



UNIVERSITATEA DIN BUCUREȘTI
FACULTATEA DE MATEMATICĂ ȘI INFORMATICĂ

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Tel/Fax: (401) 315 6990; Tel: (401) 314 8507, Cod poștal 70109

CATEDRA DE ANALIZA MATEMATICĂ

**Proiecte de cercetare pe baza de contract-grant
in ultimii 5 ani**

2007

"Generalizari ale sistemelor iterative de functii", **Grant al Academiei Romane**, 30/2007, director de grant *Miculescu Radu*.

"Analiza armonica si aproximare trigonometrica pe spatii de functii definite pe hipergrupuri", **Grant al Academiei Romane**, 22/2007, director de grant *Pavel Liliana*.

2006

"Calculare concrete in spatii de functii si aplicatii in teoria fractalilor", **CNCSIS**, Tema 8A, Cod 1067, 2006, director de grant *Chitescu Ion*.

2005

"Calculare aproximative pe spatii de functii", **CNCSIS** Nr. 27694, Tema 4A, Cod 889, 2005, director de grant *Chitescu Ion*.

"Analiza armonica pe grupuri local compacte, semigrupuri topologice, hipergrupuri", **Grant al Academiei Romane**, 16/2005, director de grant *Pavel Liliana*.



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CATEDRA DE ANALIZA MATEMATICĂ

**Monografii, Manuale, Culegeri
in ultimii 5 ani**

2007

Pavel Liliana „Metode si tehnici de analiza functionala”, **Editura Academiei Romane**, 2007.

Bucur Gheorghe “Analiza”, **Editura Universitatii din Bucuresti**, 2007.

2006

Miculescu Radu, Ciobotaru Corina, Rosoiu Alexandru, Banda Narcisa, Lupu Cezar „Probleme de calcul integral”, **Editura GIL**, 2006.

Pavel Liliana „Order structures in functional analysis”, Vol 5 (in colaborare cu R. Cristescu, N. Danet, C. Niculescu, G. Paltineanu, M. Voicu), **Editura Academiei Romane**, 2006.

2005

Chitescu Ion, C. Nastasescu, C. Nita, D. Mihalca si M. Dumitrescu „Matematica” (Trunchi comun si Curriculum diferentiat), *Manual pentru clasa a X-a*, **Editura Didactica si Pedagogica**, 2005.

Chitescu Ion, C. Nastasescu, C. Nita, D. Mihalca si M. Dumitrescu, „Matematica” (Trunchi comun), *Manual pentru clasa a IX-a*, **Editura Didactica si Pedagogica**, 2005.

Chitescu Ion, C. Nastasescu, C. Nita si D. Mihalca „Matematica” Rezolvarea problemelor din manualul pentru clasa a IX-a. Algebra si Geometrie. Trunchi comun si Curriculum diferentiat, **Editura Rotech Pro**, 2005.

Stanica Daniel si Iuliana Paraschiv-Munteanu „Analiza numerica- Exercitii si teme de laborator”, **Editura Universitatii din Bucuresti**, 2006.

2004

Chitescu Ion, C. Nastasescu, C. Nita si D. Mihalca „*Matematica*” (Trunchi comun si Curriculum diferentiat, *Manual pentru clasa a IX-a*, **Editura Didactica si Pedagogica**, 2004.

Chitescu Ion, P. Alexandrescu, M. Radulescu si S. Radulescu „*Analiza Matematica*” pentru clasa a XI-a, **Editura Paralela 45**, editia a V-a, 2004.

Miculescu Radu si Cristinel Mortici „*Functii Lipschitz*”, **Editura Academiei Romane**, Bucuresti, 2004, ISBN 973-27-1061-6.



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**Articole in reviste cotate ISI
in ultimii 5 ani**

In curs de aparitie

Chitescu Ion si *Miculescu Radu* "Approximation of fractals generated by Fredholm integral equations", **Journal of Computational Analysis and Applications**, va aparea in 2009.

Ilias Petre "Dirichlet problem with $p(x)$ -laplacian", va aparea in **Mathematical Reports** (<http://scientific.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi>).

Mihail Alexandru si *Radu Miculescu* "A generalization of iterated function systems", va aparea in **Mathematical Reports** (<http://scientific.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi>).

Mihail Alexandru si *Radu Miculescu* "A generalization of the Hutchinson measure", va aparea in **Mediterranean Journal of Mathematics**, in 2009.

Mihail Alexandru "On linear recurrences with positive variable coefficients in Banach spaces", va aparea in **Mathematical Reports** (<http://scientific.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi>).

Mihail Alexandru "On the connectivity of the attractors of iterated function systems", va aparea in **Rocky Mountain Journal of Mathematics**.

Mihail Alexandru si *Speranta Vladioiu* "On the factorization of fields of Banach spaces" va aparea in **Mathematical Reports** (<http://scientific.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi>).

2008

Mihail Alexandru si *Miculescu Radu* "Applications of fixed point theorems in the theory of generalized IFS", **Fixed Point Theory and Applications**, Volume 2008, Article ID 312876, 11 pages, doi: 10.1155/312876.

Miculescu Radu si *Mihail Alexandru* "Lipscomb's space ω^A is the attractor of an infinite IFS containing affine transformations on $l^2(A)$ ", **Proceedings of the American Mathematical Society**, Vol. 136, No. 2, 2008, p.587-592.

Pavel Liliana "Compact hypergroup characters and finite universal Korovkin sets in L_1 -hypergroup algebra", **Mediterranean Journal of Mathematics**, Vol. 5, 2008, 341-356.

2007

Miculescu Radu "Some observations on generalized Lipschitz functions", **Rocky Mountain Journal of Mathematics**, Vol.37, No.3, 2007, p.893-903.

Pavel Liliana "Multipliers for the L_p - spaces of a hypergroup", **Rocky Mountain Journal of Mathematics**, Vol. 37, No.3, 2007, p.987-999.

Pavel Liliana "An ergodic property of amenable hypergroups", **Bol. Soc. Mat. Mexicana**, Vol. 13, No. 3, 2007, p. 123-129.

2005

Pavel Liliana "Reiter's condition P_2 and hypergroup representations", **C.R. Acad. Sci. Paris**, Ser. I 341, 2005, p.475-480.

Barza Sorina, Lie Victor si *Popa Nicolae* "Approximation of infinite matrices by matricial Haar polynomials", **Ark. Mat.**, 43 No. 2, 2005, p.251-269.

Barza Sorina, Kravvaritis Dimitri si *Popa Nicolae* "Matricial Lebesgue spaces and Hölder inequality", **J. Funct. Spaces Appl.**, 3, no.3, 2005, p.239-249.

2004

Beltita Daniel si *Sabac Mihai* "Polynomial sequences of bounded operators" **J. Funct. Anal.**, 209, no.1, 2004, p.101-136.

2003

E. de Amo, M. Diaz Carrillo, *Chitescu Ion* si N.A. Secelean “A new approximation procedure for fractals“, **Journal of Computational and Applied Mathematics**, 151, 2003, p. 355-370.

Cristea, Mihai “A note on the local injectivity of weakly differentiable mappings having constant Jacobian sign” **Math. Scand.**, 93, no.1, 2003, p.91-98.

Barza Sorina, Persson Lars-Erik si *Popa Nicolae* “A matriceal analogue of Fejer's theory”, **Math. Nachr.**, 260, 2003, p.14-20.



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**Articole in reviste editate de catre Academia Romana
in ultimii 5 ani**

In curs de aparitie

Cristea Mihai "Direct products of quasiregular mappings in space", va aparea in **Revue Roumaine de Math. Pures et Appl.**, 2008.

Mihail Alexandru "Recurrent iterated function systems", va aparea in **Revue Roumaine de Math. Pures et Appl.**, nr.1, 2008.

2007

Cristea Mihai "Mappings of finite distortion: Zoric's theorem and equicontinuity results" **Revue Roumaine de Math. Pures et Appl.**, 52 , no.5, 2007, p.539-554.

Ilias Petre "Existence and multiplicity of solutions for a system of quasilinear equations" **Revue Roumaine de Math. Pures et Appl.**, 52 , no.2, 2007, p.201-211.

Ilias Petre „Existence result for p -laplacian equation with indefinite weights" **Rev. Roum. de Math. Pures et Appl.**, 52, no. 4, 2007, p.389-395.

Ilias Petre „Existence and multiplicity of solutions of a $p(x)$ -laplacian equation in a bounded domain" **Rev. Roum. de Math. Pures et Appl.**, 52, no. 6, 2007, p.639-653.

Miculescu Radu "A sufficient condition for a function to satisfy a weak Lipschitz condition", **Mathematical Reports**, Vol. 9 (59), no.3, 2007, p.275-278.

Pavel Liliana “Weak containment and hypergroup algebras”, **Revue Roum. Math. Pures Appl.**, 52, no.1, 2007, p.87-93.

Popa Nicolae “Matriceal Bloch and Bergman-Schatten spaces” **Revue Roumaine de Math. Pures et Appl.**, 52 , no.4, 2007, p.459-478.

2006

Andreian Cazacu Cabiria, *Cristea Mihai* si Rusu Elena “*T-mappings and skew products*”, **Rev. Roumaine Math. Pures Appl.**, 51, no. 5-6, 2006, p.553-565.

Cristea Mihai “*Mappings of finite distortion: boundary extension*”, **Rev. Roumaine Math. Pures Appl.**, 51, no. 5-6, 2006, p.607-631.

Cristea Mihai “*Quasiregularity in metric spaces*”, **Rev. Roumaine Math. Pures Appl.**, 51, no.3, 2006, p.291-310.

Pavel Liliana “*On the support of the left regular representation of a hypergroup*”, **Mathematical Reports**, 8 (58), no. 3, 2006, p.309-315.

2005

Cristea Mihai “*A generalization of some theorems of F. H. Clarke and B. H. Pourciau*”, **Rev. Roumaine Math. Pures Appl.**, 50, no.2, 2005, p.137-151.

Cristea Mihai “*Some generalizations of a theorem of Lindelöf for quasiregular mappings*”, **Rev. Roumaine Math. Pures Appl.**, 50, no.3, 2005, p.261-266.

Cristea Mihai “*A generalization of Schwarz's lemma*”, **Mathematical Reports**, 7(57), no.3, 2005, p.205-217.

Miculescu Radu “*On a normed space suggested by $Lip(R)$* ”, **Mathematical Reports**, 7 (57), no.1, 2005, p.51-56.

Mihail Alexandru “*On the separability of fields of Banach spaces*”, **Rev. Roumaine Math. Pures Appl.**, 50, no.1, 2005, p. 49-53.

Daniel Stanica „*A new algorithm for the computation of the pseudoinverse in Hilbert spaces*”, **Revue Roum. de Math. Pures et Appl**, 50, no.4, 2005, p.367-371.

Daniel Stanica „*An interpolation scheme in the topological vector space defined using the pseudoinverse*”, **Mathematical Reports**, 7(50), nr.4, 2005, p.325-333.

2004

Cristea, Mihai "A topological condition of starlikeness", **Rev. Roumaine Math. Pures Appl.**, 49, no.2, 2004, p.113-126.

Miculescu Radu "Uber die Erweiterung einer Metrik", **Mathematical Reports**, 6(56), no.4, 2004, p.451-457.

2003

Cristea Mihai "A note on the openness of weakly differentiable mappings having constant Jacobian sign", **Mathematical Reports**, 5(55), no.3, 2003, p.233-237.

Cristea Mihai "Eliminability results for mappings with finite dilatation", **Rev. Roumaine Math. Pures Appl.**, 48, no.4, 2003, p. 393-402.

Cristea Mihai "A change of variable formula for quasidifferentiable maps", **Rev. Roumaine Math. Pures Appl.**, 48, no.5-6, 2003, p.475-485.

Miculescu Radu "A uniform boundedness principle type result", **Mathematical Reports**, 5 (55), no.1, 2003, p.57-59.



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**Articole in reviste din strainatate
in ultimii 5 ani**

In curs de aparitie

Alexandru Mihail "On the connectivity of the attractors of iterated multifunction systems", va apare in **Real Analysis Exchange**.

2008

Cristea Mihai "Local homeomorphisms having local ACL^n inverses", **Complex Var. Elliptic Equ.**, 53, no.1, 2008, p. 77-99.

2007

Cristea Mihai "Mappings with finite distortion and arbitrary Jacobian sign", **Complex Var. Elliptic Equ.**, 52, no.1, 2007, p. 43-57.

Cristea Mihai "A note on global implicit function theorem", **J. Ineq. Pures Appl. Math.**, 8, 3, Article100, 2007.

2006

Boboc Nicu si *Bucur Gheorghe* "Hitting distributions domination and subordinate resolvents; an analytic approach", **Cent. Eur. J. Math.**, 4, no.1, 2006, p.138-162.

2005

Bezzarga Mounir si *Bucur Gheorghe* "A theorem of Hunt for semidynamical systems", **J. Math. Stat.**, 1, no. 1, 2005, p.58-65.

2004

Pavel Liliana "Ergodic sequences of probability measures on commutative hypergroups", **Internat. J. Math. Math. Sci.**, no. 7, 2004, p.335-343.

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Boboc Nicu si *Bucur Gheorghe* "Aspects of number theory in terms of potential theory", **Advances in mathematics research**, Vol. 2, 115--149, Adv. Math. Res., 2, Nova Sci. Publ., Hauppauge, NY, 2003.

Radu Miculescu "Approximations by Lipschitz functions generated by extensions", **Real Analysis Exchange**, 28(1), 2002/2003, p.33-40.



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in ultimii 5 ani**

In curs de aparitie

Dan Dumitru si *Mihail Alexandru* "A sufficient condition for the connectivity of the attractors of IIFSs", va aparea in **Analele Universitatii din Iasi**.

2008

Mihail Alexandru "Sequences of partial defined functions", **Analele Universitatii din Bucuresti**, Seria Matematică, LVII, no.1, 2008, p.113-130.

Dan Dumitru si *Mihail Alexandru* "The shift space of an iterated function system containing Meir-Keller functions", **Analele Universitatii din Bucuresti**, Seria Matematică, LVII, no.1, 2008, p.175-188.

2007

Chitescu Ion "The Euler Line and Remembrances from 44 Year Ago", **Analele Universității din București**, LVI, no.1. 2007, p.235-246.

Ilias Petre "P-laplacian with indefinite weights", **Analele Universității din București**, Seria Matematică, LVI, no.1, 2007, p.13-22.

Pavel Liliana "On the continuity of the left translation in the measure algebra of a hypergroup", **Analele Universității din București**, LVI, no. 1, 2007, p.69-74.

Pavel Liliana “On trigonometric polynomials in the L_1 -algebra of compact hypergroups”, Sesiunea de comunicari stiintifice a FMI, mai 2007, **Analele Universității din București**, LVI, 2007, p.253-260.

2005

Stanica Daniel “A Hermite cubature formula on the n -dimensional simplex”, **Analele Universității din București**, anul LXV, nr.2., 2005, p.58-65.

2004

Chitescu Ion “Yoneda’s Lemma and Abstract Representations in Functional Analysis“, **Bulletin Mathematique de la Societe des Sciences Mathematiques de Roumanie**, 45 (93), no. 3-4, 2004, p. 171-183.

Mihail Alexandru si Tache Petre-Alexandru "On linear recurrence with variable coefficients", **Analele Universității din București**, LIII, nr. 2, 2004, p.239-252.

2003

Sabac Mihai “Commutators, intertwining operators and invariant subspaces”, Spectral analysis and its applications, 161--171, **Theta Ser. Adv. Math.** 2, 2003, Theta, Bucharest.