

Raport de cercetare științifică

pentru anul 2008

1.) Denumire:

Universitatea "Al. I. Cuza" Iași, Facultatea de Matematică, Departamentul de Cercetare Științifică

Director de Departament: prof. dr. Mihai Anastasiei.

Corespondență: anastas@uaic.ro

2.a) Domenii de cercetare

- Algebra abstractă și aplicații, algebra logicii, structuri generalizate și hiperstructuri algebrice. Aplicații ale algebrei abstracte în informatică.
- Teoria măsurii și integrării, teoreme de tip Radon-Nikodym pentru multimasuri, integrale multivoce, analiza multivoca. Optimizare vectorială cu multifuncții; probleme de echilibru vectorial.
- Geometria fibrarilor diferentiabile, algebroizi Lie, structuri geometrice în fibrari diferentiabile, substructuri. Subvarietăți de tip produs de varietăți diferențiale, varietăți cuaternionice Kaehler, varietăți de contact.
- Analiza neliniară, ecuații de evoluție, probleme de viabilitate și invarianță pentru incluziuni diferențiale. Controlabilitate și timp optimal;
- Ecuații diferențiale și inecuații variaționale stochastice, control optimal stochastic. Viabilitate și invarianță pentru ecuații diferențiale stochastice.
- Metode Mecanica mediilor continue: Modele matematice ale solidelor și fluidelor, probleme specifice și metode matematice.

2.b) Infrastructura pentru cercetare/ facilitati oferite, laboratoare de cercetare

- biblioteca Seminarului Matematic "Al. Myller", cu un fond de peste 75.000 de cărți și reviste de specialitate.

2.c) Resursa umană implicată în cercetare

Personal permanent angajat			Personal cu angajament temporar		
grad didactic	numar	echivalent norma de cercetare	grad didactic	numar	echivalent norma de cercetare
prof.	18	5.67	prof.	1	0.10
conf.	14	3.55	conf.		
lect.	11	1.92	lect.		
asist.	8	2.17	asist.		
prep.	1	0.10	prep.		
CS I			CS I	1	0.51
CS II			CS II	1	1.10
CS III			CS III	3	2.73
CS			CS	2	2.20
ACS			ACS	6	6.44
drd			drd		
masteranzi			masteranzi		
studenti			studenti		
alte categorii			alte categorii		

3.a.) Granturi naționale

Grant	cod	Titlu	Director	Buget 2008 (lei)
GRANT CNCSIS DE TIP A	1158	GEOMETRIE LAGRANGE PE ALGEBROIZI LIE. APLICATII	ANASTASIEI MIHAI	12000
GRANT CNCSIS DE TIP A	1373	PROBLEME DE EXISTENTA, APROXIMARE SI CONTROL PENTRU ECUATII CU DERIVATE PARTIALE	HAVARNEANU TEODOR DUMITRU	64000
GRANT CNCSIS DE TIP A	1338	DEZVOLTAREA UNOR METODE GEOMETRICE SI ARITMETICE PENTRU STUDIUL SUPRAFETELOR ELIPTICE	LITCANU RAZVAN DINU	28000
GRANT CNCSIS DE TIP A	1152	TOPOLOGII SLABE SI TOPOLOGII DE ORDINE PE SPATII DE MASURI CU APLICATII IN PROBLEME NECONVEXE	POPA EUGEN	50000
GRANT CNCSIS DE TIP A	1156	MODELE DIFERENTIALE DETERMINISTE SI STOCHASTICE CU RESTRICTII PE STARE. CONTROL, INVARIANTA SI APROXIMARE NUMERICA	RASCANU AUREL	62000
GRANT CNCSIS DE TIP A	1159	PROBLEME DE VIABILITATE SI INVARIANTA PENTRU ECUATII DIFERENTIALE SI ECUATII FUNCTIONALE. SISTEME DE REACTIE-DIFUZIE SI ECUATII CU	VRABIE IOAN	91890

		DATE MASURI		
PROGRAM: PARTENERIATE ÎN DOMENIILE PRIORITARE Tip proiect: Proiect Complex	81-024	ELABORAREA, IMPLEMENTAREA SI VALIDAREA EXPERIMENTALAPE UN MODEL FUNCTIONAL ORIGINAL DE CAMERA DE ARDERE A UNUI ALGORITM DE CALCUL NUMERIC PENTRU SIMULAREA CURGERILOR TURBULENTE REACTIVE COMPLEXE	ILIOI CONSTANTIN	100000
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	144	CERCETARI COMPLEXE DE FIZICA PAMANTULUI PENTRU REALIZAREA FINALA A HARTII DE HAZARD SEISMIC A ROMANIEI PRIN METODE PROBABILISTICE SI DETERMINISTE, LINIARE SI NELINIARE (HHRO)	Prof.dr. Ovidiu CARJA	62700
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	05-D11-23	METODE OPERATORIALE, ANALIZA FUNCTIONALA SI COMPLEXA CU APLICATII (ANAMAT)	Prof.dr.Eugen POPA	10000
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	06-11-10	ANALIZA COMPLEXA SI DOMENII CONEXE	Prof.dr.Eugen POPA	77378
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	05-D11-36	ANALIZA SI CONTROLUL SISTEMELOR DIFERENTIALE (ACSD)	Acad. Prof.dr. Viorel BARBU	434000
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	05-D11-84	STUDII PRIVIND EVOLUTIA FRONTULUI DE SOLIDIFICARE UTILIZAND MODELUL TRANZITIEI DE FAZA. EFICIENTIZAREA PROCESELOR DE TURNARE CONTINUA A OTELURILOR (MMPTCO1)	Prof.dr.Costica MOROSANU	345000
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	06-11-12	MODELARE MATEMATICA IN MECANICA MEDIILOR CONTINUE.APLICATII IN STIINTA MATERIALELOR	Prof.dr. Stan CHIRITA	229061
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	2-CEx06- 11- 56/2006	SISTEME DINAMICE SI TERMODINAMICE	Prof.dr. Stan CHIRITA	661000
PROIECTE DE CERCETARE- DEZVOLTARE COMPLEXE	133	SISTEME SOFT PENTRU SIMULARE GEOMETRICA SI MECANICA (Pythagoras)	Conf.dr. Danut RUSU	554300

PROIECTE DE CERCETARE-DEZVOLTARE COMPLEXE	subctr..15 598/2006	GEOMETRIE RIEMANNIANA SI APLICATII	Prof. dr. Miron Radu	-
PROIECTE DE CERCETARE-DEZVOLTARE COMPLEXE	1510	CERCETARI FUNDAMENTALE SI APLICATIVE ASUPRA DINAMICII ASTEROIZILOR	Lector dr. Catalin GALES	10000
PROIECTE DE CERCETARE-DEZVOLTARE COMPLEXE	68	NOI ASPECTE ASUPRA STRUCTURILOR CUATERNIONICE PE VARIETATI DIFERENTIABILE SI SUBVARIETATILE ACESTORA. APLICATII	Lector dr. Ioan Marian MUNTEANU	25000
PROIECTE DE CERCETARE-DEZVOLTARE COMPLEXE	69	F-STRUCTURI PE VARIETATI DIFERENTIABILE SI PROPRIETATI DE BIARMONICITATE	Lector dr. Cezar ONICIUC	30000
GRANTURILE ACADEMIEI ROMÂNE	88 GAR; 21/12.05. 2008	HIPERGRUPURI SI GRUPURI ABELINE. APLICATII	Conf dr. LEOREANU-FOTEA VIOLETA	5000

3.b) Proiecte din PNCDI II

Grant	cod	Titlu	Director	Buget 2008 (lei)
PN II PROGRAMUL IDEI	13/28.09.07	FUNCTII DE SCALARIZARE SI MULTIPLICATORI LAGRANGE IN PROBLEME DE OPTIMIZARE	Prof.dr ZALINESCU Constantin	240000
PN II PROGRAMUL IDEI	15/28.09.07	CERCETARI MODERNE IN MECANICA MEDIILOR CONTINUE	Prof.dr CHIRITA Stan	356000

PN II PROGRAMUL IDEI	8/28.09.07	METODE FUNCTIONALE, DETERMINISTE SI STOCHASTICE IN DINAMICA FLUIDELOR	Prof.dr LEFTER Catalin George	235000
PN II PROGRAMUL IDEI	3/28.09.07	INCLUZIUNI DIFERENTIALE PE MULTIMI INCHISE, MULTIMI TANGENTE SI APLICATII	Prof.dr. VRABIE Ioan	333333
PN II PROGRAMUL IDEI	4/28.09.07	PRINCIPII VARIATIONALE SI CONTROL OPTIMAL	Prof.dr. CARJA Ovidiu	320000
PN II PROGRAMUL IDEI	6/28.09.07	SISTEME DIFERENTIALE CU PERTURBATII ALEATOARE; PROBLEME DE CONTROL SI VIABILITATE	Prof.dr. RASCANU Aurel	300000
PN II PROGRAMUL IDEI	1/28.09.07	INVARIANTI GEOMETRICI SI TOPOLOGICI ASOCIATI UNOR STRUCTURI GEOMETRICE PE VARIETATI. APLICATII.	Prof.dr. BUCATARU Ioan	270000
PN II PROGRAMUL IDEI	16/28.09.07	CONTROLUL OPTIMAL SI STABILIZAREA MODELELOR CONTINUE ALE DINAMICII POPULATIEI	Prof.dr. ANITA Sebastian	200000
Proiecte TD1&2 Programului RESURSE UMANE	417	STRUCTURI GEOMETRICE DE TIP LIFT NATURAL PE FIBRATELE TANGENT SI COTANGENT	DRUTA SIMONA-LUIZA	1416
Proiecte TD1&2 Programului RESURSE UMANE	419	TEORIA POTENTIALULUI PE GRUPURI LOCAL COMPACTE NECOMUTATIVE	PANTIRUC MARIAN DUMITRU	1049
Proiecte TD1&2 Programului RESURSE UMANE	569	ALGORITMI NUMERICI PENTRU APROXIMAREA SOLUTIILOR ECUATIILOR CU DERIVATE PARTIALE DE TIP ELIPTIC SI APLICATII	STEFANESCU RAZVAN	975

3.c) Proiecte internationale

Grant	cod	Titlu	Director	Buget 2008 (lei)
FP7 PEOPLE Tip proiect: ITN		CONTROLLED SYSTEMS - Deterministic and Stochastic Controlled Systems and Applications UAIC - coordonator	Prof.dr.Aurel RASCANU	-
Bilaterale ITALIA	9/2006- 2008	Reaction Diffusion Equations Theory, Numerical Methods And Related Optimal Control Problems	Prof.dr.Sebastian ANIȚA	-

4.a) Lucrări științifice publicate în reviste naționale cotate ISI

1. G.Ciobanu, D.Rusu; Synchronising the Shared Resources, Romanian Journal of Information Science and Technology, Vol 11, No 3, 2008, 281-291. ISSN: 1453-8245
2. C. Morosanu, Gh. Iorga and S. C. Cocindau, Numerical simulation of the solid region via phase field transition system, Metalurgia International, Vol. XIII, no.12, pp. 91-95, 2008. ISSN 1582-2214
3. Marius Tărnăuceanu; An sigma-lattice structure associated to some classes of finite groups. Fixed Point Theory, 9 (2008) 575-583; ISSN 1583-5022
4. Popa, Eugen ; The infinitesimal generator of a semidynamical system. An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 54 (2008), no. 1, 123—134
5. Mihai Turinici; Pseudometric Zhong principles and equilibrium points. An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 54 (2008), 233-252
6. Gavriliuț, Alina Cristiana; Types of extensions for multisubmeasures. An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 54 (2008), no. 1, 65—74
7. Gavriliuț, Alina Cristiana; Types Properties of regularity with respect to the Vietoris topology. An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 54 (2008), no. 2, 347-360
8. Bentea, Lucian; Tărnăuceanu, Marius; A note on the number of fuzzy subgroups of finite groups. An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 54 (2008), no. 1, 209-220

4.b) Lucrări științifice publicate în reviste internaționale cotate ISI

1. Barbu, Viorel; Grujić, Zoran; Lasić, Irena; Tuffaha, Amjad; Smoothness of weak solutions to a nonlinear fluid-structure interaction model. *Indiana Univ. Math. J.* 57, No. 3, 1173-1207 (2008) ISSN: 0022-2518
2. Barbu, Viorel; Marinelli, Carlo; Variational inequalities in Hilbert spaces with measures and optimal stopping problems. *Appl. Math. Optimization* 57, No. 2, 237-262 (2008) ISSN: 0095-4616
3. Barbu, Viorel; da Prato, Giuseppe; The Kolmogorov equation for a 2D-Navier-Stokes stochastic flow in a channel. *Nonlinear Anal., Theory Methods Appl.* 69, No. 3 (A), 940-949 (2008). ISSN: 0362-546X
4. Barbu, Viorel; Da Prato, Giuseppe; Röckner, Michael; Existence and uniqueness of nonnegative solutions to the stochastic porous medium equation. *Indiana Univ. Math. J.* 57, No. 1, 187-211 (2008). ISSN: 0022-2518
5. Albeverio, S.; Barbu, V.; Ferrario, B.; Uniqueness of the generators of the 2D Euler and Navier-Stokes flows. *Stochastic Processes Appl.* 118, No. 11, 2071-2084 (2008). ISSN: 0304-4149
6. Barbu, Viorel; da Prato, Giuseppe; The generator of the transition semigroup corresponding to a stochastic variational inequality. *Commun. Partial Differ. Equations* 33, No. 7, 1318-1338 (2008). ISSN: 0360-5302
7. Yan, Y.; Coca, D.; Barbu, V.; Internal optimal controller synthesis for Navier-Stokes equations. *Numer. Funct. Anal. Optim.* 29, No. 1-2, 225-242 (2008). ISSN: 0163-0563
8. Laura-Lulia Anița, Sebastian Anița, Viorel Arnăutu; Global behavior for an age-dependent population model with logistic term and periodic vital rates. *Applied Mathematics and Computation* 206 (2008), 368-379 ISSN: 0096-3003
9. Anița, Laura-Lulia; Anița, Sebastian; Asymptotic behavior of the solutions to semi-linear age-dependent population dynamics with diffusion and periodic vital rates. *Math. Popul. Stud.* 15, No. 2, 114-122 (2008). ISSN 0889-8480
10. Ainseba, Bedreddine; Anița, Sebastian; Internal nonnegative stabilization for some parabolic equations. *Commun. Pure Appl. Anal.* 7, No. 3, 491-512 (2008). ISSN 1534-0392
11. Chiriță, Stan; Ciarletta, Michele On the structural stability of thermoelastic model of porous media. *Math. Methods Appl. Sci.* 31, No. 1, 19-34 (2008). ISSN: 0170-4214
12. D'Apice, Ciro; Chiriță, Stan; End effects for a generalized biharmonic equation with applications to functionally graded materials. *J. Math. Anal. Appl.* 342, No. 1, 585-600 (2008). ISSN: 0022-247X
13. Chiriță, S.; Galeș, C.; Ghiba, I. D.; On spatial behavior of the harmonic vibrations in Kelvin-Voigt materials. *J. Elasticity* 93 (2008), no. 1, 81--92. ISSN: 0374-3535
14. Chiriță, S.; Galeș, C.; A mixture theory for microstretch thermoviscoelastic solids. *Journal of Thermal Stresses*, 31, 1099-1124, 2008. ISSN: 0149-5739
15. Chiriță, Stan; Ciarletta, Michele; Spatial evolution of harmonic vibrations in linear elasticity. *Journal of Mechanics of Materials and Structures (JoMMS)*, 3 (9), 1675-1693, 2008. ISSN: 1559-3959
16. Chiriță, S.; Danescu, A; On the strong ellipticity condition for tetragonal system of linearly elastic solids. *International Journal of Solids and Structures*, 45, no. 17, 4850-4858, 2008, ISSN: 0020-7683

17. Ieșan, Dorin; On the bending of piezoelectric plates with microstructure. *Acta Mech.* 198, No. 3-4, 191-208 (2008). ISSN 0001-5970
18. Ieșan, D. Thermopiezoelectricity without energy dissipation. *Proc. R. Soc. Lond., Ser. A, Math. Phys. Eng. Sci.* 464, No. 2091, 631-656 (2008). ISSN 1364-5021
19. Ieșan, D.; A theory of prestressed thermoelastic Cosserat continua. *ZAMM Z. Angew. Math. Mech.* 88 (2008), no. 4, 306--319. ISSN 0044-2267
20. Ieșan, D.; Nappa, L.; On the theory of viscoelastic mixtures and stability. *Math. Mech. Solids* 13 (2008), no. 1, 55--80. ISSN 1081-2865
21. Ieșan, D.; Thermo-Elastic Deformation of Porous Cosserat Beams. *J Thermal Stresses* 31(2008), 823-847. ISSN: 0149-5739
22. Anca -Maria Precupanu and Bianca Satco; The Aumann-Gould Integral. *Mediterr. J. Math.*, 5(2008), 429-441. ISSN 1660-5446
23. Cârjă, O., Necula, M., Vrabie, I. I.; Necessary and sufficient conditions for viability for nonlinear evolution inclusions, *Set-Valued Anal.*, 16(2008), 701--731. ISSN 0927-6947
24. Necula, M., Popescu, M., Vrabie, I. I.; Viability for differential inclusions on graphs, *Set-Valued Anal.*, 16(2008), 961-981. ISSN 0927-6947
25. Necula, Mihai; Vrabie, Ioan I.; A viability result for a class of fully nonlinear reaction-diffusion systems. *Nonlinear Anal., Theory Methods Appl.* 69, No. 5-6 (A), 1732-1743 (2008). ISSN 0362-546X
26. Zălinescu, Constantin; On the second conjugate of several convex functions in general normed vector spaces. *J. Glob. Optim.* 40, No. 1-3, 475-487 (2008). ISSN: 0925-5001
27. Penot, Jean-Paul; Zălinescu, Constantin; Persistence and stability of solutions of Hamilton-Jacobi equations. *J. Math. Anal. Appl.* 347, No. 1, 188-203 (2008). ISSN: 0022-247X
28. Hantoute, A.; López, M. A.; Zălinescu, C.; Subdifferential calculus rules in convex analysis: a unifying approach via pointwise supremum functions. *SIAM J. Optim.* 19 (2008), no. 2, 863--882. ISSN: 1052-6234
29. C. Zălinescu, On zero duality gap and the Farkas lemma for conic programming, *Math. Oper. Res.* 33 (2008), 991-1001. ISSN 0364-765X
30. C. Zălinescu, Hahn--Banach extension theorems for multifunctions revisited, *Math. Meth. Oper. Res.* 68 (2008), 493--508. ISSN 1432-2994
31. Bîrsan, Mircea; Inequalities of Korn's type and existence results in the theory of Cosserat elastic shells. *J. Elasticity* 90, No. 3, 227-239 (2008). ISSN 0374-3535
32. Bîrsan, Mircea; On the dynamic deformation of porous Cosserat linear-thermoelastic shells. *ZAMM, Z. Angew. Math. Mech.* 88, No. 1, 74-78 (2008) ISSN 0044-2267
33. Bóna, A.; Bucataru, I.; Slawinski, M. A.; Space of SO(3)-orbits of elasticity tensors. *Arch. Mech. (Arch. Mech. Stos.)* 60 (2008), no. 2, 123--138. ISSN 0373-2029
34. Bona, A., Bucataru, I., Slawinski, M.A; Inversion of ray velocity and polarization for elasticity tensor, *Journal of Applied Geophysics*, 65, 1(2008), 1-5. ISSN: 0926-9851
35. Crasmăreanu, Mircea; Last multipliers as autonomous solutions of the Liouville equation of transport. *Houston J. Math.* 34, No. 2, 455-466 (2008). ISSN 0362-1588

36. Crasmareanu, Mircea; Cristina-Elena Hreţcanu; Golden differential geometry, Chaos, Solitons & Fractals, 38(2008), no. 5, 1229-1238 ISSN: 0960-0779
37. Leoreanu-Fotea, V.; Davvaz, B.; Roughness in n -ary hypergroups. Inf. Sci. 178, No. 21, 4114-4124 (2008) ISSN: 0020-0255
38. Leoreanu-Fotea, Violeta; The lower and upper approximations in a hypergroup. Inf. Sci. 178, No. 18, 3605-3615 (2008). ISSN: 0020-0255
39. Leoreanu-Fotea, V.; Davvaz, B.; n -hypergroups and binary relations. Eur. J. Comb. 29, No. 5, 1207-1218 (2008). ISSN: 0195-6698
40. V. Leoreanu-Fotea, Fuzzy rough n -ary subhypergroups, Iranian Journal of Fuzzy Systems, vol. 5, n. 3 (2008), 45-57 ISSN: 1735-0654
41. V. Leoreanu-Fotea, The direct and the inverse limit of hyperstructures associated with fuzzy sets of type 2, Iranian Journal of Fuzzy Systems, vol. 5, n. 3 (2008), 89 -94 ISSN: 1735-0654
42. B. Davvaz, V. Leoreanu-Fotea, On a product of fuzzy Hv-submodules, International Journal of Fuzzy Systems, Vol. 10, No. 2, 119-122, June (2008) ISSN: 1562-2479
43. P. Corsini, V. Leoreanu-Fotea, A. Iranmanesh,; On the sequence of hypergroups and membership functions determined by a hypergraph, Journal of Multiple Valued Logic and Soft Computing, v.14, issue 6, 565-577 (2008), ISSN: 1542-3980
44. Munteanu, Marian Ioan; Some aspects on the geometry of the tangent bundles and tangent sphere bundles of a Riemannian manifold. Mediterr. J. Math. 5, No. 1, 43-59 (2008). ISSN 1660-5446
45. Munteanu, Marian-Ioan; Minimal submanifolds in \mathbb{R}^4 with a g.c.K. structure. Czechoslovak Math. J. 58(133) (2008), no. 1, 61--78. ISSN 0011-4642
46. Loubeau, E.; Montaldo, S.; Oniciuc, C.; The stress-energy tensor for biharmonic maps. Math. Z. 259, No. 3, 503-524 (2008). ISSN 0025-5874
47. Balmuş, A.; Montaldo, S.; Oniciuc, C. ; Classification results for biharmonic submanifolds in spheres. Israel J. Math. 168 (2008), 201--220. ISSN 0021-2172
48. Constantinescu, Oana; Myller configurations in Finsler spaces. Applications to the study of subspaces and of torse forming vector fields. J. Korean Math. Soc. 45, No. 5, 1443-1482 (2008) ISSN 0304 - 9914
49. Mansour, Mohamed Ait; Durea, Marius; Théra, M.; A lower semicontinuous regularization for set-valued mappings and its applications. J. Convex Anal. 15, No. 3, 473-484 (2008). ISSN 0944-6532
50. Durea, M.; Dutta, J.; Tammer, Chr.; Bounded sets of Lagrange multipliers for vector optimization problems in infinite dimension. J. Math. Anal. Appl. 348, No. 2, 589-606 (2008) ISSN 0022-247X
51. Durea, M. Optimality conditions for weak and firm efficiency in set-valued optimization. J. Math. Anal. Appl. 344, No. 2, 1018-1028 (2008). ISSN 0022-247X
52. M. Durea, J. Dutta, ; Lagrange multipliers for Pareto minima in general Banach spaces, Pacific Journal of Optimization, 4 (2008), 447-463. ISSN 1348-9151
53. Galeş, C.; On the asymptotic spatial behaviour in the theory of mixtures of thermoelastic solids. Int. J. Solids Struct. 45, No. 7-8, 2117-2127 (2008). ISSN: 0020-7683

54. Galeş, C.; Some results in the dynamics of viscoelastic mixtures. *Math. Mech. Solids* 13 (2008), no. 2, 124--147. ISSN: 1081-2865
55. Gavriliuţ, A. C.; A Gould type integral with respect to a multisubmeasure. *Math. Slovaca* 58, No. 1, 43-62 (2008). ISSN 0139-9918
56. Tărnăuceanu, Marius; Bentea, Lucian; On the number of fuzzy subgroups of finite abelian groups. *Fuzzy Sets and Systems* 159 (2008), no. 9, 1084--1096. ISSN 0165-0114
57. Tom De Medts and Marius Tărnăuceanu; Finite groups determined by an inequality of the orders of their subgroups. *Bull. Belg. Math. Soc. Simon Stevin* Volume 15, Number 4 (2008), 699-704. ISSN 1370-1444
58. Ioan Pop, Alina Tofan; Finite Cofibrations for C^* -algebras. *Bull. Belg. Math. Soc. Simon Stevin* vol 21, No.2, 2008 529-552 ISSN 1139-1138

4.c) Lucrări științifice publicate în reviste naționale indexate BDI

1. T. Precupanu; On a dual characterization in best approximation problem. *Revue d'Analyse Numérique et de Théorie de l'Approximation*, 37(2008),191-196
2. M. Durea; Some cone separation results and applications, *Revue d'Analyse Numerique et de Theorie de l'Approximation*, 37 (2008), 37-46
3. Galeş, C., Chiruta, C.; Investigation of asteroid dynamics via numerical methods, *Romanian Astronomical Journal*, 18, Supplement, 1-15, 2008.
4. Marius Tărnăuceanu; Counting subgroups for a class of finite nonabelian p -groups, *An. Ştiinţ. Univ. de Vest, Timisoara*, 46 (2008), 147-152.

4.d) Lucrări științifice publicate în reviste internaționale indexate BDI

1. Barbu, Viorel; Da Prato, Giuseppe; Röckner, Michael; Some results on stochastic porous media equations. *Boll. Unione Mat. Ital.* (9) 1, No. 1, 1-15 (2008).
2. Miron R., Kawaguchi T.; Electromagnetic fields derived from the new canonical semispray S^* in relativistic optics. *Tensor N.S.* vol. 69(2008), 8-14
3. Anastasiei, Mihai; Cioban, Mitrofan; Soltan, Petru; Academician Radu Miron -- eighty years of life and sixty years of efforts. *Bul. Acad. Ştiinţe Repub. Mold., Mat.* 2008, No. 2(57), 130-136 (2008).
4. Anastasiei, M.; Gheorghe, M.; Some examples of Randers spaces. *Acta Math. Acad. Paedagog. Nyházi.* (N.S.) 24 (2008), no. 1, 15--23.
5. Anastasiei M., Semisprays on Lie algebroids. Applications. *Tensor N.S.* vol. 69 (2008), 190-198
6. Mihai Turinici; Nonlinear vector maximal principles in product structures. *Libertas Math.*,28(2008)15-24
7. Mihai Turinici; Projective maximal principles in general vector spaces. *Libertas Math.*,28(2008)25-36

8. Cârjă, Ovidiu; Necula, Mihai; Vrabie, Ioan I.; Orthogonal solutions for a hyperbolic system. *Bul. Acad. Științe Repub. Mold., Mat.* 2008, No. 1(56), 125-130 (2008).
9. V. Leoreanu- Fotea; Several types of n-ary subhypergroups, *Italian Journal of Pure and Applied Mathematics*, n.23, (2008), 261-274
10. V. Leoreanu-Fotea, Canonical n-ary hypergroups, *Italian Journal of Pure and Applied Mathematics*, n.24, (2008), 247-254
11. G.Ciobanu, D.Rusu; Supermetrics over Apartness Lattice-Ordered Semigroup, *Electronic Notes in Theoretical Computer Science (ENTCS)* 202 (2008) 191-200;
12. M. Durea; Calculus of the Bouligand derivative of set-valued maps in Banach spaces, *Nonlinear Functional Analysis and Applications*, 13 (2008), 573-585
13. A. Gavrilut; Regularity of multisubmeasures with respect to the Wijsman topology, *Novi Sad J. Math.*, vol. 38, no 2.

4. e) Lucrări științifice publicate în volume ale conferințelor

1. V. Arnautu, R. Stefanescu; The Numerical Solutions for an Elliptic Control Problem; *Proceedings of SYNASC 2008*, Timisoara, Springer-Verlag
2. Chiriță, S.; Strong elliptic elasticity tensor and spatial behavior of harmonic vibrations. *Proceedings of the Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS) October 31- November 3, 2008*, Matsue, Japan, 325-328, ISBN 978-4-9904352-0-2.
3. Popa, Eugen; The semi-dynamical system associated with a generator, *Proceedings of 6-th Congress of Romanian Mathematicians*, 28 June-4 July, Bucharest, Ed. Academiei
4. Popa, Eugen; Poly-invariant elements in a semi-dynamical system, *Potential Theory and Stochastic*, 4-8 septembrie, Albac, Romania
5. Bîrsan, Mircea; On a problem of thermal stresses in the theory of Cosserat elastic shells with voids, *Proceedings of IUTAM Symposium on Relations of Shells, Plate, Beam, and 3D Models (Eds. Jaiani, G. and Podio-Guidugli, P.)*, Springer Science + Business Media B.V., 2008, 67-76.
6. Ciobanu, G., Gontineac, M.; Multisets and Their Encodings, *Proceedings of Prague International Workshop on Membrane Computing*, Silesian University in Opava, 1-10, 2008 ISBN: 978-80-7248-468-3
7. Gavrilut, A., Croitoru, A; Fuzzy multisubmeasures and applications, *Proceedings of The 9th WSEAS International Conference on Fuzzy Systems (FS'08)*, Sofia, Bulgaria, May 2-4, 2008, pp 113-119. ISBN 978-960-6766-57-2, ISI Proceedings;
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9. Galeș, C., On spatial behaviour in viscoelastic mixtures, *Proceedings of the Asian Conference on Mechanics of Functional Materials and Structures, ACMFMS2008*, 317-320, 2008.
10. Razvan Raducanu, Over the mortar finite element method, *New Aspects of Systems Theory and Scientific computation(ISTASC'08)*

11. Razvan Raducanu, Some remarks over theMLS method, Recent Advances in Mathematical and Computational Methods in Science and Engineering(MACMESE'08)
12. Razvan Raducanu, Mihai Saramet , A new characterization of salt deposits, Recent advances in materials science
13. Miron R., Finsler -Lagrange mechanical System and Dynamical Systems of Higher Order, in Topics in Differential geometry, Ed. Academiei Romane, 2008, p. 183-206 , editori : A. Mihai, I. Mihai, R.Miro
14. Anița, Sebastian; Caposso, V.; Stabilization for a reaction-diffusion system modelling a class of spatially structured epidemic systems. The periodic case, in Advances in Dynamics and Control: Theory, Methods and Applications (Editors: S. Sivasundaram, J. Vasundhara Devi, F.E. Udwardia, I. Lasiecka), A volume in honour of A.V. Balakrishnan, Cambridge Scientific Publishers, 2008, ISBN 978-1-904868-69-9
15. Chiriță, Stan; Ciarletta, Michele; Spatial behaviour of solutions for constrained cylinder in linear elasticity. Mathematical Physics Models and Engineering Sciences, Societa Nazionale di Scienze, Lettere e Arti in Napoli, Liguori Editore, Napoli, 2008. 151-162 ISBN: 978-88-207-4057-3

4. f) Cărți publicate în edituri naționale recunoscute CNCSIS

1. E. Popa, Absolutely continuous semigroups and tensor product of harmonic structures; Editura Universitatii, 2008, 250 p. ISBN 978-973-703-392-5
2. R. Litcanu, Lectures in Arithmetic Geometry, Casa Ed. Demiurg 2008, 200 p. ISBN 978-973-152-032-2,
3. C. Morosanu, Elemente de baza ale sistemului TeX si plain TeX, Ed. a 2-a, Editura Univ. "Al.I. Cuza" Iasi, 2008, 178 p. ISBN 978-973-703-320-8
4. M. I. Munteanu, A. I. Nistor; Algoritmi de triangulare. Casa Editorială Demiurg (2008) 172 p. ISBN 978-973-152-059-9
5. G. Tanase; Algebra liniara numerica, Ed. Universitatii "Al.I. Cuza", Iasi, 2008, 262 p. ISBN 978-973-703-251-5.

4. g) Cărți publicate în edituri internaționale

1. B., Davvaz, V. Leoreanu - Fotea, Hyperring Theory and Applications, Hadronic Press, 2008, 336 p, ISBN : 1-57485-064-4

5) Rezultate deosebite (brevete, tehnologii, premii)

6) Participări la manifestări științifice internaționale

(participant, denumire manifestare, data si locul manifestării)

1. acad. V. Barbu, Stochastic PDEs, Levico Terme(Italia), January 6-12, 2008
2. acad. V. Barbu, Nonlinear Analysis, Haifa(Israel), June 18-24, 2008.
3. acad. V. Barbu, Kolmogorov Equations,Trento(Italia), 20-24 November 2008.
4. acad. V. Barbu, Fast diffusion processes, Leyden(Olanda), 11 November-17 November 2008
5. acad. V. Barbu, „Diaspora în cercetarea științifică românească”, Bucuresti 17-19 septembrie 2008
6. acad. V. Barbu, International Exploratory Workshop on Differential Equations and Applications in Life Sciences, Iași, 5 - 7 septembrie 2008
7. acad. V. Barbu, Workshop on Stochastic Partial Differential Equations Iași, September, 8-10, 2008, România
8. prof. dr. Mihai Anastasiei, Riemannian geometry and Its Applications (RIGA 2008) July 8-11, 2008, Brasov, Romania
9. prof. dr. Mihai Anastasiei, Seminarul National de Spatii Finsler si Lagrange, 8-12 iulie, 2008 Brasov, Romania
10. prof. dr. Sebastian Anița, International Exploratory Workshop on Differential Equations and Applications in Life Sciences, Iași, 5 - 7 septembrie 2008 (organizator)
11. prof. dr. Sebastian Anița, 9ème Colloque Franco-Roumain de Mathématiques Appliquées Brașov, Roumanie. 28 août - 2 septembre 2008.
12. prof. dr. Sebastian Anița, „Diaspora în cercetarea științifică românească”, Bucuresti 17-19 septembrie 2008
13. prof. dr. Viorel Arnautu, International Exploratory Workshop, "Differential Equations and Applications in Life Sciences", Iasi, 3-7.09 2008,
14. prof. dr. Ovidiu Cârjă, DEAN Conference 2008, Barcelona, 16-18 November 2008 Spania
15. prof. dr. Ovidiu Cârjă, The 7th AIMS Conference on Dynamical Systems and Differential Equations. University of Texas at Arlington, Texas, USA May 18 - 21, 2008
16. prof. dr. Ovidiu Cârjă, Workshop on Stochastic Partial Differential Equations Iași, September, 8-10, 2008, România (organizator)
17. prof. dr. Stan Chiriță, New Trends in Fluid and Solid Models: A Conference in honor of Brian Straughan, Vietri sul Mare (Salerno), February 28th-March 1st, 2008.
18. prof. dr. Stan Chiriță, The Mechanics Conference to Celebrate the 100th Anniversary of the Department of Engineering Science and Mechanics, May 29-30, 2008, Blacksburg, Virginia, USA.
19. prof. dr. Stan Chiriță, Congress ICTAM 2008, 24-29 August 2008, Adelaide, Australia.
20. prof. dr. Stan Chiriță , Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS) October 31-November 3, 2008, Matsue, Japan.
21. prof. dr. Liviu Florescu, Compactness via tightness, Vector Measures, Integration and Applications, 24-26 September 2008. Katholische Universitaet Eichstaett-Ingolstadt, Germany

22. prof. dr. Catalin Lefter, Mathematical approaches in optimization, modellisation and control, Iasi, 11 Aprilie 2008 (organizator)
23. prof. dr. Catalin Lefter, 9ème Colloque Franco-Roumain de Mathématiques Appliquées, Braşov, Roumanie. 28 août - 2 septembre 2008.
24. prof. dr. Eugen Popa, Workshop on stochastics analysis and potential, 17-19 iunie 2008, Bucuresti
25. prof. dr. Eugen Popa, The 11th Romanian – Finnish seminar, 14-19 august 2008, Alba Iulia
26. prof. dr. Eugen Popa, Meeting on vector measures, integration and applications, 24-27 sept. Katholische Universität Eichstätt-Ingolstadt, Germania
27. prof. dr. Eugen Popa, Potential Analysis, Third workshop series on mathematics, 15 oct. 2008, Pitesti
28. prof. dr. Teodor Precupanu, International Conference Semicentennial "Tiberiu Popoviciu" Institute of Numerical Analysis, May 7-10, 2008 Cluj-Napoca
29. prof. dr. Aurel Răşcanu, Workshop on Stochastic Partial Differential Equations, Iaşi, September, 8-10, 2008, România, (organizator)
30. prof. dr. Ioan Vrabie, Fifth World Congress of Nonlinear Analysts (WCNA 2008), July 2-9, 2008, Orlando, Florida, U.S.A.
31. prof. dr. Ioan Vrabie, Direct, Inverse and Control Problems for PDE's.(DICOP 08) September 22 - 26, 2008 Cortona, Italy
32. prof. dr. Constantin Zălinescu, Fifth World Congress of Nonlinear Analysts (WCNA 2008), July 2-9, 2008, Orlando, Florida, U.S.A.,
33. prof. dr. Constantin Zălinescu, West Coast Optimization Meeting, September 5-6, 2008, Kelowna Canada
34. prof. dr. Constantin Zălinescu, Workshop on Optimization and Applications, December 17-19, 2008. Sofia Bulgaria
35. prof. dr. Constantin Zălinescu „Entscheidungstheorie und –praxis“ 12 – 14 martie 2008. Wittenberg-Germania
36. asist. drd. Eduard Rotenstein, Workshop on Stochastic Partial Differential Equations, Iaşi, September, 8-10, 2008, România, (organizator)
37. conf. dr. Mircea Bîrsan, Advanced School on Modern Engineering and Mathematical Concepts in Computational Shell Mechanics, May 19-23, 2008 in Udine (Italia).
38. conf. dr. Mircea Bîrsan, The 36th Solid Mechanics Conference, September 9-12, 2008, Gdańsk (Polonia)
39. conf. dr. Ioan Bucataru, Riemannian Geometry and Applications- RIGA 2008, Brasov, Romania. 8-11 iulie,
40. conf. dr. Ioan Bucataru, Workshop on Differential Geometric Methods in theoretical mechanics, August 24-31, 2008, Balatonfoldvar, Ungaria

41. conf. dr. Mircea Crasmareanu, Riemannian Geometry and Applications- RIGA 2008, Brasov, Romania. 8-11 iulie
42. conf. dr. Violeta Fotea, 10th Algebraic Congress on Hyperstructures and Applications, September 3 - 9, 2008, Brno, Cehia
43. conf. dr. Violeta Fotea, International Conference on Algebra and Related Topics, 28-30 Mai 2008, Bangkok, Tailanda
44. conf. dr. Mihai Gontineac, "2nd International Meeting on Membrane , Computing and Biologically Inspired Process Calculi" - MeCBIC, 3 - 4 septembrie 2008 Iasi, (organizator)
45. conf. dr. Razvan Litcanu, Geometry and Arithmetic of Moduli Spaces of Coverings, 9-20 iunie 2008, Istanbul, Turcia
46. conf. dr. Razvan Litcanu, International Conference of Algebraic Geometry, Bucuresti, 30 iunie – 5 iulie 2008
47. conf. dr. Costica Morosanu, 6th European Conference of Continuous Casting 2008, Riccione, Italy, 3-6 June, 2008.
48. conf. dr. Costica Morosanu, 11th International Conference on Aluminium Alloys -Simulation and modelling, Aachen, Germany, 22-26 sept. 2008.
49. conf. dr. Costica Morosanu, XVI-th Conference on Applied and Industrial Mathematics, CAIM 2008. Oradea, Romania, 09-11 october 2008
50. conf. dr. Marian Munteanu, VIII International Colloquium on Differential Geometry, 7 -11 July 2008. Santiago de Compostela, Spania
51. conf. dr. Marian Munteanu, Conference GLAM Global Analysis on Manifolds, in honour of Sylvestre Gallot 8-10 septembrie 2008 Roma-2008
52. conf. dr. Cezar Oniciuc, VIII International Colloquium on Differential Geometry, 7 -11 July 2008. Santiago de Compostela, Spania
53. conf. dr. Cezar Oniciuc, Tenth International conference on Geometry, Integrability and Quantization, june 6-11, 2008, Varna, Bulgaria
54. lect. dr. Oana Constantinescu, XXIIIrd International Workshop On Differential Geometric Methods In Theoretical Mechanics, August 24-30, 2008, Balatonfoldvar, Ungaria,
55. lect. dr. Oana Constantinescu, Riemannian Geometry and Applications- RIGA 2008, Brasov, Romania. 8-11 iulie
56. lect. dr. Anca Croitoru, 9th WSEAS International Conference on Fuzzy Systems (FS'08), Sofia, Bulgaria, May 2-4, 2008.
57. lect. dr. Anca Croitoru, International Conference of Analysis and Topology, Lviv, Ukraine, June 2-7, 2008.
58. lect. dr. Anca Croitoru, VII Iberoamerican Conference on Topology and Its Applications, Valencia, Spain, June 25-28, 2008.
59. lect. dr. Anca Croitoru, 3rd International Conference on Vector Measures, Integration and Applications (VMIA), Eichstatt, Germany, September 24-26, 2008.

60. lect. dr. Catalin Gales, The Mechanics Conference to celebrate the 100th Anniversary of the Department of Engineering Science and Mechanics, May 29 & 30, 2008, Blacksburg, Virginia, USA.
61. lect. dr. Catalin Gales, The 22nd International Congress of Theoretical and Applied Mechanics, ICTAM2008, August 25-28, 2008, Adelaide, Australia.
62. lect. dr. Catalin Gales, 9eme Colloque Franco-Roumain de Matematiquees, Brasov, Roumanie, 28 aout-2 septembre 2008
63. lect. dr. Catalin Gales, The Asian Conference on Mechanics of Functional Materials and Structures, October 31-November 3, 2008, Matsue, Japan.
64. lect. dr. Alina Gavrilut, 9th WSEAS International Conference on Fuzzy Systems (FS'08), Sofia, Bulgaria, May 2-4, 2008.
65. lect. dr. Alina Gavrilut, International Conference of Analysis and Topology, Lviv, Ukraine, June 2-7, 2008.
66. lect. dr. Alina Gavrilut, VII Iberoamerican Conference on Topology and Its Applications, Valencia, Spain, June 25-28, 2008.
67. lect. dr. Alina Gavrilut, 3rd International Conference on Vector Measures, Integration and Applications (VMIA), Eichstatt, Germany, September 24-26, 2008.
68. lect. dr. Razvan Raducanu, 8th WSEAS International Conference on Systems Theory and Scientific computation (ISTASC'08), Rhodos, Greece, August 20-22, 2008.
69. lect. dr. Razvan Raducanu, 10th WSEAS International Conference on Mathematical and Computational Methods in Science and Engineering (MACMESE'08) Bucharest, Romania, November 7-9, 2008.
70. Asist. dr. Marius Apetrii, International Exploratory Workshop on Differential Equations and Applications in Life Sciences, Iași, 5 - 7 septembrie 2008
71. Asist. drd. Ana Maria Moșneagu, International Exploratory Workshop on Differential Equations and Applications in Life Sciences, Iași, 5 - 7 septembrie 2008
72. asis.drd. Eduard Rotenstein, Fifth Colloquium on BSDE and their applications, 18-20 iunie 2008, Le Mans, Franta
73. prep. dr. Adina Balmus, VIII International Colloquium on Differential Geometry, 7 -11 July 2008. Santiago de Compostela, Spania