Raport Anual

Institutul de Matematică "Simion Stoilow" al Academiei Române

2022

Contents

1 Lucrări publicate la finele lui 2021 şi neconţinute în Raportul pe 2021

1.1 În reviste din străinătate cotate ISI

1. C. Benhida, E. Fricain, D. Timotin: *Reducing subspaces of C_{00} contractions*, **New York J. Math. 27**(2021), pag. 1597–1612

2. Y. Liu, L. Maxim, B. Wang: *Aspherical manifolds, Mellin transformation and a question of Bobadilla-Kollár*, **J. Reine Angew. Math. 781**(2021), pag. 1 – 18

3. C. Tănase, L. Pintilie, R. Tănase: *Lactones in the Synthesis of Prostaglandins and Prostaglandin Analogs*, **Int. J. Mol. Sci.** (2021), 22, 1572, pag. 1-40.

4. A. Fernandez Bertolin, A. Grecu, L. Ignat: *Hardy uncertainty principle for the linear Schrodinger equation on regular quantum trees*, **J. Fourier Anal. Appl. 28** (2022), Paper No. 17, 34 pp.

5. C. Cazacu, L. Ignat, A. Pazoto, J. Rossi: *A convection-diffusion model on a star-shaped graph* **NoDEA Nonlinear Differential Equations Appl. 29** (2022), no. 2, Paper No. 17, 37 pp

6. M. Prunescu: *Smooth approximations by continuous choice-functions*, **Soft computing** (2021), 25, pag. 13277 – 13286

7. M. Fulger: *Seshadri constants for curve classes*, **Int. Math. Res. Not. IMRN**(2021), no. 21, pag. 16448–16493

8. L. Maxim, J. Rodriguez, B. Wang: *Euclidean distance degree of projective varieties*, **Int. Math. Res. Not. IMRN 2021**(2021), pag. 15788 – 15802

9. A. Neguţ: *The universal sheaf as an operator*, **Math. Res. Lett. 28**(2021), pag. 1793 – 1840

10. R. Iagăr, A. Sánchez: *Blow-up profiles for a quasilinear reaction-diffusion equation with weighted reaction*, **J. Differential Equations 272** (2021), pag. 560 – 605.

11. D. Bulacu, F. Panaite: *Some ribbon elements for the quasi-Hopf algebra $D^{\omega}(H)$*, **J. Algebra Appl. 20** (2021), art. nr. 2150226

12. V.D. Rădulescu, C. Santos, L. Santos, M. Carvalho: *Discontinuous perturbations of non-homogeneous strongly-singular Kirchhoff problems*, **Nonlinear Differential Equations Appl. NoDEA 28**(2021), pag. 1 – 28

13. C. Alves, P. Garain, V.D. Rădulescu: *High perturbations of quasilinear problems with double criticality*, **Math. Z. 299**(2021), pag. 1875 – 1895

14. A. Sipoş: *Bounds on strong unicity for Chebyshev approximation with bounded coefficients*, **Math. Nachr. 294** (2021), pag. 2425–2440.

15. G. Bonanno, R. Livrea, V.D. Rădulescu: *Non-homogeneous Dirichlet problems with concave-convex reaction*, **Rend. Lincei Mat. Appl. 32**(2021), pag. 819 – 838

16. Y. Fang, V.D. Rădulescu, C. Zhang: *Regularity of solutions to degenerate fully nonlinear elliptic equations with variable exponent*, **Bull. London Math. Soc. 53**(2021), pag. 1863 – 1878

17. R. Dinu, J. Herzog, A. A. Qureshi: *Restricted classes of veronese type ideals and algebras*, **Internat. J. Algebra Comput. 31**(2021), pag. 173 – 197

18. R. Dinu, V. Ene, T. Hibi: *On the regularity of join-meet ideals of modular lattices*, **J. Commut. Algebra 13**(2021), pag. 479 – 488

19. E. Mihăilescu and M. Urbański: *Smale endomorphisms over graph-directed Markov systems*, **Ergodic Theory Dynamical Syst. 41** (2021), pag. 2508-2541

20. C. Joiţa, M. Tibăr, *The local image problem for complex analytic maps*, **Ark. Mat. 59** (2021), pag. 345–358

21. H-J, Hein, R. Răsdeaconu, I. Şuvaina: *On the classification of ALE Kähler manifolds*, **Int. Math. Res. Not. IMRN 2021** (2021), pag. 10957–10980.

1.2 În reviste din România cotate ISI

1. M. Prunescu: *Two results about rational numbers*, **Rev. Roumaine Math. Pures Appl. 66** (2021), pag. 789 – 792

1.3 În alte reviste

1. G. Paşa: *A non-existence effect given by parameter perturbations in an eigenvalue problem*, **ROMAI Journal 17** (2021), pag. 65-72.

1.4 În volume de conferinţe

1. M. Prunescu: *Secure Multiparty Computation in arbitrary rings*, **23rd International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2021)**, IEEE (2021), pag. 283 – 290

2. A. Kanda, M. Prunescu, R. Wong, P. Apostoli: *Logical and historical review on theoretical physics*, **Journal of Physics: Conference Series, Vigier Centenary 2021**, 2197, 1, 012032

3. A. Kanda, M. Prunescu, R. Wong: *Quantizing dynamics*, **Journal of Physics: Conference Series, Vigier Centenary 2021**, 2197, 1, 012027

1.5 Capitole în volume colective

1. C. Raicu, S. Sam: *Hermite reciprocity and Schwarzenberger bundles*, **Commutative algebra. Expository papers dedicated to David Eisenbud on the occasion of his 75th birthday**, editori: Irena Peeva, Springer, Cham (2021), pag. 689–721, ISBN: 978-3-030-89693-5

2 Lucrări publicate în 2022

2.1 În reviste din străinătate cotate ISI

1. A. I. Bonciocat, N. C. Bonciocat, Y. Bugeaud, M. Cipu: *Apollonius circles and irreducibility criteria for polynomials*, **Indag. Math. 33** (2022), pag. 421–439

2. N. C. Bonciocat, M. Cipu, M. Mignotte: *There is no Diophantine $D(-1)$–quadruple*, **J. London Math. Soc. 105** (2022), pag. 63–99

3. A. Dujella, M. Cipu, Y. Fujita: *Extensions of a Diophantine triple by adjoining smaller elements*, **Mediterr. J. Math. 19** (2022), Article: 187, pag. 1–20

4. D. Tiba, C. Murea: *Periodic Hamiltonian systems in shape optimization problems with Neumann boundary conditions*, **J. Differrential Equations 321**(2022), pag. 1 – 39

5. A. Neguţ: *Hecke correspondences for smooth moduli spaces of sheaves*, **Publ. Math. Inst. Hautes Études Sci. 135**(2022), pag. 337 – 418

6. A. Neguţ: *W–algebras associated to surfaces*, **Proc. London Math. Soc. 124**(2022), pag. 601 – 679

7. A. Neguţ: *Affine Laumon spaces and a conjecture of Kuznetsov*, **Ann. Sci. École Norm. Sup. 55**(2022), pag. 739 – 789

8. A. Neguţ: *Deformed W–algebras in type A for rectangular nilpotent*, **Comm. Math. Phys. 389**(2022), pag. 153 – 195

9. L. Badea: *On the Resolution of the Variational Inequalities of the First and the Second Kind as Equations Obtained by Explicit Moreau–Yosida Regularizations*, **Appl. Math. Optim., 86** (2022), article 17

10. G. Paşa: *Stability analysis for a multi-layer Hele-Shaw displacement*, **Ann. Univ. Ferrara 68** (2022), pag. 1-9.

11. T. Dumitrescu, C. Ionescu: *A locally F-finite Noetherian domain that is not F-finite*, **J. Commut. Algebra 14**(2022), pag. 177 – 180

12. A. Otiman: *Special Hermitian metrics on Oeljeklaus–Toma manifolds*, **Bull. London Math. Soc., 54**(2022), pag. 655–667

13. N. Istrati, A. Otiman, M. Pontecorvo, Matteo Ruggiero: *Toric Kato manifolds*, **J. École Polyt. - Mathématiques, 9**(2022), pag. 1347–1395

14. V. Alexandru, C. Cobeli, M. Vâjâitu, A. Zaharescu: *Statistical distribution of Fermat quotients*, **Chaos Solitons Fractals 161**(2022), 112335, pag. 1 – 6

15. C. Ospel, F. Panaite, P. Vanhaecke: *Polarization and deformations of generalized dendriform algebras*, **J. Noncommut. Geom. 16** (2022), pag. 561 – 594

16. L. Ornea, M. Verbitsky: *Twisted Dolbeault cohomology of nilpotent Lie algebras*, **Transform. Groups 27** (2022), pag. 225–238

17. B. C. Berndt, M. Fassina, S. Kim, A. Zaharescu: *Two-parameter identities for divisor sums in algebraic number fields*, **J. Math. Anal. Appl. 506**(2022), pag. 1 – 25

18. B. C. Berndt, M. Fassina, S. Kim, A. Zaharescu: *Balanced derivatives, identities, and bounds for trigonometric and Bessel series*, **Adv. Math. 395**(2022), pag. 1 – 40

19. M. Năstăsescu, A. Zaharescu: *A class of approximations to the Riemann zeta function*, **J. Math. Anal. Appl. 514**(2022), pag. 1 – 14

20. M. Fassina, S. Kim, A. Zaharescu: *The distribution of spacings between the fractional parts of $n^d\alpha$*, **Int. Math. Res. Not. IMRN 2022**(2022), pag. 10555 – 10585

21. A. Iovita, J. Morrow, A. Zaharescu: *On p-adic uniformization of abelian varieties with good reduction*, **Compos. Math. 158**(2022), pag. 1449 – 1476

22. B. C. Berndt, A. Dixit, R. Gupta, A. Zaharescu: *A class of identities associated with Dirichlet series satisfying Hecke's functional equation*, **Proc. Amer. Math. Soc. 150**(2022), pag. 4785 – 4799

23. A. Gheondea-Eladi, A. Gheondea: *Bifurcation in the evolution of certainty in a small decision making group by consensus*, **British J. Math. Stat. Psych. 75**(2022), pag. 88–115;

24. E. Fricain, A. Hartmann, W. T. Ross, D. Timotin: *The Smirnov class for de Branges–Rovnyak spaces*, **Results Math. 77**(2022), Paper 114, 11pp

25. C. Anghel, R. Stan, *Uniformization of Riemann surfaces revisited*, **Ann. Glob. Anal. Geom. 62**, 2022, 603–615

26. M. Aprodu, G. Farkas, S. Papadima, C. Raicu, J. Weyman: *Topological invariants of groups and Koszul modules*, **Duke Math. J. 171** (2022), pag. 2013 – 2046

27. M. Aprodu, I. Biswas, S. Dumitrescu, S. Heller: *On the monodromy map for the logarithmic differential systems*, **Bull. Soc. Math. France 150** (2022), pag. 543 – 568

28. L. Maxim, Laurenţiu Păunescu, M. Tibăr: *The vanishing cohomology of non-isolated hypersurface singularities*, **J. London Math. Soc. 106**(2022), pag. 112 – 153

29. L. Maxim, L. Păunescu, M. Tibăr: *Vanishing cohomology and Betti bounds for complex projective hypersurfaces*, **Ann. Inst. Fourier 72**(2022), pag. 1705 – 1731

30. L. Maxim, J. Rodriguez, B. Wang: *A Morse theoretic approach to non-isolated singularities and applications to optimization*, **J. Pure Appl. Algebra 226**(2022), Paper No. 106865, 23 pp.

31. E. Elduque, C. Geske, M. Herradón-Cueto, L. Maxim, B. Wang: *Hodge theory on Alexander invariants – a survey*, **Topology Appl. 313**(2022), Paper No. 107981, 16 pp.

32. E. Mihăilescu: *Thermodynamic formalism for invariant measures in iterated function systems with overlaps*, **Commun. Contemp. Math. 24** (2022), 2150041.

33. E. Mihăilescu, M. Urbański: *Geometry of measures in random systems with complete connections*, **J. Geom. Anal. 32**, (2022), 162.

34. A. Biś, E. Mihăilescu: *Inverse pressure for finitely generated semigroups*, **Nonlinear Anal. 222**, (2022), 112942.

35. C. Ji, V.D. Rădulescu: *Multi-bump solutions for the nonlinear magnetic Choquard equation with deepening potential well*, **J. Differential Equations 306**(2022), pag. 251 – 279

36. C.-Y. Hsiao, G. Marinescu, H. Wang: *Szegö kernel asymptotics on complete strictly pseudoconvex CR manifolds*, **J. Geom. Anal. 32**(2022), Paper No. 266.

37. R. Diaconescu: *Permutation groups generated by γ-cycles*, **Axioms 11**(2022), pag. 528.

38. R. Diaconescu: *The axiomatic approach to non-classical model theory*, **Mathematics 10** (2022), pag. 3428.

39. R. Diaconescu: *Representing 3/2-institutions as stratified institutions*, **Mathematics 10** (2022), pag. 1507.

40. V. Paşol, W. Zudilin: *Magnetic (Quasi-)Modular Forms*, **Nagoya Math. J. 248**(2022), pag. 849 – 864

41. R. Pantilie: *On tame ρ-quaternionic manifolds*, **J. Geom. Phys. 172**(2022), Paper No. 104426, 11pp.

42. C. Anghel, I. Coandă, N. Manolache: *Globally generated vector bundles on $\mathbb{P}^3$ and the unirationality of $\mathcal{M}_g$, $g \leq 13$*, **Comm. Algebra 50** (2022), pag. 5184 – 5199.

43. M. Fulger, A. Langer: *Positivity vs. slope semistability for bundles with vanishing discriminant*, **J. Algebra** 609 (2022), pag. 657–687

44. M. Fulger, T. Murayama: *New constructions of nef classes on self-products of curves* **Math. Z.** 302 (2022), pag. 1239–1265

45. L. Beznea, C.I. Vrabie: *Continuous flows driving branching processes and their nonlinear evolution equations*, **Adv. Nonlinear Analysis 11** (2022), pag. 921–936

46. S. Dăscălescu, C. Năstăsescu, L. Năstăsescu: *On a class of quasi-Frobenius algebras*, **J. Pure Appl. Algebra 226** (2022), 106992

47. A.L. Agore: *Eilenberg-Moore and Kleisli Type Categories for Bimonads on Arbitrary Categories*, **Results Math. 77**(2022), pag. 1 – 22

48. S. Lippold, M. Staic: *Partitions of the complete hypergraph K_6^3 and a determinant-like function*, **J. Algebraic Combin. 56** (2022), pag. 969–1003

49. S. Lippold, M. Staic, A. Stancu: *Edge partitions of the complete graph and a determinant-like function*, **Monatsh. Mat. 198** (2022), pag. 819–858

50. I. Chiose, R. Răsdeaconu, I. Şuvaina: *Balanced manifolds and SKT metrics*, **Ann. Mat. Pura Appl.** (4) 201 (2022), no. 5, 2505–2517

51. M. Staic, J. Van Grinsven: *A Geometric Application for the $\det^{S^2}$ Map*, **Comm. Algebra 50** (2022), pag. 1106–1117

52. S. Carolus, M. Staic: *G-Algebra Structure on the Higher Order Hochschild Cohomology* $H^*_{S^2}(A, A)$, **Algebra Coll. 29** (2022), pag. 113–124

53. M. Stanciu: *Locally conformally symplectic reduction of the cotangent bundle*, **Ann. Global Anal. Geom. 61** (2022), 533-551

54. S. Moroianu: *Higher transgressions of the Pfaffian*, **Rev. Mat. Iberoamericana 38**(2022), pag. 1425 – 1452.

55. M. Petrică, R. Stochiţoiu, M. Leordeanu, I. Popescu: *A regime switch analysis on Covid-19 in Romania*, **Scientific Reports**(2022), 12, 1-15

56. M. Bucataru, I. Cîmpean, L. Marin: *A Gradient-Based Regularization Algorithm for the Cauchy Problem in Steady-State Anisotropic Heat Conduction*, **Comput. Math. Appl. 119**(2022), pag. 220 – 240

57. T. Dumitrescu, M. Epure: *Comaximal factorization lattices*, **Comm. Algebra 50**(2022), pag. 4024 – 4031.

58. Neil Barton, Moritz Müller, Mihai Prunescu: *On representations of intended structures in foundational theories.* **J. Phil. Logic 51** (2022), pag. 283 – 296

59. J. O'Rourke, C. Vîlcu: *Simple Closed Quasigeodesics on Tetrahedra*, **Information 13** (2022), 238

60. K. Altmann, A. Constantinescu, M. Filip: *Polyhedra, Lattice Structures, and Extensions of Semigroups*, **J. London Math. Soc. 2** (2022), pag. 1–71

61. Cr. Ana-Maria Anghel: *A topological model for the coloured Jones polynomials* **Selecta Math. N. S. 28** (2022), art. 63.

62. D. Ionescu-Kruse: *Exact Viscous Compressible Flow Describing the Dynamics of the Atmosphere*, **J. Math. Fluid Mech. 24** (2022), Art. No. 43.

63. A. Sipoş: *Quantitative inconsistent feasibility for averaged mappings*, **Optim. Lett. 16** (2022), pag. 1915–1925.

64. A. Sipoş: *On extracting variable Herbrand disjunctions*, **Studia Logica 110** (2022), pag. 1115–1134.

65. A. Sipoş: *Abstract strongly convergent variants of the proximal point algorithm*, **Comput. Optim. Appl. 83** (2022), pag. 349–380.

66. V.Drăgan, E.F.Costa, I.L.Popa, S.Aberkane: *Exact Detectability of Discrete-Time and Continuous-Time Linear Stochastic Systems: A Unified Approach,* **IEEE Trans. Aut. Control, 67** (2022), pag. 5730 – 5745

67. C.M. Bonciocat, N.C. Bonciocat: *Zero-free angular sectors and lens-shaped regions for polynomials with applications to irreducibility*, **Comm. Algebra 50** (2022), pag. 2604–2620

68. K. Altmann, A. Constantinescu, M. Filip: *Versality in Toric Geometry*, **J. Algebra 609** (2022), pag. 1–43

69. C. Raicu, S. Sam: *Bi-graded Koszul modules, K3 carpets, and Green's conjecture*, **Compos. Math. 158**(2022), pag. 33 – 56

70. S. Murai, C. Raicu: *An equivariant Hochster's formula for $\mathfrak{S}_n$-invariant monomial ideals*, **J. Lond. Math. Soc. 105**(2022), pag. 1974 – 2010

71. C. Raicu, S. Sam, J. Weyman: *On some modules supported in the Chow variety*, **Vietnam J. Math. 50**(2022), pag. 501 – 521

72. D. Matei, E. Artal, J.I. Cogolludo, S. Lopez de Medrano, *Module structure of the homology of right-angled Artin kernels*, **Algebr. Geom. Topol. 22** (2022).

73. P. LeVan, C. Raicu: *Euler obstructions for the Lagrangian Grassmannian*, **Algebr. Comb. 5**(2022), pag. 299 – 318

74. J. Bassi, F. Rădulescu: *Separable boundaries for nonhyperbolic group*, **J. Operator Th. 87**(2022), pag. 461 – 470

75. M. Palmer, A. Soulié: *The Burau representations of loop braid groups*, **Comptes Rendus. Math. 360** (2022), pag. 781 – 797

76. N.D. Alikakos, Z. Geng, A. Zărnescu: *Asymptotic behavior of the interface for entire vector minimizers in phase transitions*, **J. Funct. Anal. 283** (2022), 109565

2.2 În reviste din România cotate ISI

1. C. M. Bonciocat, N. C. Bonciocat, Y. Bugeaud, M. Cipu, M. Mignotte: *Irreducibility criteria for some classes of compositions of polynomials with integer coefficients*, **Bull. Math. Soc. Sci. Math. Roum. 65** (2022), pag. 149–180

2. M. Cipu, G. Kientega, M. Mignotte, S. Nikiema: *Sur la hauteur des transformées de Graeffe d'un polynôme à coefficients entiers*, **Bull. Math. Soc. Sci. Math. Roum. 65** (2022), pag. 213–231

3. V. Timofte: *On the maximum modulus principle and the identity theorem in arbitrary dimension*, **Carpathian J. Math. 38** (2022), pag. 517 – 522

4. D. Tiba: *Periodic solutions for certain Hamiltonian systems in arbitrary dimension and global parametrization of some manifolds*, **Carpathian J. Math. 38**(2022), pag. 631 – 640

5. D. Tiba, C. Murea: *Topology optimization for the Stokes system*, **Math. Rep. 24**(2022), pag. 301 – 317

6. V.Drăgan, I.L.Popa, I.G.Ivanov: *A linear quadratic tracking problem for stochastic systems controlled by impulses. The finite horizon time case,* **Carpatian J. Math. 38**(2022), pag. 725 – 735

7. D. Popescu: *Extensions of valuation rings containing* $\mathbf{Q}$ *as limits of smooth algebras*, **Bull. Math. Soc. Sci. Math. Roumanie, 65**(2022), pag. 253-262

8. V. Niţică, A. Török: *About Some Relatives of Palindromes*, **Rev. Roumaine Math. Pures Appl. 67** (2022), pag. 1-20

9. M. Cimpoeaş: *A note on the number of partitions of n into k parts* **U.P.B. Sci Bull. Series A, 84**(2022), pag. 131 – 138

10. V. Brînzănescu, C. M. Sandu: *Algebraic methods for Bloch-Iserles Hamiltonian systems*, **Bull. Math. Soc. Sci. Math. Roumanie 65(113)**, (2022), pag. 181 – 189

11. M. Prunescu: *Symmetries in the Pascal triangle: p-adic valuation, sign-reduction modulo p and the last non-zero digit.* **Bull. Math. Soc. Sci. Math. Roumanie, 65** (2022), 431 - 447.

2.3 În alte reviste

1. L. Badea: *On the Convergence of the Damped Additive Schwarz Methods and the Subdomain Coloring*, **Math. Comput. Appl., 27** (2022), article 59

2. M. Buliga: *Molecular computers which are based on graph rewriting systems like chemlambda, chemSKI or Interaction Combinators*, **Zenodo** (2022).

3. G. Paşa: *On the Linear Stability Problem for a Three-Layer Displacement in Porous Media*, **Inter. J. Petrol. Techn. 9** (2022), pag. 8-13.

4. M. F. Anton, K. Santoro: *Grouping and Regrouping Developmental Math in Higher Ed*, **Syst. Refl. 2** (2022), pag. 27 – 40

5. D. Coman, G. Marinescu: *Equidistribution for weakly holomorphic sections of line bundles on algebraic curves*, **Ann. Fac. Sci. Toulouse Math. (6) 31** (2022), pag. 949–973.

6. C. Joiţa, *Polynomial convexity properties of closure of domains biholomorphic to balls*, **Stud. Univ. Babeş-Bolyai Math. 67** (2022), pag. 309–316.

7. F.F. Nichita: *Mathematics and Poetry — Epilogue for a Special Issue*, **Sci 4** (2022), 19.

8. T. Kalkan, F. Nichita, T. Oner, I. Senturk, I., M. Terziler: *Mathematics and Poetry ·Yang-Baxter equations, Boolean Algebras, and BCK-Algebras*, **Sci 4** (2022), 16.

2.4 În volume de conferinţe

1. B. Ichim, F. Iordache, *Predicting Multiple Traffic Features using a Spatio-Temporal Neural Network Architecture*, **VEHITS 2022**, Proceedings of the 8-th International Conference on Vehicle Technology and Intelligent Transport Systems, Online Streaming, 27.04.2022 – 29.04.2022, editori: J. Ploeg, M. Helfert, K. Berns, O. Gusikhin, Scitepress (2022), pag. 331 – 337, ISBN: 978-989-758-573-9

2. A. Cameron, R. Dinu, M. Michałek, T. Seynnaeve: *Flag matroids: algebra and geometry*, **International Conference on Interactions with Lattice Polytopes**, editori: A. Kasprzyk, B. Nill, Magdeburg, Germania, 2017, editura: Springer, Cham (2022), vol. 386, pag. 73 – 114 ISBN : 978-3-030-98326-0.

2.5 Capitole in volume colective

1. L. Maxim, J. Schürmann: *Constructible sheaf complexes in complex geometry and Applications*, **Handbook of Geometry and Topology of Singularities, III**, editori: J. L. Cisneros-Molina, L. D. Tráng, J. Seade, Springer, Cham (2022), pag. 679 – 791, ISBN: 978-3-030-95759-9; 978-3-030-95760-5

3 Cărţi publicate în 2022

3.1 În străinătate

1. A. Gheondea: *An Indefinite Excursion in Operator Theory*, Cambridge University Press, Cambridge 2022, xv+498 pag., ISBN 978-1-108-96903-1

4 Volume editate în 2022

4.1 In străinătate

1. M. Manoel, L. Maxim, M. A. Ruas, D. Trotman: *Proceedings of the 16th International Workshop on Real and Complex Singularities*, Journal of Singularities, vol. 25 (2022), ISSN: 1949-2006.

2. T. Fukui, T. Kohno, L. Maxim, Laurenţiu Păunescu, A. Suciu, M. Yoshinaga: *Proceedings of the Tokyo 2019 Hyper-JARCS Conference*, Topology Appl. vol. 313 (2022).

3. V.D. Rădulescu: *Nonlinear Analysis and its Synergies*, Rendiconti del Circolo Matematico di Palermo Series 2, Springer 71 (2022), issue 3, pag. 923 – 1215. Electronic ISSN: 1973-4409

4. F. Nichita: *Non–associative Structures, Yang–Baxter Equations and Related Topics*, Axioms, MDPI (2022), ISSN 2075-1680 (volum on-line).

5. F. Nichita: *Mathematics and Poetry, with a View towards Machine Learning* Sci, MDPI (2022), ISSN 2413-4155 (volum on-line).

4.2 În ţară

1. L. Beznea, G. Marinoschi, D. Timotin (guest editors): Selected papers from The Ninth Congress of Romanian Mathematicians, Galaţi, 2019, *Rev. Roumaine Math. Pures Appl.* **66**, No. 3-4 (2022)

5 Citări (Lista completă este anexată)

- Citări apărute în 2021 şi neconţinute în Raportul pe 2021
  - Citări - fără autocitări: 236
  - Autocitări: 41

- Citări apărute în 2022
  - Citări - fără autocitări: 891
  - Autocitări: 147

6 Premii

6.1 Premiile Academiei Române

Premii acordate în 2021 pentru lucrări din 2019.

- **M. Cimpoeaş** - Premiul Gh. Lazăr pe anul 2020 pentru grupul de lucrări *Contribuţii la probleme de ecuaţii diofantice şi L-functii Artin*
- **Victor Lie** - Premiul Simion Stoilow pe anul 2020 pentru lucrarea *The Polynomial Carleson operator*

6.2 Alte premii

- **I. Cîmpean** - Premiul Societăţii de Probabilităţi şi Statistică din România pt. anul 2022
- **L. Maxim** - Van Vleck Professorship Research Award, University of Wisconsin-Madison, 2019 - 2023
- **L. Maxim** - Vilas Associates Award, University of Wisconsin-Madison, 2021 - 2023
- **V. Rădulescu** - Highly Cited Researcher 2021, Clarivate Analytics
- **V. Rădulescu** - World's Top 2% Scientists List of Stanford University
- **V. Rădulescu** - AGH University of Science and Technology Rector's Award, 2021

7 Conferinţe

7.1 Organizări de conferinţe IMAR

1. A. Diaconu, A. Popa, V. Paşol: *Tenth Bucharest Number Theory Days*, Bucuresti, 3-5 August 2022
http://imar.ro/ apopa/BNTD10/index.html

2. A. Agore, L. Năstăsescu: *International conference on Hopf algebras, monoidal categories and related topics*, Institutul de Matematică Simion Stoilow al Academiei Române, Bucureşti, 27-29 iulie, 2022
https://hopfconferencebuch.wixsite.com/website

3. D. Timotin: *A 28-a conferinţă internaţională de teoria operatorilor*, Timişoara, 27 iunie–1 iulie 2022,
https://sites.google.com/site/ot28conference/

4. L. Beznea: *The 23rd conference of the Romanian Society for Probability and Statistics (SPSR)*, Bucharest, November 18-19, 2022,
https://spsr.ase.ro/the-23th-conference-of-the-romanian-society-of-probability-and-statistics/

5. C. Palmer-Anghel, R. Dinu, L. Ignat, R. Radu: *Workshop for Young Researchers in Mathematics*, ediţia a 11-a, IMAR, Bucureşti, România, 19-20 mai 2022,
https://fmi.univ-ovidius.ro/cercetare/wyrm2022/

6. R. Purice: *Doctoral Research Days* organizat în cadrul Reţelei Internaţionale de Cercetare ECO-Math (CNRS), 11 - 12 octombrie 2022,
http://www.imar.ro/ imar/2022/WorkshopEcomath.html

7. I. Popescu: *XVème Colloque Franco-Roumain de Mathématiques Appliquées*, Toulouse, France, 29 August-2 Septembrie 2022,
https://15colfrro.sciencesconf.org/

8. I. Cîmpean: *Workshop on Stochastic Dynamics*, Bucharest, 18-19 noiembrie 2022,
http://imar.ro/ imar/2022/wds/Stochastic-Dynamics-SPSR-Nov-2022.pdf

9. R. Diaconescu: *Workshop on Selected Topics in Cryptography*, Sinaia, Romania, 21 - 25 Martie 2022,
https://www.wstc.flt-info.eu/spring2022/

10. S. Moroianu: *Semiclassical trace formula*, Paris, Franţa, 15 - 19.11.2022
https://sites.google.com/view/adrienboulangermaths/home/semiclassical-analysis

7.2 Organizări de alte conferinţe

1. M. Cimpoeaş: *Conferinta anuala a SSMR*, Universitatea Politehnică din Bucureşti, 22 octombrie 2022,
https://conferinta.ssmr.ro/

2. A. Gheondea: *Prof. Dr. Mefharet Kocatepe's Retirement and 30th Anniversary of Department of Mathematics*, 3–4 June 2022, Bilkent University, Ankara
http://www.fen.bilkent.edu.tr/ kaptan/MK3022

3. A. Otiman: *Kähler and non-Kähler geometry: New developments and Interactions*, Aarhus, Danemarca, 21-23 iunie 2022
https://aias.au.dk/events/international-workshop-kaehler-and-non-kaehler-geometry

4. A. Neguţ: *Summer School in Representation Theory*, MIT, 13-17 iunie 2022,
https://math.mit.edu/events/grt-summer/

5. V. Rădulescu: *Recent and New Perspectives in Nonlinear Analysis*, Università degli Studi di Urbino, 3-4 November 2022
http://www.sti.uniurb.it/servadei/NonlinearAnalysisUrbino2022/

6. L. Leuştean: *Working Formal Methods Symposium (FROM 2022)*, Iaşi, România, 19-20.09.2021
https://project.inria.fr/from22/

7. A. Constantinescu: *Group Actions in Algebraic Geometry*, Cetraro, Italia, 10-16 Iulie 2022,
https://sites.google.com/view/gaag2022

8. A. Török: *5th UH-LSU-TAMU Undergraduate Mathematics Research Conference*, University of Houston, Martie 26-27, 2022

7.3 Conferinţe şi expuneri susţinute

1. C. Cobeli, *Average and not-so-average gems*, Sesiune comemorativă dedicată mentorului Nicolae Popescu, IMAR, 29 Iulie, 2022.

2. I. Popescu, *From stochastic representations to neural network approximations of solutions to boundary value problems*, Colocviul Franco-Român, Toulouse, France, 29 August - 2 Septembrie.

3. I. Popescu, *Fragility of limit theorems for some learning models*, Statistical Modelling with Applications, 14-15 Oct. ISMMA,

4. F. Rădulescu, *On Connes Embedding Problem*, Operator Theory Conference, Timişoara, Iunie 2022.

5. F. Rădulescu, *Unitary representations of arithmetic groups and Operator Algebras*, NestFest Conference, Copenhagen, Iunie 2022.

6. C. Raicu, *Cohomology of line bundles on flag varieties*, AMS Special Session on Commutative Algebra, University of Utah, Octombrie 2022.

7. C. Raicu, *Koszul modules*, Recent Advances in Classical Algebraic Geometry, Institute of Mathematics of the Jagiellonian University in Krakòw, Iunie 2022.

8. C. Raicu, *Cohomology of line bundles on flag varieties*, Effective Methods in Algebraic Geometry, Krakòw, Iunie 2022.

9. C. Raicu, *Homological algebra for determinantal ideals*, 75 + 80 = 155 years of commutative algebra: a conference in honor of Bruns and Herzog, Osnabrück University, Iunie 2022.

10. C. Raicu, *Cohomology of line bundles on flag varieties*, Open Problems in Algebraic Combinatorics, University of Minnesota, Mai 2022.

11. C. Raicu, *Cohomology of line bundles on the incidence correspondence*, Geometry Seminar, Texas A&M University, Mai 2022.

12. C. Raicu, *Borel–Moore homology of determinantal varieties*, AMS Special Session on Recent Developments in Commutative Algebra, Purdue University, Martie 2022.

13. C. Raicu, *Cohomology of line bundles on the incidence correspondence*, AMS Special Session on Homological Methods in Commutative Algebra, Tufts University, Martie 2022.

14. R. Tănase, *Dynamics of Complex Hénon Maps*, Connections Workshop: Complex Dynamics - from special families to natural generalizations in one and several variables, MSRI, Berkeley, S.U.A., 2-4 februarie 2022

15. R. Tănase, *Hedgehogs in complex dynamics*, Arithmetic Dynamics International Online Seminar (ADIOS), 12 aprilie 2022

16. R. Tănase, *Varietăţi critice în sisteme dinamice*, A XXIV-a Conferinţă Anuală a Societăţii de Ştiinţe Matematice din România, Univ. Politehnica din Bucureşti, România, 28 octombrie 2022

17. I. Popescu, *Magia și matematica din spatele rețelelor neuronale*, Conferinta Anuala SSMR, 28 Oct.

18. R. Radu, *Domenii de rotaţie în sisteme dinamice*, Conferinţa Cercetării Ştiinţifice din Academia Română, Bucureşti, România, 22-23 noiembrie 2021

19. R. Radu, *Critical points in holomorphic dynamics*, Workshop for Young Researchers in Mathematics, ediţia a 11-a, IMAR, Bucureşti, România, 20 mai 2022

20. M. Palmer-Anghel, *Homological stability for asymptotic monopole moduli spaces*, Workshop for Young Researchers in Mathematics (WYRM), Ediţia a 11-a, 20 Mai 2022.

21. M. Palmer-Anghel, *The homology of configuration-section spaces*, Twinned Conference on Homotopy Theory with Applications to Arithmetic and Geometry, MPIM Bonn, 28 Iunie 2022.

22. M. Palmer-Anghel, *Mapping class group representations via Heisenberg, Schrödinger and Stone-von Neumann*, Workshop on Cobordisms, Strings, and Thom Spectra, Casa Matemática Oaxaca (CMO), 11 Octombrie 2022.

23. I. Popescu, *From stochastic representations to neural network approximations of solutions to boundary value problems*, Georgia TechAtlanta, USA, 11 Noiembrie 2022.

24. A. Diaconu, *Braids, scanning, and moments of L-functions*, Automorphic Forms in Budapest 2022, Erdös Center of the Alfréd Rényi Institute of Mathematics, September 5-9.

25. S. Moroianu, *Ergodicity of the geodesic flow*, Entropy of semiclassical measures, Les Plantiers, Franta, 12-17 iunie 2022.

26. M. Staic, *Determinant-like maps and d-partitions of the complete graph K_{2d}*, Ohio State Denison Mathematics Conference, OSU, Columbus, Ohio, May 13 - 15 Mai, 2022

27. A. Gheondea, *Reproducing Kernel Hilbert Spaces and Machine Learning*, Istanbul Center for Mathematical Sciences, Sabancı University Karaköy Communication Center, 7 Noiembrie 2022.

28. D. Tiba, C. Murea, *Periodic Hamiltonian Systems and topology optimization*,XVème Colloque Franco-Roumain de Mathématiques Appliquées, Toulouse, 29 august - 2 septembrie 2022

29. D. Tiba, C. Murea, *Pénalisation des équations stationnaires de Stokes et Navier-Stokes et applications*, XVème Colloque Franco-Roumain de Mathématiques Appliquées, Toulouse, 29 august - 2 septembrie 2022

30. D. Tiba, *Periodic Hamiltonian Systems and Topology Optimization: Equivalence, Approximation and Optimality Conditions with Lagrange Multipliers.*, Recent advances in direct and inverse problems for PDEs and applications, La Sapienza Univ. di Roma, 5-7 Decembrie 2022,

31. I. Cîmpean, *From Monte Carlo to neural network approximations of boundary value problems*, Bielefeld Stochastic Afternoon, Bielefeld University, Germany, 2022

32. I. Cîmpean, *From Monte Carlo to neural network approximations of boundary value problems*, Online seminar organized by Prof. dr. Max von Renesse, Leipzig University, Germany, 2022

33. I. Cîmpean, *From Monte Carlo to neural network approximations of boundary value problems*, BCAM scientific seminar, Bilbao, Spain, 2022

34. I. Cîmpean, *Ergodicity of Markov semigroups and applications to singular SDEs on Hilbert spaces*, XVème Colloque Franco-Roumain de Mathématiques Appliquées, Univ. Toulouse III - Paul Sabatier, 2022

35. I. Cîmpean, *On the path continuity of Markov processes*, Stochastic Dynamics for Complex Systems, Complexity Science Hub, Vienna 2022.

36. I. Cîmpean, *On the path continuity of Markov processes*, Stochastic Analysis Seminar - Imperial College London, 2022.

37. I. Cîmpean, *Ergodicity of Markov semigroups and applications to singular SDEs on Hilbert spaces*, Statistical Modeling with Applications, Bucharest, 2022

38. A. Popa, *The trace formula for Hecke operators on congruence subgroups*, Automorphic Forms in Budapest, Budapest, 5-9 September 2022

39. C. Joiţa, *Bifurcation of affine maps in real and complex settings*, CIMPA Research School *Singularities and Applications*, Sao Carlos, Brazilia, 11–22 iulie, 2022.

40. O. Preda, *Locally conformally Kähler structures on complex spaces* - Mathematics seminar, Institut for Matematik, Aarhus Universitet, June 7, 2022.

41. I. Ţuţu, *SpeX: a rewriting-based formal-specification environment*, WADT'22 – The 26th International Workshop on Algebraic Development Techniques 2022, Aveiro, Portugal, 28–30 June 2022.

42. M. Maican, *Variation of moduli spaces of coherent systems of dimension one and order one*, Invited talk. Bandoleros 2022: Sixth Algebraic Geometry Meeting, Technical University of the Middle East, Ankara, 13 Mai 2022.

43. A. Otiman, *Toric Kato manifolds*, Universitatea Chalmers din Göteborg, martie 2022.

44. A. Otiman, *Metric and cohomological properties of Oeljeklaus-Toma manifolds*, Non-Kähler geometry meeting, Paris Orsay, mai 2022

45. Cr. A.-M. Anghel, *Coloured Jones and coloured Alexander invariants from two Lagrangians intersected in a symmetric power of a surface*, AMS-EMS-SMF Special Session, Grenoble, Franţa, Iulie 2022

46. Cr. A.-M. Anghel, *A globalisation of the Jones and Alexander polynomials from configurations on arcs and ovals in the punctured disc*, Journées de topologie quantique, IMJ-PRG, Noiembrie 2022, Paris, Franţa.

47. R. Anghel-Stan, *Jacobi fields*, Entropy of semiclassical measures, organizat de Adrien Boulanger, Cévennes, Franţa, 12-18 Iunie 2022.

48. R. Anghel-Stan, *Selberg zeta function for the Dirac operator on degenerating hyperbolic surfaces*, Univ. Regensburg, Germania, 22 Iulie 2022.

49. R. Anghel-Stan, *Uniform Weyl's law on degenerating surfaces*, Random walks and related random topics, University of Goettingen, 17-21 Octombrie 2022.

50. R. Anghel-Stan, *Valori proprii ale suprafeţelor hiperbolice*, A XXIV-a Conferinţă anuală a SSMR, Universitatea Politehnică din Bucureşti, 28 Octombrie 2022.

51. L. David, *B_n-generalized pseudo-Kähler structures*, Inaugural Conference 'Edging Higher', International Center for Mathematical Sciences, Sofia, 10 - 14 iulie 2022.

52. A. Török *Stable laws for random dynamical systems* Dynamical systems seminar, Royal Institute of Technology (KTH), Stockholm, February 2022

53. A. Török *Stable laws for random dynamical systems* 55th Spring Topology and Dynamical Systems Conference, Baylor University, Waco, USA, March 2022

54. R. Purice, *Magnetic pseudo-differential operators and Gabor frames*, The 28th International Conference in Operator Theory, Timişoara, 27 Iunie - 1 Iulie 2022.

55. D. Matei, *New and old invariants of line arrangements*, Workshop on Algebraic Surfaces, Tokyo Metropolitan Univ., Japonia, august 2022.

56. F, Nichita, *Yang–Baxter Equations, Computational Methods and Applications*, ICATA 2022, Univ. Sibiu, 12–14 septembrie, 2022.

57. F. Nichita, *Yang–Baxter Equations, Algebraic Structures and Logic*, International Symposium on Current Topics of Logical Structures in Mathematics, Ege Univ., Turcia, 3 noiembrie 2022.

58. A. Sipoş, *On extracting variable Herbrand disjunctions*, Scandinavian Logic Society Symposium – SLSS 2022, Bergen, Norvegia, 17-19 iunie 2022.

59. A. Sipoş, *On extracting variable Herbrand disjunctions*, Logic Colloquium 2022, Reykjavík, Islanda, 27 iunie - 1 iulie 2022.

60. A. Sipoş, *On extracting variable Herbrand disjunctions*, International Conference on Applied Proof Theory 2022 (APT22), Pescara, Italia, 29 august - 2 septembrie 2022.

61. C. Anghel-Stan, *Non-local coefficients in the heat asymptotics for real powers of Laplacians*, Workshop for Young Researchers, IMAR, Bucureşti, 20 Mai 2022.

62. C. Anghel-Stan, *Shadowing lemma and Anosov Closing lemma*, Entropy of semiclassical measures Workshop, Les Plantiers, Franţa, 12-18 Iunie 2022.

63. C. Anghel-Stan, *Non-local coefficients in the heat asymptotics for real powers of Laplacians*, Young Women in Geometric Analysis, Bonn, Germania, 27-29 Iunie 2022.

64. C. Anghel-Stan, *Non-local coefficients in the heat asymptotics for real powers of Laplacians*, Analytic and Geometric Aspects of Spectral Theory, Oaxaca, Mexico, 15-19 August 2022.

65. C. Anghel-Stan, *Heat kernel asymptotics for real powers of Laplacians*, Doctoral Research Days Workshop, IMAR, Bucureşti, 11-12 octombrie 2022.

66. C. Anghel-Stan, *Heat kernel asymptotics for real powers of Laplacians*, Random Walks and related random topics, Göttingen, Germania, 17-21 Octombrie 2022.

67. C. Anghel-Stan, *Funcţia Zeta-Epstein şi nucleul căldurii*, A XXIV-a Conferinţă anuală a SSMR, Universitatea Politehnică, Bucureşti, 28 Octombrie 2022.

68. S. Burciu, *Subalgebras of etale algebras and fusion subcategories*, Hopf in Turin - 2022, Turin, Italy, Septembrie 6 -9, 2022.

69. S. Burciu, *On conjugacy classes for premodular categories*, Hopf algebras, monoidal categories and related topics, Bucureşti, 27-29 Iulie 2022.

70. S. Burciu, *On conjugacy classes and Grothendieck rings of premodular categories*, Tsinghua Seminar, BIMSA-Tsinghua Quantum Symmetry Seminar, September 14, 2022.

71. L. Ornea, *Lee classes of LCK manifolds with potential*, Recent advances in complex and symplectic geometry, Ianuarie 10-12, 2022, Parma.

72. L. Ornea, *A Calabi-Yau theorem for compact Vaisman manifolds*, Kähler and non-Kähler geometry: New developments and interactions. Iunie 21-23, 2022, Aarhus.

73. L. Ornea, *Coni algebrici su varietà LCK con potenziale*, expunere în seminarul de geometrie al Universităţii Roma 3, 1 dec. 2022.

74. F. Ambro, *Successive minima of line bundles*, Birational Geometry Workshop at BIMSA, Beijing, Octombrie 21-22, 2022.

75. L. Năstăsescu, *New trends in Hopf algebras and Monoidal categories*, expunere titlu: Transfer of Frobenius and symmetric properties, Torino, Italia, septembrie 2022

76. B. Ichim, *Predicting Multiple Traffic Features using a Spatio-Temporal Neural Network Architecture*, 8th International Conference on Vehicle Technology and Intelligent Transport Systems, 27.04.2022

77. L. Badea, *Convergence of the Damped Additive Schwarz Methods and the Subdomain Coloring*, Institutul de Calcul Tiberiu Popoviciu – Zilele Academice Clujene, Cluj, 26-28 octombrie, 2022.

78. M. Buliga, *Space as a Chemical Computation*, Wolfram Physics Project colloquium on chemical computing, 8 sept 2022.

79. M. Buliga, *Inclusions hamiltoniennes avec dissipation convexe*, CITV2022, Jaca, Spain, 18-23 sept 2022

80. D. Popescu, *Rezultate in carcteristică pozitivă de tipul teoremei de uniformizare a lui Zariski*, sesiunea Academiei Române din 23 noiembrie 2021.

81. D. Timotin, *Horn Inequalities: Old and New*, Bucknell University, aprilie 2022.

82. D. Timotin, *De Branges–Rovnyak spaces with rational reproducing kernels*, Bucknell University, aprilie 2022.

83. D. Timotin, *A partir des opérateurs de Toeplitz tronqués*, Colocviul în memoria lui Mohamed Zarrabi, Bordeaux, iunie 2022.

84. V. Lie, *The LGC method* , Celebrating the 200th anniversary of the *Theorie analytique de la chaleur*, Edinburgh, UK, 27 June - 1 July 2022.

85. V. Lie, *The LGC method*, 11^{th} International Conference on Harmonic Analysis and Partial Differential Equations, El Escorial, Madrid, Spain, June 6 - 10, 2022.

86. D. Timotin, *Reducing subspaces for some completely non-unitary contractions*, International Conference on Operator Theory and Applications, Krakow, septembrie 2022.

87. M. Cimpoeaş, *A note on the monomial characters of a wreath product of groups*, C.A.I.M. ediţia 29, Universitatea de stat din Tiraspol, Chişinău, Republica Moldova, 25-28 august 2022.

88. M. Cimpoeaş, *Almost monomial ideals*, Conferinţa anuală a SSMR, Universitatea Politehnică din Bucureşti, 22 octombrie 2022, Bucureşti.

89. A. Mustățea, *Stochastic integration in Riemannian manifolds from a functional-analytic point of view*, Doctoral Research Days, Bucureşti, 11-12 octombrie 2022.

90. M. Aprodu, *Koszul modules and applications*, Bandoleros 2022 Sixth Algebraic Geometry Meeting, Ankara, 11 – 13 mai 2022.

91. M. Aprodu, *Resonance and vector bundles*, Resonance, topological invariants of groups, moduli, Humboldt-Universität zu Berlin, 15 – 18 noiembrie 2022

92. L. Maxim, *Singularities and optimization*, Singularity theory and its applications, RIMS, Kyoto University, Kyoto, Japonia, 3-5 octombrie 2022.

93. L. Maxim, *Topology of complex projective hypersurfaces*, CIMPA Research School Singularities and Applications (cinci lecţii de câte 45 de minute), Sao Carlos, Brazil, 11-22 iulie 2022.

94. R. Diaconescu, *The axiomatic approach to non-classical model theory*, Logic and Formal Methods (a UNILOG 2022 workshop), Atena, Grecia, Septembrie 2022.

95. D. Manea, *A Non-local non-linear convection-diffusion problem on the Hyperbolic space* - Workshop for Young Researchers in Mathematics – 11th Edition, 19 mai - 20 mai 2022

96. D. Manea *A Non-local non-linear convection-diffusion problem on the Hyperbolic space* - IX Partial differential equations, optimal design and numerics, 21 august - 02 septembrie 2022, Benasque, Spania

97. D. Manea, *A Non-local non-linear convection-diffusion problem on metric trees* - IX Partial differential equations, optimal design and numerics, 21 august - 02 septembrie 2022, Benasque, Spania

98. D. Manea, *A Non-local non-linear convection-diffusion problem on metric trees* – "Heating up networks - analysis meets applications meeting", 05-10 octombrie 2022, Keiserslautern, Germania

99. R. Răsdeaconu, *Asymptotically Locally Euclidean Kähler metrics*, IRMA Strasbourg, Franţa, 24 iunie, 2022.

100. E. Mihăilescu, *Pressures for semigroups of maps*, 15-th French-Romanian Analysis Colloquium, Univ Toulouse, France, August 2022.

101. E. Mihăilescu, *On a class of exact dimensional invariant measures*, Conference Fractals and Related Fields IV, Porquerolles, France, September 2022.

102. E. Mihăilescu, *Thermodynamic formalism for fibered maps with singularities*, Univ Lodz, Poland, September 2022.

103. L. Ignat, *Large-time asymptotics of some numerical schemes for Burgers' like equations*, Numerical Analysis, Numerical Modeling, Approximation Theory, Cluj, 2022.

104. C. Muscalu Invited talk, Operator Theory 28, Timisoara, Romania, June 27 - July 1, 2022.

105. C. Muscalu Invited talk, Workshop on Harmonic Analysis, Beijing, November 7-11, 2022.

106. L. Ignat, *Asymptotic behavior of solutions for some diffusion problems on metric graphs*, XVème Colloque Franco-Roumain de Mathématiques Appliquées, Toulouse, 29 august - 2 septembrie 2022

107. L. Ignat, *Asymptotic behavior of solutions for some diffusion problems on metric graphs*, NTNU, Trondheim, Norvegia, Monday, 7 Noiembrie 2022.

108. L. Leuştean, *Proof mining in optimization and nonlinear analysis*, International Conference on Applied Proof Theory 2022 (APT22) Pescara, Italia, 29.08-02.09 2022

109. L. Leuştean, *Proof mining in optimization and nonlinear analysis*, IMAR Monthly Lecture, Bucureşti, 16.11.2022

110. A. Ciorogar, R. Stavre, *Mathematical and numerical modeling of a given field of temperature influence on the pressure variation in a fluid-structure interaction problem*, International Symposium on Applied Mathematics and Engineering (ISAME22), Istanbul, Turkey, January 21-23, 2022

111. A. Ciorogar, R. Stavre, *A thermal fluid-structure interaction model; approximation methods and numerical algorithms*, 4th International Applied Mathematics, Modelling and Simulation Conference (AMMS 2022), Paris, France, June 17-19 2022

112. A. Ciorogar, R. Stavre, *Variational and numerical analysis for a thermal fluid-structure interaction problem*, International Workshop *Multiscale Modeling & Methods*, Vilnius, Lithuania, October 24-26, 2022

113. R. Dinu, *Geometry of the Gaussian graphical model for the m-cycle*, prezentare de poster, Fifth Meeting of Young Women in Mathematics Cohomological methods in Geometry, Universitatea din Freiburg, 6-8 Aprilie 2022.

114. M. Fulger, *Positivity vs. slope-semistability for bundles with vanishing discriminant*, UC Riverside, 3 Mai 2022

115. M. Fulger, *Pozitivitate versus semistabilitate pentru fibrati cu discriminant nul*, Universitatea Ovidius Constanţa, 26 Mai 2022

116. M. Fulger, *Pozitivitate versus semistabilitate pentru fibrati cu discriminant nul*, IMAR, 16 Iunie 2022

117. M. Fulger, *Positivity vs. slope-semistability for bundles with vanishing discriminant*, University of Buffalo, 17 Octombrie 2022

118. M. Fulger, *Positivity vs. slope-semistability for bundles with vanishing discriminant*, Purdue University, 19 Octombrie 2022

119. M. Fulger, *Tangent cones of theta divisors on some abelian threefolds*, University of Notre Dame, 22 Noiembrie 2022

120. L. Beznea, *Continuous flows driving branching processes and the total mass*, Journée Pasta, Nancy, France, 8 Iulie 2022.

121. L. Beznea, *Multiple-fragmentation stochastic processes driven by a spatial flow,* Probability Seminar, Luxembourg University, Luxembourg, 13 Iulie, 2022.

122. L. Beznea, *Continuous flows driving branching processes and their nonlinear evolution equations*, Bielefeld Stochastic Afternoon, Bielefeld University, Bielefeld, Germany, 10 August 2022.

123. L. Beznea, *Continuous flows driving branching processes*, From Dirichlet Forms to Wasserstein Geometry, Bonn, Germany, 29 August 29 - 2 September 2022.

124. L. Beznea, *Multiple-fragmentation stochastic processes driven by a spatial flow*, Statistical Modelling with Applications 2022, Bucharest, Romania, 14 - 15 Octobmrie 2022.

125. L. Beznea, *Scaling property for fragmentation processes related to avalanches* (online), Numerical Analysis, Numerical Modelling, Approximation Theory (NANMAT 2022), Cluj-Napoca, Romania, 26 - 28 Octomrie 2022.

126. L. Beznea, *Classical and recent results on the existence of invariant measures for transition functions*, 2nd Workshop on Geometric Function Theory in Several Complex Variables and Complex Banach Spaces, 1-3 Decembrie 2022.

127. V. Paşol, *Weyl group Multiple Dirichlet Series*, Automorphic Forms Conference, Renyi Institute, Budapesta, 5-9.09.2022

128. A. Zărnescu, *Design by colloidal homogenisation in Landau de Gennes theory of nematic liquid crystals*, Nonlinear Analysis and PDE Conference Xi'an 2022, China, 4 August 2022

129. A. Zărnescu, *Twist waves in nematic liquid crystals* SIAM Conference on Nonlinear Waves and Coherent Structures, Bremen, Germany, 31 August 2022,

130. A. Zărnescu, *Design of nematic liquid crystals through colloidal homogenisation*, Jean-Morlet Chair 2022 - Workshop: Analysis of Nematic Liquid Crystal Flows, CIRM, Marsilia, Franţa, 27 Aprilie 2022

131. A. Agore, *Equivalences of (co)module algebra structures over Hopf algebras*, Recent trends in algebra, geometry, and arithmetic, Vlora, Albania, 9 –12 iunie 2022

132. A. Agore, *V-universal Hopf algebras (co)acting on* Ω*-algebras*, International Workshop on Hopf algebras, Zhejiang Normal University, China, 11 – 13 iulie 2022

133. A. Agore, *V-universal Hopf algebras (co)acting on* Ω*-algebras*, New trends in Hopf algebras and monodical categories, University of Turin, Italy, 6 –9 septembrie 2022

134. F. Panaite, *Generalized Rota-Baxter and Nijenhuis operators*, International Workshop on Hopf algebras, Zhejiang Normal University, Jinhua (China), iulie 2022

135. F. Panaite, *Generalized Rota-Baxter and Nijenhuis operators*, Hopf algebras, monoidal categories and related topics, IMAR, Bucureşti, iulie 2022

136. M. Anton, *Computational Aspects of Arithmetic Group Cohomology*, Tenth Bucharest Number Theory Days, 3-5 August, 2022.

137. M. Anton, *About Nicolae Popescu's Vocation as a Mentor*, Romanian Academy Session, 29 Iulie, 2022.

138. M. Anton, *The Linear Algebra of Group Actions*, Colloquium, Central Connecticut State University, 8 Aprilie 2022.

139. V. Rădulescu, *Double phase problems: new results and perspectives*, University of Electronic Science and Technology of China, Chengdu, 8 January 2022

140. M. Stanciu, *Modifications of locally conformally Kähler spaces*, Workshop for Young Researchers in Mathematics 11^{th} edition, 19-20 mai 2022.

141. M. Stanciu *Modifications of locally conformally Kähler spaces*, Geometry seminar of Aarhus University, 31 august 2022.

142. V. Rădulescu, *Hardy-Littlewood-Sobolev, Stein-Weiss, and applications to Choquard problems*, Guangzhou University, 10 Ianuarie 2022

143. V. Rădulescu, *New perspectives on anisotropic Stein-Weiss inequalities and Choquard problems*, XIV Summer Workshop in Mathematics, Universidade de Brasilia, 17-21 Ianuarie 2022

144. V. Rădulescu, *Anisotropic double phase problems with mixed regime*, One Day in Double Phase Problems in Ancona, Università Politecnica delle Marche, 28 Ianuarie 2022

145. V. Rădulescu, *Elliptic equations driven by the Stuart differential operator: new results and perspectives*, ICMC Summer Meeting on Differential Equations - Chapter 2022, Universidade de São Paulo, 31 Ianuarie - 2 Februarie 2022

146. V. Rădulescu, *Isotropic and anisotropic equations with unbalanced growth*, International Workshop Recent Developments in PDEs and Applications, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia, 16-17 Martie 2022

147. V. Rădulescu, *Nonstandard phenomena in the study of double phase problems*, Seminar of the Department of Differential Equations, AGH University of Science and Technology, Krakow, 10 Mai 2022

148. V. Rădulescu, *Double phase problems: concentration of the spectrum and equations with mixed regime*, Honghe University, 26 Mai 2022

149. V. Rădulescu, *Hardy-Littlewood-Sobolev, Stein-Weiss, and beyond*, International Workshop "Advances in Nonlinear Analysis and PDEs", Shandong University of Technology and Business, Qingdao, 28-29 Mai 2022

150. V. Rădulescu, *Anisotropic double phase problems with mixed regime in the applied sciences*, International Workshop Mathematical Modeling of Self-Organizations in Medicine, Biology and Ecology, Palermo, 29 Mai - 3 Iunie 2022

151. V. Rădulescu, *New phenomena in the analysis of double phase problems*, International Conference *Nonlinear Differential Problems*, Univ. Palermo, 31 Mai 2022

152. V. Rădulescu, *Non-autonomous double phase problems with unbalanced growth*, Three Gorges University, Yichang, Hubei, 15 Iunie 2022

153. V. Rădulescu, *New phenomena in the study of double phase problems*, Seminario de EDP e Matemática Aplicada, Universidade Federal Fluminense, Rio de Janeiro, 15 Iunie 2022

154. V. Rădulescu, *Ambrosetti-Prodi problems for Robin (p,q)-equations*, Central South University, Changsha, 20 Iunie 2022

155. V. Rădulescu, *Elliptic equations driven by the Stuart differential operator and some perspectives*, Summer School in Nonlinear Analysis with a Special Tribute to Patrizia Pucci, Università degli Studi della Tuscia, Viterbo, 20-24 Iunie 2022

156. V. Rădulescu, *A new differential operator: difficulties and perspectives*, Central South University, Changsha, 11 Iulie 2022

157. V. Rădulescu, *Ambrosetti-Prodi double phase problems with Robin boundary condition*, Workshop on Nonlinear Analysis and PDEs, East China University of Science and Technology, Shanghai, 27 August 2022

158. V. Rădulescu, *Resonant non-autonomous double phase Dirichlet equations*, Zhejiang Normal University, Jinhua, 30 August 2022

159. V. Rădulescu, *Double-phase elliptic equations: concentration of the spectrum and problems with mixed regime*, Brno University of Technology, 31 August 2022

160. V. Rădulescu, *Introduction to double phase problems: new results and some perspectives*, Nanchang University, 6 Septembrie 2022

161. C. Anghel, *Globally generated vector bundles on $\mathbb{P}^3$ and the unirationality of $\mathcal{M}_g$, $g \leq 13$*, Bandoleros 2022-Sixth Algebraic Geometry Meeting , Middle East Technical University, Ankara, 11-13 Mai 2022.

162. C. Anghel, *Exact modules over CDGA and weight systems*, CAIM-2022 , Chisinau, 25-27 August 2022.

163. V. Rădulescu, *Introduction to double phase problems: new results and some perspectives*, Baotou Teachers' College, 7 Septembrie 2022

164. V. Rădulescu, *Ambrosetti-Prodi double phase problems with Robin boundary condition*, Seminar of Functional Analysis, AGH University of Science and Technology, Krakow, 12 Octombrie 2022

165. V. Rădulescu, *Isotropic and anisotropic multi-phase problems*, Anhui University of Science and Technology, 21 Octombrie 2022

166. V. Rădulescu, *Unbalanced elliptic equations and some perspectives*, Numerical Analysis, Numerical Modeling, Approximation Theory, Tiberiu Popovici Institute of Numerical Analysis, Cluj Napoca, 26-28 Octombrie 2022

167. V. Rădulescu, *Multi-phase problems: a discontinuity property of the spectrum and equations with mixed regime*, International Conference on Theory and Computation of Partial Differential Equations, Taishan Science and Technology Forum, Shandong Association for Science and Technology, Qingdao, 29-30 Octombrie 2022

168. V. Rădulescu, *Two striking results in the analysis of double phase problems*, Recent and New Perspectives in Nonlinear Analysis, Università degli Studi di Urbino, 3-4 Noiembrie 2022

169. D Beltiţă, *Transformation groupoids in W^*-algebras*, 42 International Conference on Quantum Probability and Infinite Dimensional Analysis (QP-42), Indian Statistical Institute, Statistics and Mathematics Unit, Bangalore, India, 17–20 ianuarie 2022.

170. D. Beltiţă, *On the solvable Lie groups whose regular representation is a factor representation*, XXXIX Workshop on Geometric Methods in Physics, Univ. Białystok, Polonia, 19–25 iunie 2022

171. D. Beltiţă, *Quantization and enveloping algebras of Lie groups* (mini-curs format din 4 lecţii), XI School on Geometry and Physics, Univ. Białystok, Polonia, 27 iunie–1 iulie 2022

172. D. Beltiţă, *Nilpotent Lie groups and their corresponding C^*-algebras*, Seminario *Mischa Cotlar*, Instituto Argentino de Matematica *Alberto P. Calderón*, Buenos Aires, Argentina, 30 septembrie 2022

173. V. Drăgan, I.L. Popa, *Stability analysis of impulsive stochastic linear differential equations, On the Stochastic Linear Quadratic Optimal Control Problem by Piecewise Constant Controls. The Infinite Horizon Time Case,* International Conference on Mathematical Analysis and Applications in Science and Engineering-ICMAS2SC'22 School of Engineering of the Polytechnic of Porto, 27 – 29 Iunie 2022.

174. V. Drăgan, I.L. Popa, *Stability Analysis of impulsive stochastic linear differential equations,* International Symposium and International student Workshop on Interdisciplinary mathematics in the CiTi areas, Univ. Politehnica Bucharest, 26 – 29 Iunie 2022.

175. V. Drăgan, I.L. Popa, I. G. Ivanov, *A linear quadratic tracking problem for stochastic systems controlled by impulses. The finite horizon time case,* Fourth Romanian Itinerant Seminar on Mathematical Analysis and its Applications, Transilvania University of Brasov, 19 – 21 Mai 2022.

176. V. Drăgan, I.L. Popa, I. G. Ivanov, *A linear quadratic tracking problem for stochastic systems controlled by impulses. The infinite horizon time case,* XXIV Mathematical Modelling in Engineering and Human Behaviour Conference (MMEHB 2022), Universitat Politècnica de València, València, Spain, 13 - 15 Iulie 2022.

177. V.Drăgan, I.L. Popa, S.Aberkane, Vl. Răsvan, *A spectral criterion for the existence of the stabilizing solution of a large class of discrete time Riccati equations with periodic coefficients*, National Scientific Conference "The role of science in solving contemporary crises", 3 – 5 Noiembrie 2022

178. L. Păunescu, *Spaţiul convex al aproximărilor sofice* Workshop for Young Researchers in Mathematics - 11th Edition, Bucureşti, 19-20 mai 2022.

179. L. Păunescu, *Convex space of sofic representations* The 28th International Conference in Operator Theory, Timisoara, 27 iunie- 1 iulie 2022.

180. C. Popescu, *Asupra numărului de puncte laticiale interioare unui poligon laticial convex*, Societatea de Ştiinţe Matematice din România, iunie 2022.

8 Alte activităţi

8.1 Conducere granturi

- R. Purice - Coordonator Român al Reţelei Internaţionale IRN ECO-Math, CNRS (Franţa). http://imar.ro/GDRI/
- S. Moroianu - director de proiect al grantului PN-III-P4-ID-PCE-2020-079. *Spectral Methods in Hyperbolic Geometry*
- M. Aprodu - director de proiect al grantului PN-III-P4-ID-PCE- 2020-0029, *Syzygies, invariants and classification problems in algebraic geometry and topology*
- I. Cîmpean - director de proiect al grantului PN-III-P1-1.1-PD-2019-0780 *Probabilistic potential methods for diffusion processes under low regularity and applications*
- A. Popa - director de proiect al grantului PN-III-P4-ID-PCE-2020-2498, Aspecte algebrice si analitice ale formelor automorfe
- O. Preda - director de proiect al grantului PN-III-P1-1.1-TE-2021-0228, *LCK structures on singular complex spaces.*
- S. Burciu - director de proiect al grantului PN-III-P4-ID-PCE-2020-0878 *Pivotal fusion categories: character theory and Galois symmetries*
- L. Beznea - director de proiect al grantului PN-III-P4-PCE-2021-0921 *Stochastic analysis methods for the evolution equations of non-local branching and fragmentation processes*
- E. Mihăilescu - director de proiect al grantului PN III-P4-ID-PCE-2020-2693 *Dimensions and invariance in dynamical systems*
- A. Agore - director al grantului PN-III-P4-ID-PCE-2020-0458 *Extending structures and the global extension problem*
- R. Diaconescu - director de proiect al grantului PN-III-ID-PCE-2020-0446, *Metode Axiomatice in Teoria Non-clasică a Modelelor.*
- M. Palmer-Anghel director al proiectului PN-III-P4-ID-PCE-2020-2798 *Moduli spaces of submanifolds and motion groups*
- R. Diaconescu - director de proiect al grantului PN-III-P2-2.1-PED-2019-0955, *Verificare Formală Bazată pe Componente.*
- L. Păunescu - director de proiect al grantului PN-III-P1-1.1-TE-2019-0262 *Spaţiul convex al reprezentărilor sofice*
- A. Sipoş - director de proiect al grantului PN-III-P1-1.1-PD-2019-0396 *Proof Mining in Analysis and Optimization*
- R. Tănase - director de proiect al grantului PN-III-P1-1.1-TE-2019-2275 *Partial Hyperbolicity for Polynomial Diffeomorphisms of* $\mathbb{C}^2$
- D. Tiba ECO-Math France-Romania, 2022-2023 (cu C.Murea, Univ. Mulhouse)

- L. Maxim - *Topology of complex algebraic varieties*, cercetare, $09/2018-08/2023$, Simons Foundation Collaboration Grants for Mathematicians (USA).
- C. Raicu - NSF Award DMS - 1901886.
- V. Lie - NSF grant DMS-1900801, July 2019 - June 2023.
- M. Fulger - Simons Collaboration Grant *Problems on Positivity in Algebraic Geometry*, 2018–2023
- V. Rădulescu - director de proiect al grantului PCE PN-III-P4-ID-PCE-2020-0068 *Nonlinearity and anisotropy*
- I. Beltiţă - Membru în Comitetul de Management al Acţiunii COST CA21109 *Cartan Geometry, Lie, Integrable Systems, Quantum Group Theories for Applications* (CaLISTA). https://www.cost.eu/actions/CA211
- N. Bonciocat - Responsabil temă de cercetare în echipa *Equations diophantiennes* în cadrul GDRI ECO-Math (Groupement de Recherche International en Matématiques visant l'Europe Centrale et Orientale - Director proiect: Radu Purice)

8.2 Conducere doctorate

- I. Popescu - 6 doctoranzi: A. Andriciuc, A. Nistor, E. Kelesidis, M. Petrică, V. Constantinescu, C. Sandu.
- R. Purice - 1 doctorand: A. Mustăţea (finalizat în 2022)
- M. Cimpoeaş - 2 doctoranzi: A. Neacşu, S. Bălănescu, în cadrul Şcolii Doctorale a Facultăţii de Ştiinţe Aplicate din cadrul Universităţii Politehnice din Bucureşti.
- S. Moroianu - 2 doctoranzi: C. Anghel, R. Stan
- M. Aprodu - 3 doctoranzi: L. Filimon, C. Spiridon, A. Stoenică
- L. Ornea 2 doctoranzi: C. Ciulică şi V. Marchidanu.
- A. Zărnescu - 1 doctorand R.D. Ceuca, in cadrul BCAM, Spania
- L. Maxim - 2 doctoranzi: A. Hof, L. Rajat Srivastava, University of Wisconsin-Madison (USA)
- R. Diaconescu - 1 doctorand: A. Ioniţă
- R. Stavre - 1 doctorand: A. Ciorogar.
- C. Raicu - 7 doctoranzi: Z. Gao, L. N. Moncada Morales, P. LeVan, J. Zoromski, J. Lanfranco, E. Reed la University of Notre Dame (USA).
- V. Lie - 2 doctoranzi: A. Gaitan, C. Hsu, la Purdue University (USA)
- M. Fulger - 2 doctoranzi: H. Zhou, B. Oltsik la University of Connecticut (USA).

- L. Beznea - 5 doctoranzi: Ş. Aniţa, A. Boeangiu, A. Popescu, A. Teodor, C. Vrabie
- L. Ignat - 1 doctorand: D. Manea
- V.D. Rădulescu - 2 doctoranzi la AGH University of Science and Technology, Krakow.

8.3 Cooperări ştiinţifice

1. D. Timotin - Univ. Bucknell şi Indiana University (Bloomington), mai-iunie 2022.
2. A. Bonciocat - Hausdorff Center for Mathematics, Bonn, Germania, 29 august – 2 septembrie 2022.
3. D. Tiba - Univ. Mulhouse, Franţa, 21.11.2022-27.11.2022
4. B. Ichim - Univ. Osnabruck, Germania, iunie 2022.
5. L. Ornea - Univ. Roma 3, Italia, mai şi noiembrie 2022.
6. Cipriana Anghel-Stan - CIRM Marseille, Franţa, 28 Martie - 1 Aprilie 2022.
7. Cipriana Anghel-Stan - Univ. Géneve, Elveţia, 1-11 Aprilie 2022.
8. L. Maxim - Univ. Lille , Franţa, Iunie-August 2022
9. L. Maxim - Max Planck Institute Bonn, Germania, Septembrie-Decembrie 2022
10. L. Maxim - Research in Pairs, MFO Oberwolfach, Germania, 11-23 Iunie 2022
11. L. Maxim - Research in Pairs, Centro Internazionale per la Ricerca Matematica Trento, Italia, 30 Mai - 10 Iunie 2022
12. Martin Palmer-Anghel - American University of Sharjah, Emiratele Arabe Unite, 28 Martie – 2 Aprilie 2022.
13. Martin Palmer-Anghel - Univ. Glasgow, Scoţia, 6–9 Iunie 2022.
14. Daniel Beltiţă - Univ. Savoie Mont Blanc, Le Bourget du Lac, Franţa, 3–10 Octombrie 2022.
15. R. Diaconescu - *Laboratory of Algorithmic Applications and Logic*, National Technical University Athens, Grecia, 11–30 Septembrie 2022.
16. R. Stavre - Vilnius Univ., Lithuania, October 24-26, 2022.
17. M. Fulger - Univ. Varşovia, Polonia, 7–11 Iulie 2022
18. M. Fulger - Univ. Genova, Italia, 15–20 Iulie 2022
19. L. Beznea - Basque Centre for Applied Mathematics (BCAM), Bilbao, Spania, 20-26 martie 2022, iunie 2022, septembrie 2022, noiembrie 2022.
20. L. Beznea - Banach Center şi Institute of Mathematics of the Polish Academy of Sciences, Varşovia, Polonia, 26-27 mai 2022.

21. L. Beznea - Univ. Lorraine, Franţa (profesor invitat), 30 iunie-28 iulie 2022.
22. L. Beznea - Unviv. Luxembourg, Luxembourg, 13-14 iulie 2022.
23. L. Beznea - Univ. Bielefeld, Germania, 7-28 august 2022.
24. M. Stanciu - Aarhus University, Denmark, 27 august - 2 septembrie 2022.
25. L. Beznea - Univ. Bielefeld, Germania, 30 noiembrie - 15 decembrie 2022.
26. A. Agore - Vrije Universiteit Brussel, Belgia 15.04.2022 – 20.05.2022, 13.06.2022 – 11.07.2022
27. A. Agore - Max Planck Institute for Mathematics, Bonn, Germania, 01.11.2022 – 30.12.2022.
28. R. Radu - Mathematical Sciences Research Institute (MSRI), Berkeley, S.U.A., 31 ianuarie - 27 februarie 2022
29. R. Tănase - Mathematical Sciences Research Institute (MSRI), Berkeley, S.U.A., 31 ianuarie - 27 februarie 2022
30. R. Purice - Univ. Aalborg, Danemarca.
31. R. Dinu - Univ. Duisburg-Essen, Essen, Germania, 19.06–01.07.2022.
32. R. Dinu - Univ. Konstanz, Germania, 01.09.2022–31.08.2024,
33. E. Mihăilescu - Univ Toulouse, Franta, August 2022
34. E. Mihăilescu - Univ Lodz, Polonia Septembrie 2022.
35. D. Ionescu-Kruse Erwin Schrödinger Institute (ESI), Viena, Austria, Research in Teams Project, 1 - 31 iulie 2022.
36. R. Anghel-Stan - CIRM Marseille, Franţa, 28 Martie - 1 Aprilie 2022.
37. R. Anghel-Stan, Univ. Geneva, Elveţia, 1-11 Aprilie 2022.
38. F. Belgun Univ. Marburg, Germania, 14-18.3.2022.
39. L. Ignat - Norwegian University of Science and Technology, Trondheim, Norvegia, 2-9 noiembrie 2022

8.4 Membri în colective editoriale

1. Cezar Joiţa: *Revue Roumaine de Mathématiques Pures et Appliquées*, *Mathematical Reports*.
2. I. Popescu: *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, Mathematical Reports, Revue Roumaine de Mathématiques Pures et Appliquées*
3. M. Cipu: *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, Gazeta Matematică - Seria A*

4. A. Gheondea: *Journal of Operator Theory*, *Complex Analysis and Operator Theory*, *Opuscula Mathematics, Journal of Function Spaces*

5. D. Tiba: *Scientific Bulletin, ser. A*, *International Journal of Differential Equations*, *Bulletin of the South Ural Univ.*, *Mathematica*, *Proceedings of the Romanian Academy*, *Mathematics*, *Mathematics and its Applications*, *Annals of ARS*.

6. C. Ionescu: *Asia Mathematika*.

7. D. Popescu: *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie*.

8. D. Timotin: *Journal of Operator Theory, Revue Roumaine de Mathématiques Pures et Appliquées, Mathematical Reports, Analele Ştiinţifice ale Universităţii "Alexandru Ioan Cuza" din Iaşi, Matematica*.

9. R. Diaconescu: *Studies in Universal Logic* book series at Springer Basel.

10. M. Aprodu: *Revue Roumaine de Mathématiques Pures et Appliqées, Mathematical Reports*

11. L. Beznea: *Advances in Pure and Applied Mathematics*, *Revue Roumaine de Mathématiques Pures et Appliquées*, *Mathematical Reports*, *Proceedings of the Romanian Academy - Series A*.

12. C. Năstăsescu: *Mathematical Reports, Revue Roumaine des Mathématiques Pures et Appliquées, Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, Analele Universităţii din Bucureşti - Seria Matematică, Analele Ştiinţifice ale Universităţii "Ovidius" din Constanţa - Seria Matematică, Analele Universităţii din Craiova Seria Matematică - Informatică, Mathematica (Cluj)*.

13. L. Ornea: *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie*, *Mathematical Reports*, *Revue Roumaine des Mathématiques Pures et Appliquées*.

14. V. Timofte: *Australian Journal of Mathematical Analysis and Applications*.

15. E. Mihăilescu: *Discrete and Continuous Dynamical Systems–series S*.

16. Daniel Beltiţă: *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie*, *Analele Ştiinţifice ale Universităţii Al.I. Cuza din Iaşi —Matematică*.

17. V. Brînzănescu: *Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie*, *Analele Ştiinţifice ale Universităţii "Ovidius" din Constanţa , Serdica Mathematical Journal*.

18. V. Rădulescu: *Mathematics in science and engineering* Book Series, Academic Press, *De Gruyter Book Series in Nonlinear Analysis and Applications*, *Advances in Nonlinear Analysis*, *Boundary Value Problems*, *Mathematical Methods in the Applied Sciences*, *Bulletin of Mathematical Sciences*, *Journal of Geometric Analysis*, *Asymptotic Analysis*, *Rendiconti del Circolo Matematico di Palermo*, *Demonstratio Mathematica*, *Complex Variables and Elliptic Equations*, *Discrete and Continuous Dynamical Systems - Series S*, *Journal of Mathematics and Applications*, *Advances in Pure and Applied Mathematics*, *Opuscula Mathematica*, *Journal of Numerical Analysis and Approximation Theory*, *Analele Ştiinţifice ale Universităţii "Ovidius" din Constanţa*.

19. V. Drăgan: *International Journal of Innovative Computing, Information and Control*, *ICIC-Express Letters*, *IET Control Theory and Applications*, *Innovativity in Modeling and Analytics Journal of Research*, *Annals Series on Mathematics and Its Application*, *Acta Universitatis Apulensis - Serie Mathematica Informatica*.

20. F. Nichita: *Axioms*, *Sci.*

8.5 Lucrări acceptate la publicat în 2022

1. D. Tiba, C. Murea: *Implicit Parametrizations in shape optimization: boundary observation*, acceptată la Pure and Applied Functional Analysis.

2. M. Palmer, U. Tillmann: *Point-pushing actions for manifolds with boundary*, acceptată la Groups Geom. Dyn.

3. G. Horel, M. Palmer: *Motivic homological stability of configuration spaces*, acceptată la Bull. London Math. Soc.

4. A.-M. Stan, F. Stan: *Some remarks on totally positive algebraic integers*, acceptată la Bull. Math. Soc. Sci. Math. Roumanie.

5. L. Ornea, M. Verbitsky: *Lee classes on LCK manifolds with potential*, acceptată la Tohoku Math. J.

6. L. Ornea, V. Slesar: *Deformations of Vaisman manifolds*, acceptată la Differential Geom. Appl.

7. A.L Agore, G. Militaru: *The factorization problem for Jordan algebras. Applications*, acceptată la Collect. Math.

8. M. F. Anton: *Relative Brauer relations of Abelian p-groups*, acceptată la Rev. Roumaine Math. Pures Appl.

9. R.-D., Ceuca, J.M. Taylor, A. Zărnescu: *Effective surface energies in nematic liquid crystals as homogenized rugosity effects*, acceptată la Comm. Cont. Math.

10. N.D. Alikakos, D. Gazoulis, A. Zărnescu: *Entire Minimizers of Allen-Cahn Systems with Sub-Quadratic Potentials*, acceptată la Journ. Dyn. Diff. Eqs.

11. R. Diaconescu: *Generalised graded interpolation*, acceptată la Inter. J. Approx. Reasoning.

12. R. Diaconescu: *Decompositions of stratified institutions*, acceptată la J. Logic Computation.

13. R. G. Iagăr, Ph. Laurençot: *Finite time extinction for a diffusion equation with spatially inhomogeneous strong absorption*, acceptată la Diff. Integral Eq..

14. R. Diaconescu: *Preservation in many-valued truth institutions*, acceptată la Fuzzy Sets and Systems, Elsevier.

15. D. Angella, A. Dubickas, A. Otiman, J. Stelzig: *On metric and cohomological properties of Oeljeklaus-Toma manifolds*, acceptată la Publ. Mat.

16. T. Abe, D. Ibadula, A. Măcinic: *On some freeness-type properties for line arrangements*, acceptată la Ann. Sc. Norm. Super. Pisa, Cl. Sci.

17. N. Istrati, A. Otiman: *Bott-Chern cohomology of compact Vaisman manifolds*, acceptată la Trans. Amer. Math. Soc.

18. V. Alexandru, C. Cobeli, M. Vâjâitu, A. Zaharescu: *On Wieferich and non-Wieferich primes with prime bases*, acceptată la Mediterr. J. Math.

19. V. Alexandru, M Vâjâitu: *Galois equivariant functions on Galois orbits in large p-adic fields*, acceptată la Rend. Sem. Mat. Univ. Padova.

20. V.Drăgan, I.L.Popa, I.G.Ivanov: *A Linear Quadratic Tracking Problem for Impulsive Controlled Stochastic Systems. The Infinite Horizon Time Case,* acceptată la Math. Meth. Appl. Sci.

21. M. Cimpoeaş: *On a generalization of monomial groups*, acceptată la Monatsh. Math.

22. M. Cimpoeaş, A. F. Radu: *On the monoid algebra associated to the monomial characters of a finite group*, acceptată la Quaest. Math.

23. M. Cimpoeaş, A. F. Radu: *On supercharacter theoretic generalizations of monomial groups and Artin's conjecture*, acceptată la Czech. Math. J.

24. Y. Liu, L. Maxim, B. Wang: *Non-abelian Mellin transformations and applications*, acceptată la Forum of Mathematics, Sigma.

25. E. Elduque, C. Geske, M. Herradón-Cueto, L. Maxim, B. Wang: *Mixed Hodge structures on Alexander modules*, acceptată la Mem. Amer. Math. Soc.

26. C. Anghel, D. Cheptea: *Lie algebroids and weight systems*, acceptată la proceedings conferinta in seria Springer Proceedings in Mathematics and Statistics.

27. R. Pantilie: *On tame ρ-quaternionic manifolds*, acceptată la J. Geom. Phys.

28. V. Lie: *A unified approach to three theme in Harmonic Analysis*, acceptată la Adv. Math.

29. D. Poliševski, A. Ştefan: *Dirichlet problem for a fine scale conductive mixture with interfacial barrier*, acceptată la Appl. Anal.

30. C. Cobeli, A. Zaharescu: *On the parity slope of words of low complexity*, acceptată la Proc. Romanian Acad.

31. C. Anghel, I. Coandă, N. Manolache: *On the vector bundles from Chang and Ran's proof of the unirationality of M_g, $g < 14$* , acceptată la Comm. Algebra.

32. A. Mustățea: *The diamagnetic inequality for the heat semigroup in Hermitian bundles over compact Riemannian manifolds*, acceptată la Math. Rep.

33. A. Mustăţea: *A functional-analytic construction of stochastic integrals in Riemannian manifolds*, acceptată la Proc. Rom. Acad.

34. I. Beltiţă, D. Beltiţă: *Solvable Lie groups whose regular representation is a factor representation.* In: Proceedings of the XXXIX Workshop on Geometric Methods in Physics.

35. J. Bassi, F. Rădulescu: *An example of a non-amenable dynamical system which is boundary amenable*, acceptată la Proc Amer. Math. Soc.

36. N. Papageorgiou, A. Pudelko, V.D. Rădulescu: *Non-autonomous (p,q)-equations with unbalanced growth*, acceptată la Math. Annalen.

37. Q. Li, V.D. Rădulescu, J. Zhang, X. Zhao: *Normalized solutions of the autonomous Kirchhoff equation with Sobolev critical exponent: sub- and super-critical cases*, acceptată la Proc. Amer. Math. Soc.

38. A. Aghajani, V.D. Rădulescu: *Positive supersolutions of non-autonomous quasilinear elliptic equations with mixed reaction*, acceptată la Ann. Inst. Fourier-Grenoble

39. V. Ambrosio, V.D. Rădulescu: *Multiplicity of concentrating solutions for (p,q)-Schrödinger equations with lack of compactness*, acceptată la Israel J. Math.

40. Y. Chen, V.D. Rădulescu, R. Xu: *High energy blowup and blowup time for a class of semilinear parabolic equations with singular potential on manifolds with conical singularities*, acceptată la Comm. Math. Sci.

41. R. Gaba: *'p-adic Galois representations attached to Elliptic Curves*, acceptată la Adv. Math. Res.

42. R. Gaba, B. Cânepa, V.Olteanu: *CM complex elliptic curves and algorithms complexity*, acceptată la Sci. Bull. UPB.

8.6 Preprinturi elaborate în 2022

1. D. Tiba: *Optimality conditions and Lagrange multipliers for shape and topology optimization problems*, arXiv.2210.02688, pag. 1–20

2. D. Popescu: *Pure transcendental, immediate valuation ring extensions as limits of smooth algebras*, arxiv/AC:2206.00472.

3. O. Preda, M. Stanciu: *Modifications and blow-ups of lcK spaces*, arXiv.2211.10925.

4. R. Dinu, F. Navarra: *Non-simple polyominoes of König type*, preprint arXiv:2210.12665, 15 pagini.

5. L. Ornea, M. Verbitsky: *Principles of locally conformally Kähler geometry*, arXiv:2208.07188; carte, 769 pagini.

6. L. Ornea, M. Verbitsky: *Algebraic cones of LCK manifolds with potential*, arXiv:2208.05833

7. L. Ornea, M. Verbitsky: *A Calabi-Yau theorem on Vaisman manifolds*, arXiv:2206.08808

8. L. Ornea, M. Verbitsky: *Mall bundles and flat connections on Hopf manifolds*, arXiv:2205.14062

9. L. Ornea, M. Verbitsky: *Non-linear Hopf manifolds are locally conformally Kähler*, arXiv:2202.12398

10. M. Staic: *Existence of the det^{S^2} map*, arXiv:2205.02178.

11. M. Staic: *Conditional Probability Matrix and the S^2-rank*, arXiv:2205.02183.

12. B. Ichim, J. Moyano-Fernández: *On the consistency of score sheets of a round-robin football tournament*, arXiv:2208.12372.

13. G. Paşa: *On the growth rates for a three-layer flow in porous media*, arXiv:2203.11150.

14. G. Paşa: *Unbounded eigenfunctions in the stability problem for a three-layer flow in porous media*, arXiv:2211.03519.

15. I. Beltiţă, D. Beltiţă: *Continuous selection of Lagrangian subspaces*, arXiv: 2211.02433, pag. 1–22.

16. I. Beltiţă, D. Beltiţă: *A note on ideal spaces of Mautner groups*, arXiv: 2211.04424, pag. 1–15.

17. M. Maican: *On the Hilbert function of a finite scheme contained in a quadric surface*, arXiv 2203.14175, 13 pagini

18. E. Fricain, A. Hartmann, W. Ross, D. Timotin: *Sharp estimates of the solutions to Bézout's polynomial equation and a corona theorem*, arXiv:2205.00740, 35 pag.

19. H. Cheval, U. Kohlenbach, L. Leuştean: *On modified Halpern and Tikhonov-Mann iterations*, arXiv:2203.11003, pag. 14

20. L. Leuştean, P. Pinto: *Rates of asymptotic regularity for the alternating Halpern-Mann iteration*, arXiv:2206.02226, pag. 14

21. M. Cimpoeaş: *A note on the monomial characters of a wreath product of groups*, arxiv 2207.06906, pag. 8.

22. M. Cimpoeaş, A. G. Neacşu: *Geometrical isomorphisms between categories of fuzzy coverings and fuzzy partitions*, arxiv 2210.07948, pag. 24.

23. M. Aprodu, G. Farkas, C. Raicu, J. Weyman: *Koszul modules with vanishing resonance in algebraic geometry*, arXiv:2201.00839

24. L. David, V. Cortés *B_n-generalized pseudo-Kähler structures*, arxiv: 2206.10456, 46 pag.

25. L. Maxim, M. Tibăr: *Euclidean distance degree and limit points in a Morsification*, preprint arXiv:2210.06022

26. Y. Liu, L. Maxim, B. Wang: *Cohomology of $\mathbb{Z}$-local systems on complex hyperplane arrangement complements*, arXiv:2209.13193

27. L. Maxim, J. Rodriguez, B. Wang, L. Wu: *Linear optimization on varieties and Chern-Mather classes*, arXiv:2208.09073

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29. L. Maxim, J. Rodriguez, B. Wang, L. Wu: *Logarithmic cotangent bundles, Chern-Mather classes, and the Huh-Sturmfels Involution conjecture*, arXiv:2202.00554

30. R. Diaconescu: *Non-deterministic algebraic rewriting as adjunction*, arXiv:2204.12133.

31. S. Burciu, S. Palcoux: *Structure constants, Isaacs property and Extended-Haagerup fusion categories*, arxiv.org/2210.13936, pag. 12

32. S. Burciu: *On some Frobenius type divisibility results in a premodular category*, arxiv.org/2209.12530, pag. 14

33. L. Beznea, I. Cîmpean, M. Röckner: *Path continuity of Markov processes and locality of Kolmogorov operators*, arXiv:2208.06036

34. S. Dăscălescu, L. Năstăsescu, C. Năstăsescu: *Graded Frobenius Rings*, arXiv: 2204.07639

35. L. Beznea, I. Cîmpean, O. Lupaşcu-Stamate, I. Popescu, A. Zărnescu: From Monte Carlo to neural networks approximations of boundary value problems, arXiv:2209.01432

36. M. Petrica, I. Popescu: *A modified SIRD model for Covid19 spread prediction using ensemble neural networks* , arXiv:2203.00407

37. J. S. Athreya, C. Cobeli, A. Zaharescu: *Visibility phenomena in hypercubes*, preprint arxiv 2204.03147, pag. 23.

38. J. Duan, I. Popescu *LoCoV: low dimension covariance voting algorithm for portfolio optimization*, arXiv:2204.00204

39. J. Duan, I. Popescu, H. Matzinger *Recover the spectrum of covariance matrix: a non-asymptotic iterative method*, arXiv:2201.00230

40. Cr. A.-M. Anghel: *A globalisation of Jones and Alexander polynomials constructed from a graded intersection of two Lagrangians in a configuration space*, arxiv.org/abs/2205.07842, 32 pag.

41. J. Duan, I. Popescu, H. Matzinger:*Invariance principle of random projection for the norm* arXiv:2112.00300

42. L. Liu, A. Makhlouf, C. Menini, F. Panaite: *BiHom-NS-algebras, twisted Rota-Baxter operators and generalized Nijenhuis operators*, arXiv:2206.04418

43. A. Mustăţea: *Stochastic integration in Riemannian manifolds from a functional-analytic point of view*, arXiv:2207.08285.

44. A. Mustăţea: *A functional-analytic construction of the stochastic parallel transport in Hermitian bundles over Riemannian manifolds*, arXiv:2209.11978.

45. J. Darné, M. Palmer, A. Soulié: *When the lower central series stops*, arxiv 2201.03542, 86 pag.

46. M. Palmer, A. Soulié: *The pro-nilpotent Lawrence-Krammer-Bigelow representation*, arxiv.org 2211.01855, 31 pag.

47. I. Chiose, M. Toma: *Positive currents on non-kählerian surfaces, II*, arXiv:2210.07629

48. I. Chiose, R. Răsdeaconu: *Remarks on astheno-Kähler manifolds, Bott-Chern and Aeppli cohomology groups,* arXiv:2210.14126

49. J. O'Rourke, C. Vîlcu: *Simple Closed Quasigeodesics on Tetrahedra*, arXiv:2203.04745, 34 pag.

50. G. Nenciu, E Richman, C. Sparber: *Effective dynamics of translationally magnetic Schrodinger equations in the high field limit*, arXiv:2208.07894/2022, pag. 1–20.

51. G. Nenciu, I. Nenciu: *Weak anisotropic Hardy inequality: Essential self-adjointness of drift-difussion operators on domains in R-d, revisited*, arXiv:2205. 10494/2022, pag. 1–28.

52. E. Mihăilescu: *Invariant measures in non-conformal fibered systems with singularities*, arXiv:2210.08623.

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54. E. Feireisl, A. Roy, A. Zarnescu *On the motion of several small rigid bodies in a viscous incompressible fluid*, arXiv:2209.09284

55. E. Feireisl, A. Roy, A. Zarnescu *On the motion of a small rigid body in a viscous compressible fluid*, arXiv:2208.07933

56. E. Feireisl, A. Roy, A. Zarnescu *On the motion of a nearly incompressible viscous fluid containing a small rigid body*, arXiv:2206.02931

57. Gao, Zhao; Raicu, Claudiu. *Cohomology of line bundles on the incidence correspondence*, arXiv: 2210.03656.

58. T. Dumitrescu, M. Epure: *A Schreier type property for modules*, arxiv.org 2204.09784, 12 pagini.

59. L. Păunescu, A. Sipoş: *A proof-theoretic metatheorem for tracial von Neumann algebras*, arXiv:2209.01797.

60. A. Sipoş: *On quantitative metastability for accretive operators*, arXiv:2210.11131.

61. D. Ionescu-Kruse, R. I. Ivanov: *Nonlinear two-dimensional water waves with arbitrary vorticity*, pag. 1-30.

62. A. Diaconu, V. Paşol, A. A. Popa: *Quadratic Weyl group multiple Dirichlet series of Type* $D_4^{(1)}$, arXiv:2111.11062

63. C. Muscalu, I. Oliveira: *A new approach to the Fourier restriction problem for the paraboloid*, arXiv2110.12482, 49 pages.