# 6. Rezultatele cercetării desfăşurate în anul 2018

## Articole ISI publicate în reviste din străinătate = 26

1. **Viorel Barbu**, Chiara Benazzoli, Luca Di Persio: **Mild solutions to the dynamic programming equation for stochastic optimal control problems,** *Automatica* 93 (2018), 520–526, ISI, FI=6,13; SRI=3,69.
2. **Viorel Barbu**, Michael Röckner, Deng Zhang: **Optimal bilinear control of nonlinear stochastic Schrödinger equations driven by linear multiplicative noise,** *Annals of Probability* 46 (4) (2018), 1957–1999 https://doi.org/10.1214/17-AOP1217, ISI, FI=2,03; SRI=3,372.
3. **Viorel Barbu**, Michael Röckner: **Variational solutions to nonlinear stochastic differential equations in Hilbert spaces,** *Stoch PDE*: *Anal Comp*., April 2018. https://doi.org/10.1007/s40072-018-0114-0, ISI, FI=1,18; SRI=0,73.
4. **Viorel Barbu**, Michael Röckner: **Nonlinear Fokker–Planck equations driven by Gaussian linear multiplicative noise,** *J. Differential Equations,* 265 (2018) 4993–5030. ISI, FI=1,78; SRI=2,41.
5. **Catalin-George Lefter, Elena-Alexandra Melnig,** Feedback stabilization with one simultaneous control for systems of parabolic equations**,** *Mathematical Control and Related Fields,* vol. 8 (2018), 777-787. ISI. FI = 0.631, SRI = 1.022.
6. **Dorin Ieşan**, A theory of thermopiezoelectricity with strain gradient and electric field gradient effects, European Journal of Mechanics A/Solids 67 (2018) 280- 290. FI=2.881; SRI=1,645.
7. **Dorin Ieşan**, R. Quintanilla, Qualitative properties in strain gradient thermoelasticity with microtemperatures, *Mathematics and Mechanics of Solids,* 23 (2018), 240-258. ISI. FI=2.545; SRI=1,324.
8. **Dorin Ieşan**, On a theory of thermoelasticity without energy dissipation for solids with microtemperatures. *Z. Angew. Math. Mech*., 98 (2018), 870- 885. FI=1.296; SRI=1,011.
9. **Constantin Zălinescu**, On the entropy minimization problem in Statistical Mechanics, *J. Math. Anal. Appl.* 457 (2018), 1713-1729. ISI. FI=1.138. SRI=1.164.
10. V. Capasso, **S. Anita**, The interplay between models and public health policies: regional control for a class of spatially structured epidemics (think globally, act locally), *Mathematical Biosciences and Engineering* 15 (1) (2018), 1-20, DOI 10.3934/mbe.2018001, FI=1.230, SRI=0.653.
11. **S. Anita**, S. Behringer, A.-M. Mosneagu, T. Upmann Optimal harvesting of a spatially distributed renewable resource with endogeneous pricing, *Mathematical Modelling of Natural Phenomena*, va apărea in 2019, DOI 10.1051/mmnp/ 2018050, FI=1.101, SRI=0.896.
12. **S. Anita**, V. Capasso, A.-M. Mosneagu, Global eradication for spatially structured populations by regional control, *Discrete and Continuous Dynamical Systems,* Series B, va apărea in 2019, DOI 10.3934/dcdsb.2018263, FI=0.972, SRI=0.984.

13. S. Bilal, **Ovidiu Cârjă**, T. Donchev, N. Javaid, A.I. Lazu, Nonlocal evolution inclusions under weak conditions**,** *Advances in Difference Equations*, 2018. https://doi.org/10.1186/ s13662-018-1858-6. FI=1,095, SRI=0,212.
14. T. Donchev, S. Bilal, **O. Cârjă**, A. Lazu, Nonlocal problem for evolution inclusions with one-sided Perron nonlinearities**,** *Revista de la Real Academia de Ciencias Exactas, Fi sicas y Naturales*, Serie A. Matematicas, https://doi.org/10.1007/s13398-018-0589-6, FI=1,074. SRI=0,544.
15. **M. Durea,** R. Strugariu, Optimality conditions and a barrier method in optimization with convex geometric constraint, *Optimization Letters*, 12 (2018), 923-931, ISI, FI=0.994, SRI=0.813.
16. **M. Durea,** E. A. Florea, R. Strugariu, Henig proper efficiency in vector optimization with variable ordering structure, *Journal of Industrial and Management Optimization*, DOI: 10.3934/jimo.2018071**,** ISI, FI=1.013, SRI= 0.966.
17. Bonaccorsi, S., **Zalinescu, A**. *Maximum principle for an optimal control problem associated to a SPDE with nonlinear boundary conditions*, Journal of Mathematical Analysis and Applications, 465 (1) (2018), 359-378.
18. **Stan Chirita**, High-order approximations of three-phase-lag heat conduction model: Some qualitative results, *Journal of Thermal Stresses*, 41 (5) (2018), 608-626. ISI, FI=1.852; SRI= 0.983.
19. **Stan Chirita,** High-order effects of thermal lagging in deformable conductors, *International Journal of Heat and Mass Transfer*, vol. 127 (2018), 965-974.
20. Vittorio Zampoli, **Stan Chirita**, On the depth of a thermomechanical signal in a dual-phase lag deformable medium, in *Proceedings of 2018 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems (EESMS) Proceedings*, pp. 77-82.
21. R.J. Martin, **I.D. Ghiba**, P. Neff. Rank-one convexity implies polyconvexity in isotropic planar incompressible elasticity, *Journal de Mathématiques Pures et Appliqués*, 116 (2018), 88-104. ISI, FI=1.848 , SRI=2.473.
22. R.J. Martin, **I.D. Ghiba**, P. Neff, A non-ellipticity result, or the impossible taming of the logarithmic strain measure, *International Journal of Nonlinear Mechanics*, 102, 147-158, 2018 ISI, FI=2.163 , SRI=1.426.
23. R.J. Martin, **I.D. Ghiba**, P. Neff, A polyconvex extension of the logarithmic Hencky strain energy, *Analysis and Applications*, 2018, https://doi.org/10.1142/S0219530518500173, ISI, FI=1.79, SRI=1.729.
24. **Ionuț Munteanu**: Boundary stabilization of the stochastic heat equation by proportional feedbacks, *Automatica* 87 (2018),152-158. ISI, FI=6,13; SRI=3,69.
25. **Ionuț Munteanu**, Boundary stabilisation to non-stationary solutions for deterministic and stochastic parabolic-type equations, *International Journal of Control*, https://doi.org/10.1080/00207179.2017.1407878. ISI, FI=2,10; SRI=1,25.
26. **Ionuț Munteanu,** Michael Röckner, Total variation flow perturbed by gradient linear multiplicative noise, *Infin. Dimens. Anal. Quantum Probab. Relat. Topics*, 21 (1) (2018), 1850003, 28 p. ISI. FI=0.700.

## Articole non-ISI publicate în reviste din Baze de Date Internaționale (B+) = 1

1. **Constantin Zălinescu**, Lagrange multipliers in convex entropy minimization, *Pure and Applied Functional Analysis*, 3 (2) (2018), 393-402.

## Cărţi sau capitole de cărţi publicate în străinătate = 2

1. **D. Ieșan**, R. Quintanilla, *On the Deformation of Chiral Piezoelectric Plates*, In "Generalized Models and Non-classical Approaches in Complex Materials", Altenbach, H., Pouget, J., Rousseau, M., Collet, B., Michelitsch, Th. (Eds.), Springer International Publishing AG, Approaches in Complex Materials, Advanced Structured Materials 89, 2018, 417-438. (Chapter 22).
2. L.-I. Anita, **S. Anița**, V. Capasso, A.-M. Mosneagu, *Some regional control problems for population dynamics,* in Lecture Notes in Economics and Mathematical Systems (Eds. G. Feichtinger, R. Kovacevic, G. Tragler), Springer, 2018, 99-119.

## Comunicări prezentate la conferinţe internaţionale = 16

1. **Dorin Ieșan,** The deformation of hemitropic porous elastic cylinders", *Current Trends in Applied Mathematics,* Iasi, ediția 2018.
2. **S. Anita**, *Regional control in population dynamics*, Workshop on Optimal Control in Mathematical Biology, Iasi, Romania, 20 November, 2018.
3. Vittorio Zampoli, **Stan Chirita**, *On the depth of a thermomechanical signal in a dual-phase lag deformable medium*, 2018 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems (EESMS), June 21—22, 2018, Salerno, Italia.
4. **M. Durea**, *On directional regularity of mappings and applications to optimization*, Colloquium & International Conference on Variational Analysis and Nonsmooth Optimization, 28 iunie - 1 iulie 2018, Halle, Germania.
5. **M. Durea**, *Optimality conditions and a barrier method in convex optimization without convex representation*, 29th European Conference on Operational Research, 8-11 iulie 2018, Valencia, Spania.
6. **M. Durea**, *Directional regularity of mappings: criteria and stability*, International Workshop on Nonlinear and Variational Analysis, 17-19 august 2018, Kaohsiung, Taiwan.
7. **M. Durea**, *Stability of the directional regularity of mappings*, Current Trends in Applied Mathematics, 10-11 septembrie 2018, Iasi, Romania.
8. **C. Lefter,** *Parabolic systems, stabilization and unique continuation properties,* Analyse, analyse numérique et contrôle des milieu continus, Bucureşti, 21-23 mai 2018, Institutul de Matematică Simion Stoilow.
9. **Aurel Răşcanu**: *"EDSR multivoques: $L^p$-formulation faible variationelle* ($1<p<2$)", Workshop in Stochastic and PDE September 14-15, 2018, "Simion Stoilow" Institute of Mathematics of the Romanian Academy Bucharest, Romania.
10. **Cristina Stamate**, Anca Croitoru, *Aumann-Pettis-Sugeno type integral of multifunctions relative to multisubmeasures*, CAIM 2018, 20-23 septembrie 2018, Chisinau, Moldova.
11. **Adrian Zălinescu**, *BSDEs with time-delayed generators and associated path-dependent nonlinear Kolmogorov equations*, Universita di Trento, Italia, 19.04.2018
12. **I.D. Ghiba**, *Existence results in relaxed micromorphic continuum model*, ETAMM 2018, Cracovia, Polonia, 18-22 iunie, 2018.
13. **Constantin Zălinescu**, *Quadratic minimization problems via CDT method*, 4th Internaational Conference on Nonlinear Analysis and Optimization (NAOP 2018), June 18-20, 2018, Zanjan (Iran).

14. **Constantin Zălinescu**, *On canonical duality theory in nonconvex optimization*, International Conference on Variational Analysis and Nonsmooth Optimization, June 28-July 1, 2018, Halle (Germania).
15. **Constantin Zălinescu**, *On quadratic optimization problems with quadratic constraints and duality,* Current Trends in Applied Mathematics, Iași, 10-11 septembrie 2018.
16. **Gabriela Lițcanu,** *Mathematical modelling and analysis of chemotaxis dynamics*, Workshop on Biomathematics noiembrie 2018, Iaşi.

## Comunicări prezentate la conferinţe naţionale = 7

1. **S. Anita**, *Regional control for some reaction-diffusion systems*, First Romanian Itinerant Seminar on Mathematical Analysis and its Applications, Cluj-Napoca, Romania, 20-21 April, 2018.
2. Lucian Maticiuc, **Aurel Răşcanu**: *Multivalued BSDE: $L^p$-variational solutions.* Zilele Academice Ieşene, ediţia a XXXIII-a, 20 octombrie, 2018, Iaşi.
3. **Gabriela Lițcanu,** *About mathematical models of the immune response dynamics*, Zilele Academice, octombrie 2018, Iaşi.
4. **C.Lefter,** *Stabilization of periodic solutions to parabolic systems. Phase transition models*, Geometry and PDEs, Timişoara, 12-13 octombrie 2018
5. **Melnig Elena-Alexandra**, *Lipschitz stability in $L^q$-norm for inverse source problems associated to parabolic systems*, Workshop Geometry and PDE's, 12-13 octombrie 2018, Timisoara, Romania.
6. **Melnig Elena-Alexandra**, *$L^q$ estimates for inverse problems*, Zilele Academice, 20 octombrie 2018, Iasi.
7. **Melnig Elena-Alexandra**, *$L^q$ Carleman estimates and applications*, Zilele Universitatii, 26 octombrie 2018, Iasi.

## Lucrări elaborate, trimise spre publicare = 22

1. **E.-A. Melnig**, *Inverse source problems for parabolic systems. L^q estimates.*
2. **D. Ieșan**, *Torsion of Chiral Porous Elastic Beams* (trimis la *Journal of Elasticity*)**.**
3. A. Hammel, **Constantin Zălinescu**, *Minimal element theorems revisited.*
4. **Ovidiu Cârjă,** *Minimum time and minimum norm control for linear systems.*
5. **Teodor Havârneanu, Cătălin-George Popa**, Armen Shirikyan, *Exact internal controllability of the three-dimensional magnetohydrodynamic equations with five or four scalar control functions.*
6. **S. Anita**, A.-M. Mosneagu, *Optimal harvesting for age-structured population dynamics with size-dependent control*, Mathematical Control and Related Fields.
7. **M. Durea,** R. Strugariu, *A barrier method in convex optimization with generalized inequality constraint.*
8. R. Cibulka**, M. Durea**, M. D. Pantiruc, R. Strugariu, *On the stability of the directional regularity.*
9. B. Aramă**, C. Lefter,** *Stabilization of periodic solutions to parabolic systems. Phase transition models.*

10. **Aurel Răşcanu**, *$L^p$ - Variational Solution of Backward Stochastic Differential Equation driven by subdifferential operators on a deterministic interval time*, *arXiv:1810.11247*, Submitted 26 October, 2018, 53 pp.
11. **Cristina Stamate,** *Vector Equilibrium Problems-an unified approach.*
12. **Cristina Stamate,** *Equilbrium for Abstract Economies*.
13. **Cristina Stamate,** *Aumann-Pettis-Sugeno type integral of multifunctions relative to multi-submeasures.*
14. **Cristina Stamate,** *Sugeno type integrals of multifunctions relative to multisubmeasures*.
15. **Cristina Stamate,** *Aumann-Sugeno type integrals of multifunctions relative to multisub-measures.*
16. **Cristina Stamate,** *Aumann integrals type integrals of multifunctions relative to sub-measures.*
17. **Cristina Stamate,** *Vector integrals for multifunctions*.
18. F. Cordoni, L. Di Persio, L. Maticiuc, **A. Zălinescu**, *A stochastic approach to path-dependent nonlinear Kolmogorov equations via BSDEs with time--delayed generators and applications to finance* (trimisă spre publicare în *Stochastic Processes and their Applications*).
19. F. Cordoni, L. Di Persio, L. Maticiuc**, A. Zălinescu**, *A stochastic approach to path–dependent nonlinear Kolmogorov equations with Neumann nonlinear boundary conditions via BSDEs with time–delayed generators and applications to finance.*
20. **A. Zălinescu**, *Oblique reflected SDEs with jumps.*
21. **G. Lițcanu**, *Wave-type solutions of reaction-diffusion equations and applications in biology*.
22. **G. Lițcanu**, *About patterns driven by chemotaxis.*

## Granturi derulate prin institut = 1

1. **PN-III-P4-ID-PCE-2016-0011**. *Analiza si controlul ecuatiilor stochastice Schrodinger si a unor modele de difuzie neliniara*. Director de proiect: **V. Barbu**. Membri în echipă: **I. Munteanu, A.E. Melnig**. Contract 49/2017, durata 30 luni (12.07.2017-31.12.2019). Finantator: UEFISCDI. Valoare totala: 850.000,00 lei. Valoare **2018**: 262.676,00 lei.

## Premii = -

## Manifestări ştiinţifice organizate de institut = 3

1. ***Current Trends in Applied Mathematics***, workshop cu participare internațională, 10-11 septembrie 2018, cu prilejul Zilelor Academice (organizat împreună cu Institutul de Statistică matematică şi Matematică aplicată, Bucureşti).
2. Simpozionul aniversar: ***Academicianul Constantin Corduneanu la 90 de ani,*** 10 septembrie 2018.
3. **Sesiunea de comunicări** a Institutului de Matematică Octav Mayer şi a *Comisiei de automatică* teoretică şi teoria controlului, 20 octombrie 2018, cu prilejul Zilelor Academice.

## 4. Citări

| | | |
|---|---|---|
| **1.** | **V. Barbu:** | **690** |
| **2.** | **C. Zălinescu:** | **180** |
| **3.** | **D. Ieşan:** | **123** |
| **4.** | **M. Durea :** | **99** |
| **5.** | **A. Răşcanu:** | **68** |
| **6.** | **S. Aniţa:** | **61** |
| **7.** | **A. Zălinescu:** | **6** |
| **8.** | **S. Chiriţă:** | **106** |
| 9. | **C. G. Lefter:** | **22** |
| **10.** | **O. Cârjă:** | **32** |
| **11.** | **G. Liţcanu:** | **5** |
| **12.** | **I.D. Ghiba:** | **64** |
| **13.** | **I. Munteanu:** | **4** |
| | **TOTAL =** | **1460** |

**DIRECTOR,**

**Prof.dr. Cătălin-George Lefter**