (2020), 53-61.
58. Niculescu, C.P., Olteanu, O., *A Note on the Isotonic Vector-Valued Convex Functions*, Preprint. arXiv **2020**, arXiv:2005.01088v. Available online: <https://arxiv.org/abs/2005.01088> (accessed on 22 September 2020).
59. C.P. Niculescu, O. Olteanu, *From the Hahn-Banach extension theorem to the isotonicity of convex functions and the majorization theory*, RACSAM **114**, 171 (2020), 1-19 (online). <https://doi.org/10.1007/s13398-020-00905-4>
60. O. Olteanu, *From Hahn-Banach type theorems to the Markov moment problem, sandwich theorems and further applications*, Mathematics MDPI **8**, 1328 (2020), 1-18. <https://doi.org/10.3390/math8081328>
61. O. Olteanu, *Polynomial approximation on unbounded subsets, Markov moment problem and other applications*, Mathematics MDPI **8**, 1654 (2020), 1-12. <https://doi.org/10.3390/math8101654>

Over 30 presentations at scientific meetings, such as (in alphabetic order):

- Conference on Differential Geometry and Topology
- Congress of Romanian Mathematicians
- First Conference of Balkan Society of Geometers
- French – Romanian Colloquium on Applied Mathematics
- Functional Analysis Seminar, Copenhagen University, Denmark
- International Conference “Differential Geometry and Dynamical Systems”
- International Conference on Complex Analysis and Related Topics. Romanian-Finnish Seminar
- International Conference on Operator Theory
- Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society
- Séminaire d' Initiation à l'Analyse, Université Pierre et Marie Curie – Paris VI, France
- The Conference on Spectral Theory of Operators and Applications, Institute of Mathematics “Simion Stoilow” of the Romanian Academy
- Topological Ordered Vector Spaces Seminar

I presented other over 10 scientific works at national Colloquiums and Symposiums.

Selected Textbooks and Monographs

- 1) V. Olariu, O. Olteanu, *Mathematical Analysis*, SEMNE Publishing House, 1999 (Romanian).
- 2) M. Niculescu, O. Olteanu, *Differential Calculus. Mathematical Analysis I*, PRINTECH, Bucharest, 1999 (Romanian).
- 3) V. Olariu, O. Olteanu, *Trigonometric functions. Theory and Applications*, VICTOR, Bucharest, 2001 (Romanian).
- 4) C. Drăgușin, O. Olteanu, M. Gavrilă, *Mathematical Analysis. Theory and applications*, Vol I, MATRIX ROM, Bucharest, 2007 (Romanian).
- 5) C. Drăgușin, O. Olteanu, M. Gavrilă, *Mathematical Analysis. Theory and applications*, Vol II, MATRIX ROM, Bucharest, 2007 (Romanian).
- 6) C. Drăgușin, O. Olteanu, M. Gavrilă, *Mathematical Analysis. Integral Calculus. Theory and applications*, MATRIX ROM, Bucharest, 2013 (Romanian).
- 7) V. Olariu, O. Olteanu, *Linear differential equations. Classical and modern theory*, LAMBERT Academic Publishing, Saarbrücken, 2016.
- 8) V. Olariu, O. Olteanu, *Second order partial differential equations*, LAMBERT Academic Publishing, Saarbrücken, 2016
- 9) V. V. Olariu, C. O. Olteanu, *Periodic functions. Periodic distributions*, LAMBERT Academic Publishing, Saarbrücken, 2017.
- 10) V. V. Olariu, C. O. Olteanu, *Orthogonality and Mathematical Physics*, LAMBERT Academic Publishing, Beau Bassin, 2018.

Research book chapters

- 11) O. Olteanu, *On Markov Moment Problem and Related Inverse Problems*, Book Publisher International, Advances in Mathematics and Computer Science, Vol. 3, Ch. 11, pp. 146-158 (Book Chapter, DOI: [10.9734/bpi/amacs/v3](https://doi.org/10.9734/bpi/amacs/v3)), 2019.

Research books

- 12) O. Olteanu, *New Results in Mathematical Analysis*, LAMBERT Academic Publishing, Beau Bassin, 2020.
- 13) O. Olteanu, *Recent Results on Markov Moment Problem, Polynomial Approximation and Related Fields in Analysis*, Generis Publishing, Chişinău, 2020.