

Raport Anual

Institutul de Matematică "Simion Stoilow" al Academiei Române

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Contents

1	Lucrări publicate la finele lui 2020 și neconținute în Raportul pe 2020	1
1.1	În reviste din străinătate cotate ISI	1
1.2	În reviste din România cotate ISI	1
1.3	În alte reviste	1
1.4	În volume de conferințe	2
2	Lucrări publicate în 2021	3
2.1	În reviste din străinătate cotate ISI	3
2.2	În reviste din România cotate ISI	8
2.3	În alte reviste	9
2.4	În volume de conferințe	9
2.5	Capitole in volume colective	9
3	Cărți publicate în 2021	10
3.1	În alte edituri din România	10
4	Volume editate în 2021	10
4.1	In străinătate	10
4.2	În țară	10
5	Citări (Lista completă este anexată)	11
6	Premii	11
6.1	Premiile Academiei Române	11
6.2	Alte premii	11
7	Conferințe	11
7.1	Organizări de conferințe	11
7.2	Conferințe și expuneri susținute	12
8	Alte activități	15
8.1	Conducere granturi	15
8.2	Conducere doctorate	17
8.3	Membru în colective editoriale	17
8.4	Lucrări acceptate la publicat	19
8.5	Preprinturi elaborate în 2020	22
8.6	Cooperări științifice	27

1 Lucrări publicate la finele lui 2020 și neconținute în Raportul pe 2020

1.1 În reviste din străinătate cotate ISI

1. C. Anghel: *Geometry of the Sasakura bundle*, **Expo. Math.** **38**(2020), pag. 51 – 59
2. M. Cimpoeaș: *On the restricted partition function via determinants with Bernoulli polynomials. II.*, **Rev. Un. Mat. Argentina** **61**(2020), pag. 431 – 440
3. M. Prunescu: *The exponential diophantine problem for \mathbb{Q} is undecidable*, **J. Symbolic Logic**, **85** (2020), pag. 671 – 672
4. L. Maxim: *Notes on vanishing cycles and applications*, **J. Aust. Math. Soc.** **109**(2020), pag. 371 – 415
5. A. Neguț: *Toward AGT for parabolic sheaves*, **Int. Math. Res. Not. IMRN**(2020), <https://doi.org/10.1093/imrn/rnaa308>
6. S. Burciu: *Representations and conjugacy classes of semisimple quasitriangular Hopf algebras*, **SIGMA Symmetry Integrability Geom. Methods Appl.** **16**(2020), Paper No. 039, 20 pp
7. G. Nenciu, I. Nenciu: *On essential self-adjointness for first order differential operators on domains in \mathbb{R}^d* , **J. Spectral Th.** **10** (2020), pag. 1253–1276.
8. E. Mihăilescu, M. Urbanski: *Skew product Smale endomorphisms over countable shifts of finite type*, **Ergodic Theory Dynam. Systems** **40** (2020), pag. 3105–3149.
9. Y. Zhang, X. Tang, V. Rădulescu: *Small perturbations for nonlinear Schrödinger equations with magnetic potential*, **Milan J. Math.** **88** (2020), pag. 479 – 506
10. M. Lyubich, R. Radu, R. Tănase, *Hedgehogs in higher dimensions and their applications*, **Astérisque** **416** (2020), pag. 213–251
11. T. Firsova, M. Lyubich, R. Radu, R. Tănase, *Hedgehogs for neutral dissipative germs of holomorphic diffeomorphisms of $(\mathbb{C}^2, 0)$* , **Astérisque** **416** (2020), pag. 193–211

1.2 În reviste din România cotate ISI

1. A. Neguț: *The Chow of $S^{[n]}$ and the universal subscheme*, **Bull. Math. Soc. Sci. Math. Roumanie (N.S.)** **63**(2020), pag. 385–394

1.3 În alte reviste

1. G. Pașa: *Eigenvalues and Approximation Through Simple Functions*, **Rev. Roumaine Math. Pures Appl.** **65** (2020), pag. 485–490.
2. M. Aprodu, V. Vuletescu: *Indecomposable filtrable vector bundles on Oeljeklaus-Toma manifolds*, **Revue Roumaine Math Pures Appl.**, **65** (2020), pag. 227 – 234

3. Iordănescu, R.; Nichita, F.F.; Pasarescu, O. *Unification Theories: Means and Generalized Euler Formulas.*, **Axioms** **9**(2020), pag. 1 – 8.

1.4 În volume de conferințe

1. L. Beznea, M. Deaconu, O. Lupașcu-Stamate: *Scaling property for fragmentation processes related to avalanches*, In: **Applications of Mathematics and Informatics in Natural Sciences and Engineering** (2020), pag. 37–45, (Springer Proceedings in Mathematics & Statistics **334**).
2. Chen, J., Dai, Z., Duan, J., Hu, Q., Li, R., Matzinger, H., Popescu, I., Zhai, H.: *A cost-reducing partial labeling estimator in text classification problem*, In Future of Information and Communication Conference (2020), Springer, pp. 494–511.

2 Lucrări publicate în 2021

2.1 În reviste din străinătate cotate ISI

1. Cristina Anghel: *A combinatorial description of the centralizer algebras connected to the Links-Gould Invariant*, **Algebr. Geom. Topol.** **21**, (2021), pag. 1553 – 1593
2. Cristina Anghel, N. Geer, B.Patureau: *Relative (pre)-modular categories from special linear Lie superalgebras*, **J. Algebra** **586**, (2021), pag. 479 – 525
3. M. Prunescu: *Smooth approximations by continuous choice-functions*, **Soft Computing**, **25** (2021), pag. 13277 – 13286
4. C. Ionescu: *Finite generation of André-Quillen (co-)homology of F -finite algebras*, **Comm. Algebra** **49**(2021), pag. 1548 – 1552
5. C.Y. Hsiao, X. Li, G. Marinescu: *Equivariant Kodaira Embedding for CR Manifolds with Circle Action*, **Michigan Math. J.** **70** (2021), pag. 55–113.
6. O. Preda, M. Stanciu: *Coverings of locally conformally Kähler complex spaces*, **Math. Z.** **298** (2021) pp.639–651.
7. S. Carolus, J. Laubacher, M. D. Staic: *A simplicial construction for noncommutative settings*, **Homology, Homotopy Appl.** **23**(2021), pag. 49 – 60
8. L. Dias, C. Joița, M. Tibăr : *Atypical points at infinity and algorithmic detection of the bifurcation locus of real polynomials*, **Math. Z.** **298** (2021), 1545–1558.
9. C. Anghel, I. Coandă, N. Manolache: *A property of five lines in \mathbb{P}^3 and four generated 4-instantons*, **Comm. Algebra** **49**(2021), pag. 1 – 13
10. M. Colțoiu, C. Joița: *Geometric Convexity Properties of Coverings of 1-Convex Surfaces*, **J. Geom. Anal.** **31** (2021), pag. 475–489.
11. L. Beznea, I.R. Ionescu, and O. Lupașcu-Stamate: *Random multiple-fragmentation and flow of particles on a surface* **J. Evol. Equ.** (2021), <https://doi.org/10.1007/s00028-021-00732-z>
12. M. Vâjăitu: *On Lebesgue decomposition of p -adic distributions. With an appendix by Victor Alexandru*, **Publ. Math. Debrecen** **98**(2021), pag. 115 – 127
13. V. Alexandru, M. Vâjăitu, A. Zaharescu: *On the zeros and singularities of p -adic trace functions*, **Comm. Algebra** **49**(2021), pag. 967 – 978
14. D. Liu, A. Zaharescu: *Races with imaginary parts of zeros of the Riemann zeta function and Dirichlet L -functions*, **J. Math. Anal. Appl.** **494**(2021), pag. 1 – 11
15. H. M. Bui, K. Pratt, A. Zaharescu: *Exceptional characters and nonvanishing of Dirichlet L -functions*, **Math. Ann.** **380**(2021), pag. 593 – 642
16. W.Brunns, B. Ichim: *Polytope volume by descent in the face lattice and applications in social choice*, **Math. Progr. Comput.** **13** (2021), pag. 415 – 442

17. V. Cortes, L. David: *Generalized connections, spinors, and integrability of generalized structures on Courant algebroids*, **Moscow Math. J.** **21** (2021), pag. 695 – 736.
18. E. Elduque, L. Maxim: *Higher-order degrees of affine plane curve complements*, **Indiana Univ. Math. J.** **70**(2021), pag. 179 – 211
19. Y. Liu, L. Maxim, B. Wang: *Perverse sheaves on semi-abelian varieties*, **Selecta Math. (N.S.)** **27**(2021), Paper No. 30, 40 pp.
20. Y. Liu, L. Maxim, B. Wang: *Topology of subvarieties of complex semi-abelian varieties*, **Int. Math. Res. Not. IMRN** **2021**(2021), pag. 11169 – 11208
21. G. Oberdieck, A. Negut, Q. Yin: *Motivic decompositions for the Hilbert scheme of points of a K3 surface*, **J. Reine Angew. Math.** (2021), pp. 65–95
22. E. Gorsky, A. Neğuț, J. Rasmussen: *Flag Hilbert schemes, colored projectors and Khovanov-Rozansky homology*, **Adv. Math.** **378**(2021), art. 107542.
23. A. Aydın, A. Gheondea: *Probability error bounds for approximation of functions in reproducing kernel Hilbert spaces*. **J. Funct. Spaces** (2021), Art. ID 6617774, 15 pp.
24. E. Mihăilescu, M. Urbanski: *Smale endomorphisms over graph-directed Markov systems*, **Ergodic Theory Dynam. Systems** **41** (2021), pp. 2508-2541.
25. E. Mihăilescu: *Thermodynamic formalism for invariant measures in iterated function systems with overlaps*, **Commun. Contemp. Math.** (2021), 2150041.
26. J. Orlik, G. Panasenko and R. Stavre: *Asymptotic analysis of a viscous fluid layer separated by a thin stiff stratified elastic plate*, **Appl. Anal.** **100**(2021), pag. 589 – 629
27. U. Kohlenbach, A. Sipoș: *The finitary content of sunny nonexpansive retractions*, **Comm. Contemp. Math.** **23** (2021), 19550093 [63 pag.].
28. A. Sipoș: *Rates of metastability for iterations on the unit interval*, **J. Math. Anal. Appl.** **502** (2021), 125235 [11 pag.].
29. A. Sipoș: *Construction of fixed points of asymptotically nonexpansive mappings in uniformly convex hyperbolic spaces*, **Numer. Funct. Anal. Optim.** **42** (2021), pag. 696–711.
30. A. Sipoș: *A quantitative multiparameter mean ergodic theorem*, **Pacific J. Math.** **314** (2021), pag. 209–218.
31. A.L. Agore: *Universal coacting Poisson Hopf algebras*, **Manuscripta Math.** **165**(2021), pag. 255 – 268
32. A.L. Agore, G. Militaru: *Algebraic constructions for Jacobi-Jordan algebras*, **Linear Algebra Appl.** **630**(2021), pag. 158 – 178
33. I. Gruais, D. Polišeovski: *Thermal flows in fractured porous media*, **ESAIM: Math. Modell. Numerical Anal.(M2AN)** **55(3)**(2021), pag. 789 – 805

34. I. Beltiță, D. Beltiță: *AF-embeddability for Lie groups with T_1 primitive ideal spaces*, **J. London Math. Soc.** **104**(2021), pag. 320–340.
35. I. Beltiță, D. Beltiță: *Traces of C^* -algebras of connected solvable groups*, **J. Math. Anal. Appl.** **500**(2021), pag. 125–135.
36. I. Beltiță, D. Beltiță: *Linear dynamical systems of nilpotent Lie groups*, **J. Fourier Anal. Appl.** **27**(2021), pag. 1–29, art.nr. 74.
37. I. Beltiță, D. Beltiță: *On the isomorphism problem for C^* -algebras of nilpotent Lie groups*, **J. Topol. Anal.** **13**(2021), pag. 753–782.
38. I. Beltiță, D. Beltiță, J.E. Galé: *Transference for Banach Space Representations of Nilpotent Lie Groups. Part 2. Pedersen Multipliers*, **J. Geom. Anal.** **31**(2021), pag. 12568–12593.
39. H. Cornean, B. Helffer, R. Purice: *Spectral analysis near a Dirac type crossing in a weak non-constant magnetic field*, **Trans. Amer. Math. Soc.**, **374**(2021), pag. 7041 – 7104.
40. E. Feireisl, E. Rocca, G. Schimperna, A. Zărnescu, *Weak sequential stability for a non-linear model of nematic electrolytes.*, **Discrete Contin. Dyn. Syst. Ser. S14** (2021), no. 1, pag. 219?241.
41. A. Zărnescu, *Mathematical problems of nematic liquid crystals: between dynamical and stationary problems.*, **Philos. Trans. Roy. Soc. A** **379** (2021), no. 2201, Paper No. 20200432, 15 pp.
42. A. Otiman, M. Toma: *Hodge decomposition for Cousin groups and Oeljeklaus-Toma manifolds*, **Ann. Sc. Norm. Super. Pisa Cl. Sci. XXII**(2021), pag. 485 – 503
43. N. Istrati, A. Otiman, M. Pontecorvo: *On a class of Kato manifolds*, **Int. Math. Res. Not. (IMRN)**, **2021**(2021), pag. 5366 – 5412
44. R. Pantilie: *Twistor theory for exceptional holonomy*, **Mathematika** **67**(2021), pag. 54 – 60
45. M. Verbitsky, V. Vuletescu, L. Ornea: *Classification of non-Kähler surfaces and locally conformally Kähler geometry*, **Russian Math. Surveys (Uspekhi Mat. Nauk)** **76** (2021), pag. 71–102
46. L. Ornea, M. Verbitsky: *Closed orbits of Reeb fields on Sasakian manifolds and elliptic curves on Vaisman manifolds*, **Math. Z.** **299** (2021), 2287–2296.
47. T. Dumitrescu, M. Epure: *A class of multiplicative lattices*, **Czech. Math. J.** **71** (2021), pag. 591–601 .
48. S. Burciu: *Structure constants for premodular categories*, **Bull. Lond. Math. Soc.** **53**(2021), pag. 777–791
49. L. Ignat, J. Rossi, A. San Antolin: *Asymptotic behaviour for local and nonlocal evolution equations on metric graphs with some edges of infinite length*, **Ann. Mat. Pura Appl. (4)** **200** (2021), no. 3, 1301–1339.

50. A. Gárriz, L. Ignat: *A non-local coupling model involving three fractional Laplacians*, **Bull. Math. Sci.** **11** (2021), Paper No. 2150007.
51. V. Drăgan, E.F. Costa, I.L. Popa, S. Aberkane: *Exact detectability: Application to generalized Lyapunov and Riccati equations*, **Systems Control Lett.**, **157**, (2021), 105032
52. V. Drăgan, I.G. Ivanov, I.L. Popa, O. Bagdasar: *Closed-loop Nash Equilibrium in the Class of Piecewise Constant Strategies in a Linear State Feedback Form for Stochastic LQ Games*, **Mathematics**, **9**, **2713**, (2021), doi.org/10.3390/math9212713.
53. M. Cipu, A. Dujella, Y. Fujita: *Diophantine triples with largest two elements in common*, **Period. Math. Hung.** **82**(2021), pag. 56–68
54. V. Timofte, A. Timofte: *On algorithms testing positivity of real symmetric polynomials*, **J. Inequal. Appl.** **2021**, article number 135 (2021), 22 pag.
55. D. Cibotaru, S. Moroianu, *Odd Pfaffian forms*, **Bull. Brazilian Math. Soc.** **52**(2021), pag. 915 – 976.
56. L. Leuştean, P. Pinto: *Quantitative results on a Halpern-type proximal point algorithm*, **Comput. Optim. Appl.** **79** (2021), pag. 101 – 125
57. G. Nenciu, I. Nenciu, R. Obermeyer: *Essential Self-adjointness of Symmetric First-Order Differential Systems and Confinement of Dirac Particles on Bounded Domains in \mathbb{R}^d* , **Commun. Math. Physics** **387** (2021), pag. 361–395.
58. X. He, V. Rădulescu : *Small linear perturbations of fractional Choquard equations with critical exponent*, **J. Differential Equations** **282**(2021), pag. 481 – 540
59. N.S. Papageorgiou, V. Rădulescu, X. Tang: *Anisotropic Robin problems with logistic reaction*, **Z. Angew. Math. Phys.** **72**(2021), art. 94
60. F. Gao, V. Rădulescu, M. Yang, Y. Zheng: *Standing waves for the pseudo-relativistic Hartree equation with Berestycki-Lions nonlinearity*, **J. Differential Equations** **295**(2021), pag. 70 – 112
61. N.S. Papageorgiou, V. Rădulescu, D. Repovš: *Anisotropic (p,q) -equations with gradient dependent reaction*, **Nonlinearity** **34**(2021), pag. 5319 – 5343
62. Y. Zhang, X. Tang, V. Rădulescu: *High perturbations of Choquard equations with critical reaction and variable growth*, **Proc. Amer. Math. Soc.** **149**(2021), pag. 3819 – 3835
63. G. Figueiredo, V. Rădulescu: *Positive solutions of the prescribed mean curvature equation with exponential critical growth*, **Ann. Mat. Pura Appl.** **200**(2021), pag. 2213 – 2233
64. N.S. Papageorgiou, D. Qin, V. Rădulescu: *Nonlinear eigenvalue problems for the (p,q) -Laplacian*, **Bull. Sci. Math.** **172**(2021), Paper No. 103039
65. Y. Zhang, X. Tang, V. Rădulescu: *Concentration of solutions for fractional double-phase problems: critical and supercritical cases*, **J. Differential Equations** **302**(2021), pag. 139 – 184

66. A. Bahrouni, V. Rădulescu, D. Repovš: *Nonvariational and singular double phase problems for the Baouendi-Grushin operator*, **J. Differential Equations** **303**(2021), pag. 645 – 666
67. C. Ji, V. Rădulescu: *Concentration phenomena for magnetic Kirchhoff equations with critical growth*, **Discrete Contin. Dyn. Syst.** **41**(2021), pag. 5551 – 5577
68. Y. Zhang, X. Tang, V. Rădulescu: *Anisotropic Choquard problems with Stein-Weiss potential: nonlinear patterns and stationary waves*, **C. R. Math. Acad. Sci. Paris** **359**(2021), pag. 959 – 968
69. C. Alves, P. Garain, V. Rădulescu: *High perturbations of quasilinear problems with double criticality*, **Math. Z.** **299**(2021), pag. 1875 – 1975
70. D. Qin, V. Rădulescu, X. Tang: *Ground states and geometrically distinct solutions for periodic Choquard-Pekar equations*, **J. Differential Equations** **275**(2021), pag. 652 – 683
71. W. Yan, V. Rădulescu: *Global small finite energy solutions for the incompressible magnetohydrodynamics equations in $\mathbb{R} \times \mathbb{R}^2$* , **J. Differential Equations** **277**(2021), pag. 114 – 152
72. C. Ji, V. Rădulescu: *Multi-bump solutions for the nonlinear magnetic Schrödinger equation with exponential critical growth in \mathbb{R}^2* , **Manuscripta Math.** **164**(2021), pag. 509 – 542
73. C. Ji, V. Rădulescu: *Concentration phenomena for nonlinear magnetic Schrödinger equations with critical growth*, **Israel J. Math.** **241**(2021), pag. 465 – 500
74. V. Ambrosio, T. Isernia, V. Rădulescu: *Concentration of positive solutions for a class of fractional p -Kirchhoff type equations*, **Proc. Royal Soc. Edinburgh, Sect. A** **151**(2021), pag. 601 – 651
75. G. Mingione, V. Rădulescu: *Recent developments in problems with nonstandard growth and nonuniform ellipticity*, **J. Math. Anal. Appl.** **501** (2021), Paper 125197
76. A. Aghajani, C. Cowan, V. Rădulescu: *Positive supersolutions of fourth-order nonlinear elliptic equations: explicit estimates and Liouville theorems*, **J. Differential Equations** **298**(2021), pag. 323 – 345
77. R. Xu, W. Lian, V. Rădulescu, N. Zhao, Y. Yang: *Global well-posedness for a class of fourth order nonlinear strongly damped wave equations*, **Adv. Calc. Var.** **14**(2021), pag. 589 – 611
78. M. Palmer: *Homological stability for moduli spaces of disconnected submanifolds, I*, **Alg. Geom. Topol.** **21** (2021), pag. 1371 – 1444
79. M. Palmer, U. Tillmann: *Configuration-mapping spaces and homology stability*, **Res. Math. Sciences** **8** (2021), Art. 38
80. L. Liu, A. Makhlof, C. Menini, F. Panaite: *Tensor products and perturbations of BiHom-Novikov-Poisson algebras*, **J. Geom. Phys.** **161** (2021), art. nr. 104026

81. L. Liu, A. Makhlouf, C. Menini, F. Panaite: *BiHom-pre-Lie algebras, BiHom-Leibniz algebras and Rota-Baxter operators on BiHom-Lie algebras*, **Georgian Math. J.** **28** (2021), pag. 581–594
82. R. Dinu, M. Vodička: *Gorenstein property for phylogenetic trivalent trees*, **J. Algebra** **575**(2021), pag. 233 – 255.
83. R. Dinu, C. Eur, T. Seynnaeve: *K-theoretic Tutte polynomials of morphisms of matroids*, **J. Comb. Th. Series A** **181**(2021), 105414.
84. A. Diaconu, I. Whitehead: *On the third moment of $L(\frac{1}{2}, \chi_d)$ II: the number field case*, **J. Eur. Math. Soc. (JEMS)** **23** (2021), pag. 2051–2070.
85. I. Badea, C. Mocanu, F. Nichita, O. Păsărescu, *Applications of Non-Standard analysis in Topoi to Mathematical Neurosciences and Artificial Intelligence: Infons, Energons, Receptons (I)*, **Mathematics** **9**(2021), pag. 1 – 28.
86. I. Cîmpean, A. Grecu: *The nonlinear Schrodinger equation with white noise dispersion on quantum graphs*, **Comm. Math. Sci.** **19**(2021), pag. 405 – 435
87. D. Ionescu-Kruse: *Analytical Atmospheric Ekman-Type Solutions with Height-Dependent Eddy Viscosities*, **J. Math. Fluid Mech.** **23** (2021), pag. 1 – 11.
88. F.F. Nichita: *On the Johnson–Tzitzeica Theorem, Graph Theory, and Yang–Baxter Equations*, **Symmetry** (2021), 13, 2070.
89. I. Badea, C. Mocanu, F. Nichita, O. Păsărescu, O. *Applications of Non-Standard analysis in Topoi to Mathematical Neurosciences and Artificial Intelligence: Infons, Energons, Receptons (I)*, **Mathematics** (2021), 9, 2048.
90. D. Gaidashev, R. Radu, M. Yampolsky: *Renormalization and Siegel disks for complex Hénon maps*, **J. Eur. Math. Soc. (JEMS)** **23** (2021), pag. 1053–1073
91. A. Khan, D. Timotin: *Algebras of block Toeplitz matrices with commuting entries*, **Linear Multilinear Algebra** **69** (2021), pag.2702–2716
92. H. Bercovici, D. Timotin: *Operators invariant relative to a completely nonunitary contraction*, **Math. Z.** **299** (2021), pag. 1631–1649.

2.2 În reviste din România cotate ISI

1. M. Cimpoeaş: *Remarks on the restricted partition function*, **Math. Reports** **23(73)** no. 4(2021), 10 pages.
2. D. Popescu: *Valuation rings of dimension one as limits of smooth algebras*, **Bull. Math. Soc. Sci. Math. Roumanie**, **64(112)**, (2021), pag. 65–74.
3. C. Popescu: *On vertex 3-colourable disc triangulations*, **Bull. Math. Soc. Sci. Math. Roumanie** **112** (2021), pag. 133 – 145.

2.3 În alte reviste

1. M. Prunescu: *Sequence A344949*, **The Online Encyclopedia of Integer Sequences** (2021), <https://oeis.org/A344949>
2. V. Brînzănescu: *Vector bundles on non-Kaehler elliptic surfaces and integrable systems*, **Revue Roum. Math. Pures Appl.** **66**(2021), pag. 257 – 263
3. G. Paşa: *Three-Layer Hele-Shaw Displacement With an intermediate Non-Newtonian Fluid*, **Int. Journal Appl. Math.** **34** (2021), pag. 669-679.
4. M. Buliga: *ZSS: Zipper logic revisited*, **figshare. Journal contribution.** (2021), doi: 10.6084/m9.figshare.14769666.v1
5. J. Itoh, J. Rouyer, C. Vilcu: *Some inequalities for tetrahedra*, **Beiträge Algebra Geom.** **62** (2021), pag. 705 – 715
6. V. Drăgan, S. Aberkane : *Robust Stability of Time-Varying Markov Jump Linear Systems with Respect to a Class of Structured, Stochastic, Nonlinear Parametric Uncertainties*, **Axioma** **10** (2021), 148
7. V. Drăgan, I.L. Popa: *A spectral criterion for the existence of the stabilizing solution of a class of Riccati type differential equations with periodic coefficients*, **Stud. Univ. Babeş-Bolyai Math.**, **66** (2021), pag. 159 – 177.
8. V. Drăgan, I.G. Ivanov: *The minimization of the mean square of the deviation of a random signal from a given target*, **Ann. Acad. Rom. Sci. Ser. Math. Appl.**, **13** (2021), pag. 181 – 201.
9. L. Iantovics, F. Nichita: *On the Colored and the Set-Theoretical Yang–Baxter Equations*, **Axioms** **10** (2021), 146.
10. R. Gaba: *Venetoclax First Cycle Treatment in a Case of Severe AML FAB M2 and COVID-19 Pneumoniae: A Rare Clinical Scenario*, **Asian Hematology Res. J.**, **4** (2021), pag. 12 – 18
11. V. Rădulescu: *Low and high perturbations of nonhomogeneous eigenvalue problems with absorption*, **Revue Roum. Math. Pures Appl.** **66** (2021), pag. 223 – 235

2.4 În volume de conferințe

1. I. Țuțu, C.E. Chiriță, J.L. Fiadeiro: *Dynamic Reconfiguration via Typed Modalities*, **FM 2021, LNCS 13047**, Formal Methods, 24th international symposium, Beijing, China, Nov. 2021, E. Abraham et al. (eds.) Springer (2021), pag. 599 – 615, ISBN: 978-3-030-90870-6

2.5 Capitle in volume colective

1. L. David, C. Hertling: *Meromorphic connections over F-manifolds*, **Quantization and Geometry, Proc. Symp. Pure Math.**, **103.1**, I. Krichever et al. (eds.) Amer. Math. Soc. (2021), pag. 171 – 217, ISBN: 978-1-4704-5591-0

2. C. Raicu, *Koszul Modules*, **Recent developments in commutative algebra**, A. Conca, S. Iyengar, A. Singh (eds.), Springer, Cham (2021), pag. 33–57, ISBN: 978-3-030-65063-6
3. R. Diaconescu: *Implicit Partiality of Signature Morphisms in Institution Theory*, in **J. Madarász, G. Székely eds., Hajnal Andréka and István Németi on Unity of Science: From Computing to Relativity Theory Through Algebraic Logic** Springer (2021), pag. 81–123.
4. I. Țuțu, C.E. Chiriță, J.L. Fiadeiro: *When databases roamed computing: Formal database specification revisited*, **A Question is More Illuminating than an Answer, Tributes 44**, E.H. Haeusler, L.C.P.D. Pereira, J.P. Viana (eds.) College Publications (2021), pag. 261 – 278 ISBN: 978-1-84890-353-1

3 Cărți publicate în 2021

3.1 În alte edituri din România

1. M. Cimpoeaș: *Capitole de algebră liniară, geometrie și ecuații diferențiale pentru ingineri*, Ed. Politehnica Press(2021), pag. 260, ISBN: 978-606-515-981-5
2. M. Cimpoeaș: *Capitole de analiză matematică pentru ingineri*, Ed. Politehnica Press(2021), pag. 300, ISBN: 978-606-515-982-2

4 Volume editate în 2021

4.1 In străinătate

1. X. Chen, M. Ravnik, V. Slastikov, A. Zărnescu *Topics in mathematical design of complex materials*, Volum tematic in Philos. Trans. Roy. Soc. A (2021), vol. 379, ISSN:1364-503X
2. L. Ignat, J. Navarro, J. Rossi, A. San Antolin (Eds.) *Proceedings of the 7Th Workshop in Mathematical Analysis in Alicante 2020*, Publicacions De La Universitat D'Alacant, ISBN: 978-84-9717-XXX-X, 2021

4.2 În țară

1. L. Beznea, A. Gheondea, P. Hästö, C. Joița, M. Vuorinen (guest editors): Proceedings of the 15th Romanian-Finnish Seminar and the 10th Conference on Function Spaces, Differential Operators, and Nonlinear Analysis, Turku (Finland), 2019. *Math. Reports* **23** (73), No. 1-2, (2021) (Special issue dedicated to the memory of Cabiria Andreian Cazacu)
2. L. Beznea, I. Popescu, M. Röckner (guest editors): Stochastic Analysis and Related Topics, Nicu Boboc Memorial Volume. *Revue Roumaine Math. Pures Appl.* **66**, No. 1 (2021)

5 Citări (Lista completă este anexată)

- Citări apărute în 2020 și neconținute în Raportul pe 2020
 - Citări - fără autocitări: 170
 - Autocitări: 31
- Citări apărute în 2021
 - Citări - fără autocitări: 859
 - Autocitări: 105

6 Premii

6.1 Premiile Academiei Române

Premii acordate în 2020 pentru lucrări din 2018.

- Florin Nicolae - Premiul Gheorghe Lazăr 2018
- Iulian Cîmpean - Premiul Simion Stoilow 2018

6.2 Alte premii

- L. Maxim: Van Vleck Professorship Research Award, University of Wisconsin-Madison, 2019 - 2023
- A. Neaguț: MIT Charles E. Reed Faculty Initiatives Award, 2020
- V. Rădulescu: Highly Cited Researcher 2019, Clarivate Analytics
- V. Rădulescu: First Prize of the Rector of the AGH University of Science and Technology, Krakow

7 Conferințe

7.1 Organizări de conferințe

1. A. Sipoș: Proof and Computation in Mathematics Minisymposium (parte din DMV Annual Meeting 2020; online), Chemnitz, 14 septembrie 2020, <https://www.tu-chemnitz.de/mathematik/dmv2020/minisymp.php>
2. F. Rădulescu: Geometric Analysis and Potential Theory Discrete and Continuous a conference on the occasion of Massimo Picardello's 70th birthday Perugia, Italy, February 17-19, 2020 , <https://www.math.tugraz.at/massimo70/>
3. L. Ignat: VII jornadas de Analisis Matematico Alicante, 15-17/01/2020, <https://dmat.ua.es/es/actividades/vii-jornadas-de-analisis-m-atematico.html>

4. A. Negut: Workshop on Soergel Bimodules and Categorification of the Braid Group ICERM, Providence, Feb 28-Mar 1, 2020,
<https://icerm.brown.edu/events/htw-20-sbcb/>
5. L. Maxim: *Singularities in the Midwest Workshop, VII.*, Madison, WI, 20-21 martie 2020, (anulat din cauza Covid-19),
<http://www.math.wisc.edu/~maxim/Sing20.html>
6. L. Maxim *Suzhou Workshop on Geometry, Combinatorics and Representation Theory*, Soochow University, Suzhou, China, 6-9 iulie 2020 (amanat pentru 2021),
<http://www.math.wisc.edu/~maxim/Suzhou20.html>
7. R. Răscdeaconu: *Real Enumerative Geometry and Beyond* - Shanks Workshop, Vanderbilt University, Nashville, TN, USA, 6-7 martie, 2020
adresa web: <https://my.vanderbilt.edu/rag2020/>
8. L. Beznea: *Série de vidéo conférences MATH-ADORE*, în cadrul Centrului Francophon de Matematică (AUF) de la IMAR, prima expunere, "Mathématiques et mouvement des organismes aquatiques" (Marius Tucsnak, Univ. Bordeaux, Franța), 10 iulie 2020 (co-organizator), <http://www.imar.ro/imar/2020/anunturi/conf-tucsnak.html>
9. L. Beznea: *Atelier de travail en Stochastique et EDP*, București, 20-21 octombrie 2020, video conferință, (co-organizator),
<http://imar.ro/CFM/2020/EDP-Stochastique-Oct2020.pd>
10. D. Ionescu-Kruse: Membru în colectivul științific al conferinței "Le XV-e Colloque Franco-Roumain de Mathématiques Appliquées", Brașov, România, 24 - 28 august 2020
<https://15colfro.sciencesconf.org/>
11. A. Otiman: Conformal Structures in Geometry, 16 iulie 2020, Platforma Zoom (co-organizator cu N. Istrati și M. Pontecorvo)
<https://gecogedi.dimai.unifi.it/event/1031/>

7.2 Conferințe și expuneri susținute

1. L. Maxim, *Homological duality: jumping loci, propagation, realization*, la "Arrangements at Home, II: Cohomology Jump Loci", Online Workshop, 11-12 iunie 2020.
2. L. Maxim, *Homological duality: jumping loci, propagation, realization*, la "16th International Workshop on Real and Complex Singularities", Online Workshop, 23-30 noiembrie 2020.
3. M. Aprodu, *Green's conjecture and vanishing of Koszul modules*, Zoom Algebraic Geometry Marathon (online), 1 Septembrie 2020.
4. V. Brînzănescu, *Gauduchon metrics and stability*, Workshop online Univ. Roma 3, July, 16, 2020.
5. F. Rădulescu, *Operators Algebras and unitary representations of p -adic groups*, Perugia, Italy, February 17-19, 2020.

6. V. Brînzănescu, *Can we do research without mathematics?*, Humboldt Kolleg Bucharest, November, 18-22, 2020.
7. M. Staic, *The Exterior Operad*, Algebra Seminar BGSU, February 11 and February 18, 2020.
8. Al. Constantinescu, *Singularities and Radical Initial Ideals* One Day Workshop on Commutative Algebra and Related Fields, 1.9.2020, Constanța, Romania.
9. A. Sipoș, *Quantitative inconsistent feasibility for averaged mappings*, Days in Logic 2020 (Lisabona, Portugalia), 30 ianuarie - 1 februarie 2020.
10. A. Sipoș, *Two recent results in proof mining*, MFO Workshop no. 2046 (on ‘Mathematical Logic: Proof Theory, Constructive Mathematics’; online; Oberwolfach, Germania), 8-14 noiembrie 2020.
11. L. Ignat, *Asymptotic behavior of solutions for some local and nonlocal diffusion problems on metric graphs*, (virtual) seminar in Hagen, COST partener Delio Mugnolo, 21/10/2020
12. L. Ignat, *Asymptotic behavior of solutions for local and nonlocal diffusion on metric graphs*, virtual International conference on applied mathematics and numerical methods, October 29-31, 2020, Craiova, Romania.
13. V. D. Rădulescu, *New phenomena in anisotropic double-phase problems*, Center for Applied Mathematics, Guangzhou University, 8 July 2020
14. D. Timotin, *Algebras of block Toeplitz matrices with commuting entries*, prezentare online la seminarul de teoria operatorilor de la Univ. Lille, iunie 2020.
15. V. D. Rădulescu, *From nonlinear analysis to mathematical physics and beyond*, East China University of Science and Technology, Shanghai, 21 September 2020
16. A. Popa, *Multiple Dirichlet series for affine Weyl groups*, Online conference in automorphic forms, 1-5 iunie 2020, Budapest
17. Miron Stanciu, *Compatibility between non-Kähler structures on complex (nil)manifolds*, Seminarul de Geometrie al Institutului de Matematică al Academiei Române (online), 9 iunie 2020.
18. M. Stanciu, *Locally conformally symplectic reduction*, Conferința Școlii Doctorale din Consorțiul Universitaria (online), 22-23 octombrie 2020.
19. A. Popa, *Affine Weyl group Multiple Dirichlet Series*, IMAR monthly lecture, 15 ianuarie 2020
20. V. D. Rădulescu, *Double phase problems with variable exponents and mixed regime*, International Conference on Applied Mathematics and Numerical Methods, Craiova, 29 October 2020

21. R. Purice, *Spectral analysis of the bottom of the spectrum of a 2-dimensional periodic magnetic Hamiltonian*, Mathematical Challenge of Quantum Transport in Nanosystems, International Conference, Saint Petersburg, 14 – 16 Septembrie, 2020 (video-conferință on-line).
<http://mathdep.ifmo.ru/mcqt2020/>
22. A. Gheondea: *Generalized Lebesgue-Radon-Nikodym Decompositions*, Analysis Seminar, Department of Mathematics, Bilkent University, Ankara, 21.04.2020, 16:00-17:00.
23. A. Gheondea: *Gaussian Reproducing Kernels*, Analysis Seminar, Department of Mathematics, Bilkent University, Ankara, 13.10.2020, 15:00–16:00.
24. I. Belțiță, *C^* -algebras of solvable Lie groups and their finite-dimensional approximation properties*, International Conference on Noncommutative Analysis Ghent Analysis and PDE Center, Ghent University, via ZOOM, 18-20 August 2020.
25. I. Țuțu, J.L. Fiadeiro, C.E. Chiriță, *Dynamic reconfigurations through hybrid lenses*, 25th International Workshop on Algebraic Development Techniques, workshop virtual, 29 aprilie 2020.
26. A. Zărnescu, *Half-integer point defects in nematic liquid crystals*, Old Dominion University, webinar 5 Noiembrie 2020
27. D. Belțiță, *Finite-dimensional approximations of convolution operators on groups*, Functions and Operators, 10 years after (FaO2020), 15 – 17 iulie 2020, Jagiellonian University, Cracovia, Polonia (online: <http://fao2k20.im.uj.edu.pl/>).
28. V. Drăgan, *On the optimal filtering of signals generated by linear systems subjected to multiplicative and additive white noise perturbations - An overview*, 19 Februarie 2020, Conferința lunară la IMAR.
29. A. Diaconu, *Secondary terms in the asymptotics of moments of L-functions*, prezentare Zoom în cadrul conferinței *Online Conference in Automorphic Forms*, 1 Iunie - 5 Iunie, 2020.
30. V. Drăgan, *On the Stochastic Linear Quadratic optimal regulator by Piecewise Constant Admissible Controls. The infinite time horizon case*, The online Conference AMEFSS 2020, 28 June -2 July 2020, Plovdiv University and Sofia University, Bulgaria.
31. D. Matei, *Homology of Artin Kernels*, Topology Seminar, iunie 2020, University of Tokyo.
32. S. Moroianu, *Integrality properties of eta invariants*, Makerere University Mathematics Seminar, 25 februarie 2020.
33. C. Raicu, *Equations and syzygies for varieties of binary forms*, Mathematics Department Colloquium, Cleveland State University, November 2020.
34. C. Raicu, *Equations and syzygies for varieties of binary forms*, AMS special session on Recent Developments in Commutative Algebra, University of Texas at El Paso, September 2020.

35. C. Raicu, *Equations and syzygies for varieties of binary forms*, Joint Colloquium: Northwestern University, the University of Chicago, and the University of Illinois at Chicago, August 2020.
36. C. Raicu, *The syzygies of some thickenings of determinantal varieties*, ICERM workshop on Free Resolutions and Representation Theory, August 2020.
37. C. Raicu, *Commutative Algebra with \mathfrak{S}_n -invariant monomial ideals*, Fellowship of the Ring Seminar, MSRI, May 2020.
38. C. Raicu, *Regularity of \mathfrak{S}_n -invariant monomial ideals*, Algebra, Geometry and Combinatorics Day, University of Illinois at Urbana–Champaign, March 2020.
39. C. Raicu, *Regularity of \mathfrak{S}_n -invariant monomial ideals*, Commutative algebra and Combinatorics Seminar, University of Bucharest, Romania, January 2020.
40. M. Buliga, *Molecular computers in artificial chemistry*, Natural Computation Research Group, Univ. Aix-Marseille, France, aprilie 2020.
41. M. Buliga, *Chemlambda*, Recursive Distinctioning Seminar, Univ. of Chicago, US, mai 2020.
42. M. Buliga, *Emergent rewrites in knot theory and logic*, Knots2020: Conference on Physical Knotting, Vortices and Surgery in Nature, Novosibirsk, Russia, iunie 2020.
43. M. Buliga, *Pure See, a lambda calculus for space*, Recursive Distinctioning Seminar, Univ. of Chicago, US, iunie 2020.
44. M. Buliga, *Zipper logic revisited*, Quantum Topology Seminar, Univ. of Chicago, US, septembrie 2020.
45. I. Cîmpean, *On the construction of Hunt processes with applications to Mehler semigroups*, Atelier de travail en Stochastique et EDP, Bucuresti, 20-21 octombrie 2020 (online).
46. A. Otiman, *Dolbeault cohomology of Cousin groups and OT manifolds*, Univ. Ludwig Maximilians, München, decembrie 2019.
47. A. Otiman, *Special non-Kähler metrics on solvmanifolds*, Virtual Seminar on geometry with symmetries (online), noiembrie 2020
48. A. Otiman, *Special non-Kähler metrics on complex manifolds*, Univ. Firenze (online), noiembrie 2020

8 Alte activități

8.1 Conducere granturi

- L. Păunescu - Director de proiect al grantului PN-III-P1-1.1-TE-2019-0262, 15.09.2020-14.09.2022.
- I. Cimpean - Director grant PN-III-P1-1.1-PD-2019-0780, 01.09.2020–31.08.2022, finantat de UEFISCDI.

- O. Preda - Director de proiect grant PN-III-P1-1.1-PD-2016-0182, etapa III: perioada 01.01 - 30.04.2020.
- A. Sipoș - Director de proiect grant PN-III-P1-1.1-PD-2019-0396, 01.09.2020–31.08.2022, finanțat de UEFISCDI.
- L. Maxim - Topology of complex algebraic varieties, 09/2018 – 08/2023, Simons Foundation Collaboration Grants for Mathematicians (USA).
- A. Neaguț - NSF CAREER Award no. 1845034
- C. Raicu - NSF Award DMS - 1901886.
- V. Rădulescu - Analysis of continuous and discrete mathematical models in biology, chemistry and genetics, Grant N1-0064 finanțat de ARRS (Slovenian Research Agency)
- L. Beznea - Coordonator și R. Purice - Secretar Științific - Centre francophone en mathématiques Bucarest-IMAR, finanțat de Biroul Europa Centrală și Orientală al Agenției Universitare a Francofoniei.
<http://www.imar.ro/CFM/>
- R. Purice - Coordonator Român al Rețelei Internaționale GDRI ECO-Math, finanțată de CNRS (Franța), Academia Română și de IMAR.
<http://imar.ro/GDRI/>
- R. Diaconescu - grant PN-III-P2-2.1-PED-2019-0955, *Verificare Formală Bazată pe Componente*.
- A. Agore - Director grant PN-III-P1-1.1-TE-2016-0124, 01.10.2018-30.09.2020.
- M. Fulger - grant 579353 Simons Foundation, Mathematics and Physical Sciences - Collaboration Grants for Mathematicians, Septembrie, 2018– August 2022
- V. Lie - National Science Foundation Grant No. DMS-1900801
- R. Rășdeaconu - Grant NSF (DMS - 1804586) pentru organizarea conferinței *Real Enumerative Geometry and Beyond*, Shanks Workshop, March 6-7, 2020, Vanderbilt University.
- R. Rășdeaconu - Grant NSF (DMS - 1804586) pentru organizarea conferinței *Complex Differential Geometry*, Shanks Workshop, March 2-3, 2018, Vanderbilt University.
- I. Nenciu - *Midwest Partial Differential Equations Seminar (DMS-1800839)*, grant pentru organizarea unei serii de conferințe bianuale, 2018–2021, National Science Foundation, USA.
- I. Nenciu - *On confinement and other long time behaviors in mathematical physics and integrable systems*, grant de cercetare 709025, Simons Foundation, 2020 – 2025.

8.2 Conducere doctorate

- R. Stavre - Doctorand Alexandra Roxana Ciorogar în cadrul SCOSAAR
- R. Diaconescu - Doctorand Alexandru Ioniță în cadrul SCOSAAR
- V. Brînzănescu - Doctorand Maria-Cristina Sandu în cadrul SCOSAAR.
- L. Beznea - Doctoranzi Ștefania Anița, Ana-Maria Boeangiu, Adela Popescu și Alexandra Teodor în cadrul SCOSAAR
- R. Purice - Doctorand Alexandru Mustățea în cadrul SCOSAAR
- L. Ignat - Doctorand Andreea Grecu, Cotutelă cu Liviu Marin la Univ. București
- L. Maxim - Doctorand Alexander Hof, University of Wisconsin-Madison (USA)
- A. Zărnescu - Doctorand Răzvan Ceucă, in cadrul BCAM, Spania
- M. Aprodu - Doctorand Laura Filimon la Univ. București și M. Pavel la Univ. Lorraine Nancy în cotutelă cu Matei Toma
- G. Pașa - începând din iunie 2020 conducător științific al tezei de doctorat elaborate de doamna Liliana Dumitru
- A. Neaguț - Doctorand Yu Zhao la Massachusetts Institute of Technology
- C. Raicu - Doctoranzi Michael Perlman, Zhao Gao, Lizda Nazdira Moncada Morales, Paul LeVa, Jacob Zoromski și Juan Lanfranco la Univ. of Notre Dame.
- I. Nenciu - Doctorand Ryan Obermeyer la University of Illinois at Chicago.
- V. Lie - Doctorand Alejandra Gaitan la Purdue Univ.
- E. Mihăilescu - Doctorand Rodica Marineac în cadrul SCOSAAR
- S. Moroianu - Doctoranzi Cipriana Anghel și George-Rareș Stan în cadrul SCOSAAR

8.3 Membru în colective editoriale

- L. Beznea - *Advances in Pure and Applied Mathematics*, De Gruyter, *Revue Roumaine Math. Pures Appl., Math. Reports*, (co-editor șef), Ed. Academiei Romane - *Proc. Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, Ed. Academiei Romane
- Cezar Joița - Secretar științific al comitetului de redacție la *Revue Roumaine de Mathématiques Pures et Appliquées* și *Mathematical Reports*.
- M. Cipu - *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie* și *Gazeta Matematică, Seria A*.

- C. Năstăsescu - *Mathematical Reports, Revue Roumaine des Mathématiques Pures et Appliquées, Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, Analele Universității din București, Seria Matematică, Analele Științifice ale Universității "Ovidius" din Constanța, Seria Matematică, Analele Universității din Craiova, Seria Matematică - Informatică, Mathematica (Cluj).*
- M. Aprodu - *Revue Roumaine Math. Pures Appl., Math. Reports*
- D. Tiba - *Mathematics and its Applications", Annals of ARS, Bucharest, Recreatii Matematice, Iasi, Mathematical Reports, Scientific Bulletin, ser. A (Bucharest), International Journal of Differential Equations, Bulletin of the South Ural Univ. , Mathematica, Romanian Academy, Cluj, Proceedings of the Romanian Academy, Mathematics*
- V. Rădulescu - *Mathematics in Science and Engineering Book Series Academic Press, De Gruyter Book Series in Nonlinear Analysis and Applications, Advances in Nonlinear Analysis (Walter de Gruyter), Boundary Value Problems (Springer Open), Journal of Mathematical Analysis and Applications (Elsevier), Mathematical Methods in the Applied Sciences (Wiley), Bulletin of Mathematical Sciences (World Scientific), Journal of Geometric Analysis (Springer), Asymptotic Analysis (IOP Press), Rendiconti del Circolo Matematico di Palermo (Springer), Demonstratio Mathematica (Walter de Gruyter), Complex Variables and Elliptic Equations (Taylor & Francis), Discrete and Continuous Dynamical Systems, Series S (American Institute of Mathematical Sciences), Journal of Mathematics and Applications (Rzeszow University of Technology), Advances in Pure and Applied Mathematics (Walter de Gruyter), Opuscula Mathematica (AGH University of Science and Technology, Krakow), Journal of Numerical Analysis and Approximation Theory (Romanian Academy), Ann. St. Univ. Ovidius Constanța*
- V. Brînzănescu - *Bull. SSMR, An. Univ. Ovidius, Serdica J. Math..*
- C. Beli - *Gazeta matematică, Seria A*
- A. Gheondea - *Journal of Operator Theory, Fundația Theta, Complex Analysis and Operator Theory, Birkhäuser Verlag, Basel, Opuscula Mathematics, AGH University of Science and Technology, Krakow, Journal of Function Spaces, Hindawi Limited, London*
- C. Ionescu - *Asia Mathematica*
- D. Timotin - *Journal of Operator Theory, Revue Roumaine de Mathématiques Pures et Appliquées, Mathematical Reports, Analele Științifice ale Universității "Alexandru Ioan Cuza" din Iași, Matematică*
- R. Diaconescu - *Studies in Universal Logic* book series at Springer Basel, Switzerland.
- M. Colțoiu - *Proceedings of the Romanian Academy, Series A, Acta Universitatis Apulensis*
- Călin Popescu - *Gazeta Matematică — Seria A.*
- D. Beltiță - *Analele Științifice ale Universității „Al.I.Cuza” din Iași —Matematică*

- V. Drăgan - *International Journal of Innovative Computing, Information and Control (IJICIC)*, *ICIC-Express Letters*, *IET Control Theory and Applications*, *Innovativity in Modeling and Analytics Journal of Research (IMAJOR)*, *Annals Series on Mathematics and Its Application*, *Acta Universitatis Apulensis, Serie Mathematica Informatica* și *Honorary Board of Romanian Itinerant Seminar on Math. Analysis and Applications*
- F. Rădulescu - *Libertas Mathematicae*, *Journal of Operator Theory*
- I. Nenciu - *Nonlinearity*, London Mathematical Society.
- V. Timofte - *Australian Journal of Mathematical Analysis and Applications (AJMAA)*
- E. Mihailescu - *Discrete and Continuous Dynamical Systems-S*
- F. Nichita - *Axioms*, MDPI, *Sci*, MDPI
- L. Ornea - *Mathematical Reports*, *Revue Roumaine de Mathématiques Pures et Appliquées*, *Bulletin Mathématique de la Société des Sciences Mathématique de Roumanie*
Am fost Guest Editor la Nr. 3/2020 al revistei Revue Roumaine, număr dedicat profesorului Vasile Brînzănescu la împlinirea a 75 de ani.
- G. Marinescu - *Annals of Global Analysis and Geometry*, *Analysis and Mathematical Physics*

8.4 Lucrări acceptate la publicat

1. C. Ionescu: *Finite generation of André-Quillen (co-)homology of F-finite algebras*, acceptată la Comm. Algebra
2. T. Dumitrescu, C. Ionescu: *A locally F-finite Noetherian domain that is not F-finite*, acceptată la J. Commut. Algebra
3. C. Anghel, I. Coandă, N. Manolache: *A property of five lines in \mathbb{P}^3 and four generated 4-instantons*, acceptată la Comm. Algebra.
4. C. Anghel, I. Coandă, N. Manolache: *Globally generated vector bundles with small c_1 on projective spaces, II*, acceptată la Math. Nachr.
5. H. Bercovici, D. Timotin: *Operators invariant relative to a completely nonunitary contraction*, acceptată la Math. Z.
6. C. Raicu: *Regularity of \mathfrak{S}_n -invariant monomial ideals*, arXiv: 1909.04650, acceptată la J. Comb. Theory Series A.
7. A.L. Agore: *Universal coacting Poisson Hopf algebras*, acceptată la Manuscripta Math.
8. A.L. Agore, A.S. Gordienko, J. Vercauteren: *Equivalences of (co)module algebra structures over Hopf algebras*, acceptată la J. Noncommut. Geom.
9. G. Nenciu, I. Nenciu, *On essential self-adjointness for first order differential operators on domains in \mathbb{R}^d* . acceptată la J. Spectral Theory.

10. A. I. Bonciocat, N. C. Bonciocat, Y. Bugeaud, M. Cipu, M. Mignotte: *Irreducibility criteria for compositions of multivariate polynomials over arbitrary fields*, acceptată la Publ. Math. Debrecen.
11. L. David, C. Hertling: *Meromorphic connections over F -manifolds*, acceptată la Integrability, Quantization, and Geometry (eds. I. Krichever, S. Novikov, O. Ogievetsky, S. Shlosman), Proc. of Symp. in Pure Math., AMS.
12. L. Liu, A. Makhlouf, C. Menini, F. Panaite: *BiHom-pre-Lie algebras, BiHom-Leibniz algebras and Rota-Baxter operators on BiHom-Lie algebras*, acceptată la Georgian Math. J.
13. H. Auvray, X. Ma, G. Marinescu: *Bergman kernels on punctured Riemann surfaces*, acceptata la Math. Ann.
14. W. Bruns, B. Ichim: *Polytope volume by descent in the face lattice and applications in social choice*, acceptată la Math. Program.
15. D. Popescu: *Néron desingularization of extensions of valuation rings with an Appendix by Kestutis Cesnavicius*, acceptată la Springer Collection PROMS, in Proc. Transient Transcendence in Transylvania 2019, Eds. Alin Bostan, Kilian Raschel.
16. Călin Popescu: *On 3-Colourable Disc Triangulations*, acceptată la Bull. Math. Soc. Sci. Math. Roumanie.
17. S. Carolus, J. Laubacher, M. Staic: *A Simplicial Construction for Noncommutative Settings*, acceptată la Homotopy, Homology Appl.
18. I. Gruais, D. Poliřevski : *Thermal flows in fractured porous media*, acceptată la ESAIM: Mathematical Modelling and Numerical Analysis.
19. S. Carolus, M. Staic: *G -Algebra Structure on the Higher Order Hochschild Cohomology $H^{S^2}(A, A)$* , acceptată la Algebra Colloq.
20. U. Kohlenbach, A. Sipoř: *The finitary content of sunny nonexpansive retractions*, acceptată la Communications in Contemporary Mathematics.
21. A. Sipoř: *Bounds on strong unicity for Chebyshev approximation with bounded coefficients*, acceptată la Math. Nachr.
22. L. Ignat, J. Rossi, A. San Antolin : *Asymptotic behaviour for local and nonlocal evolution equations on metric graphs with some edges of infinite length*, acceptată la Ann. Mat. Pura Applicata
23. D. Qin, V. Rădulescu, X. Tang *Ground states and geometrically distinct solutions for periodic Choquard-Pekar equations*, acceptată la J. Diff. Eq.
24. Y. Fang, V. Rădulescu, C. Zhang, X. Zhang *Gradient estimates for multi-phase problems in Campanato spaces*, acceptată la Indiana Univ. Math. J.
25. N. Papageorgiou, V. Rădulescu, D. Repovš *Robin double-phase problems with singular and superlinear terms*, acceptată la Nonlinear Anal. Real World Appl.

26. Y. Liu, L. Maxim, B. Wang: *Topology of subvarieties of complex semi-abelian varieties*, acceptată la Int. Math. Res. Not.
27. L. Maxim, J. Rodriguez, B. Wang: *Euclidean distance degree of projective varieties*, acceptată la Int. Math. Res. Not.
28. L. Maxim: *Notes on vanishing cycles and applications*, acceptată la J. Australian Math. Soc.
29. L. Jeanjean, V. Rădulescu: *Nonhomogeneous quasilinear elliptic problems: linear and sublinear cases*, acceptată la J. d'Analyse Math.
30. S. Chen, V. Rădulescu, X. Tang: *Normalized solutions of nonautonomous Kirchhoff equations: sub- and super-critical cases*, acceptată la Applied Math. Optimiz.
31. C. Ji, V. Rădulescu *Multi-bump solutions for quasilinear elliptic equations with variable exponents and critical growth in \mathbb{R}^N* , acceptată la Commun. Contemp. Math.
32. F. Eduard, E. Rocca, G. Schimperna, A. Zărnescu: *Weak sequential stability for a nonlinear model of nematic electrolytes. Weak sequential stability for a nonlinear model of nematic electrolytes*, acceptată la Discrete & Continuous Dynamical Systems - S.
33. V. Ambrosio, T. Isernia, V. Rădulescu: *Concentration of positive solutions for a class of fractional p -Kirchhoff type equations*, acceptată la Proc. Royal Soc. Edinburgh - Sect. A.
34. V. Rădulescu, X. Tang, Y. Zhang: *Small perturbations for nonlinear Schrödinger equations with magnetic potential*, acceptată la Milan J. Math.
35. M. Vâjâitu: *On Lebesgue decomposition of p -adic distributions*, acceptată la Publ. Math. Debrecen.
36. V. Alexandru, M. Vâjâitu, A. Zaharescu: *On the zeros and singularities of p -adic trace functions*, acceptată la Comm. Algebra.
37. G. Paşa: *Eigenvalues and approximation through simple functions* acceptată la Revue Roumaine Math. Pures Appl.
38. R. Pantilie: *Twistor theory for exceptional holonomy*, acceptată la Mathematika.
39. A. Otiman, M. Toma: *Hodge decomposition for Cousin groups and Oeljeklaus-Toma manifolds*, acceptată la Annali della Scuola Normale di Pisa.
40. N. Istrati, A. Otiman, M. Pontecorvo: *On a class of Kato manifolds*, acceptată la Int. Math. Res. Not. (IMRN)
41. D. Angella, N. Istrati, A. Otiman, N. Tardini: *Variational problems in conformal geometry*, acceptată la Journal of Geometric Analysis.
42. I. Țuțu, C.E. Chiriță, J.L. Fiadeiro: *When databases roamed computing: Formal database specification revisited*, acceptată la College Publications Tributes.
43. D. Ionescu-Kruse: *Analytical atmospheric Ekman-type solutions with height-dependent eddy viscosities*, acceptată la Journal of Mathematical Fluid Mechanics.

44. D. Ionescu-Kruse: *Fronts, pulses and periodic travelling waves in two-component shallow water models*, acceptată la Revue Romaine de Mathématiques Pures et Appliquées, un număr dedicat conferinței "The Ninth Congress of Romanian Mathematicians", Galați, Romania, 2019.
45. M. Palmer: *Homological stability for moduli spaces of disconnected submanifolds, I*, acceptată la Algebraic & Geometric Topology
46. A. Debray, S. Galatius, M. Palmer: *Apendice de "Lectures on Invertible Field Theories" de S. Galatius* (capitol al unei cărți), acceptată la IAS/Park City Mathematics Series
47. C. Anghel, I. Coandă, N. Manolache: *A property of five lines in P^3 and four generated 4-instantons*, acceptata la Comm. Algebra.
48. T. Dumitrescu, M. Epure: *A class of multiplicative lattices*, acceptată la Czech. Math. J.
49. C. Anghel, I. Coandă, N. Manolache: *Globally generated vector bundles with small c_1 on projective spaces, II*, acceptată la Math. Nachr.
50. I. Cîmpean, A. Grecu: *The nonlinear Schrödinger equation with white noise dispersion on quantum graphs*, acceptată la Commun. Math. Sci.
51. Cristian Cobeli: *DO^2* , acceptată la Revue Roumaine de Mathématiques Pures et Appliqués.
52. L. Ornea, M. Verbitsky, V. Vuletescu: *Classification of non-Kähler surfaces and locally conformally Kähler geometry*, acceptată la Russian Math. Surveys.
53. C. Muscalu, Y. Zhai: *Five-linear singular integral estimates of Brascamp-Lieb type* acceptată la Anal. PDE.
54. C. Beli: *On the kernel of the projection map $T(V) \rightarrow S(V)$* , acceptată la Math. Rep.

8.5 Preprinturi elaborate în 2020

1. M. Cimpoeaş: *On a generalization of monomial groups*, <https://arxiv.org/pdf/1910.12683>, pag. 17
2. J. Bassi, F. Rădulescu: *Separable boundaries for non-hyperbolic groups*, preprint arXiv:2002.01466
3. M. Cimpoeaş: *A note on the action of Hecke groups on subsets of quadratic fields*, <https://arxiv.org/2007.05941>, pag. 6
4. D. Timotin: *The invariant subspaces of $S \oplus S^*$* , preprint Arxiv:2003.09399.
5. T. Dumitrescu, C. Ionescu: *A locally F -finite Noetherian domain that is not F -finite*, preprint arXiv 2006.06043, pag. 6.
6. N. C. Bonciocat, M. Cipu, M. Mignotte: *There is no Diophantine $D(-1)$ -quadruple*, <http://arxiv.org/abs/2010.09200>

7. S. Burciu: *On the Galois symmetries for the character table of an integral fusion category*, arXiv:2005.13944./2020, pag. 28
8. G. Paşa: *An ill-posed problem in hydrodynamic stability of multi-layer Hele-Shaw flow*, arXiv:2008.12561.
9. S. Burciu: *Structure constants for pre-modular categories*, arXiv:2002.05483./2020, pag. 18.
10. V. Paşol, W. Zudilin: *Magnetic (quasi-) modular forms*, arXiv:2009.14609
11. L. David, C. Hertling: *(TE)-structures over the irreducible 2-dimensional globally nilpotent F-manifold germ*, arxiv:2001.01063 pag. 53.
12. G. Arsu: *T-Weyl calculus*, <https://arxiv.org/abs/2011.05981>
13. L. Liu, A. Makhlouf, C. Menini, F. Panaite: *Tensor products and perturbations of BiHom-Novikov-Poisson algebras*, preprint arXiv nr. 2007.09016/2020
14. B. Ichim, A. Zarojanu: *On the behavior of the size of a monomial ideal*, Preprint arXiv:1602.08025.
15. D. Popescu: *Immediate extensions of valuation rings and ultrapowers*, arXiv/2001.02930.
16. I. Chiose, M. Toma *Positive currents on non-Kählerian surfaces* , preprint arXiv:2006.09967
17. D. Popescu: *Valuation rings of dimension one as limits of smooth algebras*, arxiv/2006.08972.
18. C. Benea, C. Muscalu: *Mixed-norm estimates via the helicoidal method*, arXiv:2007.01080, 48 pages.
19. C. Cobeli, A. Zaharescu, *Factorials (mod p) and the average of modular mappings*, preprint arXiv 2011.07582, pag. 9.
20. D. Popescu: *Valuation rings as limits of complete intersection algebras*, arxiv/2004.11004.
21. L. Leuştean, P. Pinto: *Quantitative results on a Halpern-type proximal point algorithm*, arXiv:2001.10040 pag. 22
22. M. Perlman, C. Raicu: *Hodge ideals for the determinant hypersurface*, arXiv: 2003.09874
23. A. Diaconu și H. Twiss: *Secondary terms in the asymptotics of moments of L-functions*, preprint arXiv:2008.13297

24. I. Beltiță, D. Beltiță, *Traces of C^* -algebras of connected solvable groups*,
Preprint arXiv: 2006.15941/2020, 8 pag.
25. C. Anghel, I. Coandă, N. Manolache: *Globally generated vector bundles with $c_1 = 5$ on \mathbb{P}^n , $n \geq 4$* ,
preprint arXiv:2002.07167, 40 pagini.
26. I. Beltiță, D. Beltiță, *AF-embeddability for Lie groups with T_1 primitive ideal spaces*,
Preprint arXiv: 2004.11010, 21 pag.
27. G. Nenciu, I. Nenciu, R. Obermeyer: *Essential self-adjointness of symmetric first-order differential systems and confinement of Dirac particles on bounded domains in \mathbb{R}^d* .
preprint arXiv:2010.09816.
28. H. Auvray, X. Ma, G. Marinescu: *Quotient of Bergman kernels on punctured Riemann surfaces*,
preprint arXiv:2004.03858, pag. 26
29. T.-C. Dinh, G. Marinescu, D-V. Vu: *Moser-Trudinger inequalities and complex Monge-Ampère equation*,
preprint arXiv:2006.07979, pag. 22
30. J. O'Rourke, C. Vîlcu: *Tailoring for Every Body: Reshaping Convex Polyhedra*,
preprint arXiv:2008.01759; 62 pag.
31. M. Staic: *The Exterior Graded Swiss-Cheese Operad $\Lambda^{S^2}(V)$ (with an appendix by A. Gherman and M. Staic)*,
preprint arXiv:2002.00520
32. M. Staic, J. Van Grinsven: *A Geometric Application for the \det^{S^2} Map*,
preprint arXiv:2009.13641
33. S. Aberkane, V. Drăgan: *On the existence of the stabilizing solution of generalized Riccati equations arising in zero sum stochastic difference games: The time-varying case*,
preprint arhiva: <https://arxiv.org/abs/2006.01486>, pag. 33.
34. A. Sipoș: *Quantitative inconsistent feasibility for averaged mappings*,
arXiv:2001.01513.
35. A. Sipoș: *Revisiting jointly firmly nonexpansive families of mappings*,
arXiv:2006.02167.
36. A. Sipoș: *Construction of fixed points of asymptotically nonexpansive mappings in uniformly convex hyperbolic spaces*,
arXiv:2008.03930.
37. A. Sipoș: *A quantitative multi-parameter mean ergodic theorem*,
arXiv:2008.03932.
38. V. Timofte: *Hartogs companions and holomorphic extensions in arbitrary dimension*,
preprint arXiv:2009.03086, pag. 31.

39. A. Sipoş: *Rates of metastability for iterations on the unit interval*,
arXiv:2008.03934.
40. D. Tiba, C.M. Murea: *Implicit parametrizations in shape optimization: boundary observation*,
preprint arXiv 2003.10384, 25 pag.
41. M. Palmer, U. Tillmann: *Homology of configuration-mapping and -section spaces*,
arxiv.org/abs/2007.11607, 45 pag.
42. M. Palmer, U. Tillmann: *Point-pushing actions and configuration-mapping spaces*,
arxiv.org/abs/2007.11613, 20 pag.
43. G. Horel, M. Palmer: *Motivic homological stability of configuration spaces*,
arxiv.org/abs/2007.13718, 13 pag.
44. Cr. A.-M. Anghel, M. Palmer: *Lawrence-Bigelow representations, bases and duality*,
arxiv.org/abs/2011.02388, 25 pag.
45. H. D. Cornean, B. Helffer, R. Purice: *Spectral analysis near a Dirac type crossing in a weak non-constant magnetic field*,
arXiv:2005.08699, 62 pag.
46. D. Tiba, C.M. Murea: *Periodic Hamiltonian systems in shape optimization problems with Neumann boundary conditions*,
preprint arXiv 2006.09098, pag. 25.
47. V. Timofte, A. Timofte, *On algorithms for testing positivity of symmetric polynomial functions*,
arXiv:2011.04358.
48. K. Altmann, Al. Constantinescu, M. Filip: *Polyhedra, lattice structures, and extensions of semigroups*,
arXiv:2004.07377, 51 pag.
49. K. Altmann, Al. Constantinescu, M. Filip: *Versal deformations of toric singularities*
arXiv:2004.07377, 32 pag.
50. L. Maxim, L. Păunescu, M. Tibăr: *The vanishing cohomology of non-isolated hypersurface singularities*,
preprint arhiva arXiv:2007.07064.
51. Y. Liu, L. Maxim, B. Wang: *Aspherical manifolds, Mellin transformation and a question of Bobadilla-Kollár*,
preprint arhiva arXiv:2006.09295.
52. L. Maxim, L. Păunescu, M. Tibăr: *Vanishing cohomology and Betti bounds for complex projective hypersurfaces*,
preprint arhiva arXiv:2004.07686.

53. E. Elduque, C. Geske, M. Herradón Cueto, L. Maxim, B. Wang: *Mixed Hodge structures on Alexander modules*, preprint arXiv:2002.01589.
54. L. Maxim, J. Rodriguez, B. Wang: *A Morse theoretic approach to non-isolated singularities and applications to optimization*, preprint arXiv:2002.00406.
55. A.D. Aydın, A. Gheondea: *Reproducing Kernel Hilbert Spaces Approximation Bounds*, arXiv:2003.12801.
56. L. Ornea, A. Otiman, M. Stanciu: *Compatibility between non-Kähler structures on complex (nil)manifolds*, arXiv:2003.10708.
57. Constantin-Nicolae Beli: *Explicit formulas for the cohomology of the elementary abelian p -groups*, preprint arXiv, <https://arxiv.org/abs/2005.11868>
58. Constantin-Nicolae Beli: *Universal integral quadratic forms over dyadic local fields*, preprint arXiv, <https://arxiv.org/abs/2008.10113>
59. Constantin-Nicolae Beli: *Four conjectures by Zhi-Hong Sun* preprint arXiv, <https://arxiv.org/abs/2008.10718>
60. N. Barton, M. Müller, M. Prunescu *On representations of intended structures in foundational theories*. <https://philarchive.org/rec/BARORO>, 2020.
61. M. Buliga: *Artificial chemistry experiments with chemlambda, lambda calculus, interaction combinators*, arXiv:2003.14332
62. M. Buliga: *Artificial life properties of directed interaction combinators vs. chemlambda*, arXiv:2005.06060
63. M. Buliga: *Graph rewrites, from graphic lambda calculus, to chemlambda, to directed interaction combinators*, arXiv:2007.10288
64. F. Nichita: *On Jordan Algebras and Some Unification Results*. Preprint arXiv 2002.05345.
65. C. Mocanu; F. Nichita; O. Pasarescu: *Applications of Non-Standard Analysis in Topoi to Mathematical Neuroscience and Artificial Intelligence: I. Mathematical Neuroscience*. Preprints 2020, 2020010102 (doi: 10.20944/preprints202001.0102.v1).
66. A. Otiman: *Special Hermitian metrics on Oeljeklaus-Toma manifolds*, arXiv: 2009.02599
67. N. Istrati, A. Otiman, M. Pontecorvo, M. Ruggiero: *Toric Kato manifolds*, arXiv: 2010.14854

68. D. Matei, E. Artal, J.I. Cogolludo, S. Lopez de Medrano: *Module structure of the homology of right-angled Artin kernels*, arXiv:2020.00279.
69. Cr. Ana-Maria Anghel, N. Geer, B. Patureau, *Renormalized Witten-Reshetikhin-Turaev invariants and m-traces associated to the special linear Lie superalgebra*, arxiv.org/abs/2010.13759 (38 pag)
70. Cr. Ana-Maria Anghel, *$U_q(sl(2))$ -quantum invariants unified via intersections of embedded Lagrangians* arxiv.org/abs/2010.05890. 18 pag.
71. Cr. Ana-Maria Anghel, *ADO invariants directly from partial traces of homological representations*, arxiv.org/abs/2007.15616, 16 pag.
72. Cr. Ana-Maria Anghel, *Coloured Jones and Alexander polynomials as topological intersections of cycles in configuration spaces*, arxiv.org/abs/2002.09390, 47 pag.
73. S. Moroianu: *Higher transgressions of the Pfaffian*, arxiv <https://arxiv.org/abs/2011.06538>, 25 pagini
74. I.R. Badea, C. Mocanu, O. Păsărescu: *Applications of Non-Standard Analysis in Topoi to Mathematical Neuroscience and Artificial Intelligence: Infons, Energons, Receptons (I)*, preprints202001.0102, Preprints.org, MDPI, August 2020

8.6 Cooperări științifice

1. D. Ionescu-Kruse - Erwin Schrödinger Institute (ESI) Viena, Austria, programul "Mathematical Aspects of Geophysical Flows", 20 - 26 Ianuarie 2020.
2. A. Agore - Vrije Universiteit Brussel, Belgia, 03.03.2020 – 14.03.2020
3. L. Maxim - Sydney Mathematical Research Institute at the University of Sydney (Australia), 15.01.2020 – 15.03.2020
4. L. Beznea - Universitatea Paris-Nord, Franța, 2-15 februarie 2020, în cadrul rețelei GDRI ECO Math.
5. F. Ambro - AIM, San Jose, USA, Workshop on K-stability and related topics, 06-10.01.2020
6. M. Palmer-Anghel - Université Paris 13, Franța, 11–13.03.2020
7. C. Joita - Univ. Lille, 01-13.03.2020.
8. Cr. Ana-Maria Anghel, Univ. Lille (Februarie 2020).
9. Cr. Ana-Maria Anghel, Univ. Paris Diderot (Ianuarie 2020)
10. Cr. Ana-Maria Anghel, Institut Fourier, Grenoble (Ianuarie 2020)