

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea: **Științe Aplicate**

Departamentul: **Matematici Aplicate**

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Gradul didactic: **Profesor universitar**

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

Titlul: Geometric PDEs and Control Problems

Locul și anul susținerii: Universitatea “Politehnica” din București, București, 2013

Coordonator: Prof. univ. dr. Constantin Udriște

B. Cărți și capitole în cărți publicate în ultimii 10 ani

7) O. Olteanu, **S. Treanță**, *Symmetry in Mathematical Analysis and Functional Analysis* (Editor); ISBN 978-3-0365-6591-0 (hardback); ISBN 978-3-0365-6590-3 (PDF); MDPI Switzerland, 2023.

6) **S. Treanță**, *Variational Problems and Applications* (Editor); ISBN 978-3-0365-6589-7 (hardback); ISBN 978-3-0365-6588-0 (PDF); MDPI Switzerland, 2023.

5) **S. Treanță**, *Advances in Optimization and Nonlinear Analysis* (Editor); ISBN: 978-3-0365-4750-3; MDPI Switzerland, 2022.

4) A. Jayswal, Preeti, **S. Treanță**, *Multi-dimensional Control Problems: Robust Approach*; Series ISSN: 2364-6837; Series E-ISSN: 2364-6845; Springer Singapore, 2022.

3) **S. Treanță**, *Recent Advances in Nonlinear Analysis and Optimization with Applications* (Editor); ISBN (10): 1-5275-5954-8; ISBN (13): 978-1-5275-5954-7; Cambridge Scholars Publishing, 2020.

2) **S. Treanță**, *Variational Analysis with Applications in Optimisation and Control*, ISBN: 978-1-5275-3728-6, Cambridge Scholars Publishing, 2019.

1) O. Olteanu, **S. Treanță**, *Convexity, Optimization and Approximation, with some Applications*, ISBN: 978-613-9-87683-9, LAP Lambert Academic Publishing, 2018.

Capitole în cărți

8) **S. Treanță**, *On Variational Derivative and Controlled Variational Inequalities*, In: Mishra S.K., Marechal P., Upadhyay B.B. (eds) *Recent Trends in Optimization: Theory, Algorithms, and Applications*; accepted, Springer Nature, 2024.

- 7) **S. Treanță**, *Results on the Existence of Solutions for Some Controlled Optimization Problems*, In: Debnath P., Srivastava H.M., Chakraborty K., Kumam P. (eds) *Advances in Number Theory and Applied Analysis*, DOI: 10.1142/13314; ISBN: 978-981-127-252-2; World Scientific, 2023.
- 6) **S. Treanță**, *Controlled nonlinear dynamics for constrained optimization problems involving second-order partial derivatives*, In: Jayswal, A., Antczak, T. (Eds.). (2022). *Continuous Optimization and Variational Inequalities* (1st ed.). Chapman and Hall/CRC. eBook ISBN: 9781003289883.
- 5) **S. Treanță**, *On well-posed variational problems involving multidimensional integral functionals*, In: Debnath P., Srivastava H.M., Kumam P., Hazarika B. (eds) *Fixed Point Theory and Fractional Calculus. Forum for Interdisciplinary Mathematics*. pp. 189-212; DOI: 10.1007/978-981-19-0668-8_11; eISBN: 978-981-19-0668-8; ISBN: 978-981-19-0667-1; Springer Singapore, 2022.
- 4) **S. Treanță**, *On a new class of interval-valued variational control problems*, In: Debnath P., Konwar N., Radenovic S. (eds) *Metric Fixed Point Theory - Applications in Science, Engineering and Behavioural Sciences*, pp. 211-226; DOI: 10.1007/978-981-16-4896-0_10; eISBN: 978-981-16-4896-0; ISBN: 978-981-16-4895-3; Springer, 2021.
- 3) **S. Treanță**, *On a class of interval-valued variational control problems with first-order PDE constraints*. In: Treanță S. (ed) *Recent Advances in Nonlinear Analysis and Optimization with Applications*, pp. 17-32; ISBN (10): 1-5275-5954-8; ISBN (13): 978-1-5275-5954-7; Cambridge Scholars Publishing, 2020.
- 2) **S. Treanță**, *On Controlled Variational Inequalities Involving Convex Functionals*. In: Le Thi H., Le H., Pham Dinh T. (eds) *Optimization of Complex Systems: Theory, Models, Algorithms and Applications*. WCGO 2019. *Advances in Intelligent Systems and Computing*, vol. 991, pp. 164-174, 2020. Springer, Cham. DOI: 10.1007/978-3-030-21803-4_17; ISBN: 978-3-030-21802-7; eISBN: 978-3-030-21803-4.
- 1) **S. Treanță**, C. Udriște, *Single-Time and Multi-Time Hamilton–Jacobi Theory Based on Higher Order Lagrangians*. In: Adhikari A., Adhikari M., Chaubey Y. (eds) *Mathematical and Statistical Applications in Life Sciences and Engineering*, pp. 71-95, 2017. Springer, Singapore. DOI: 10.1007/978-981-10-5370-2_3; ISBN: 978-981-10-5369-6; eISBN: 978-981-10-5370-2.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

“Red” articles potrivit AIS (vezi JCR2022 – 28 June 2023), publicate în perioada 2019-2023:

- 1) **S. Treanță**, *On a minimal criterion of efficiency in vector variational control problems*, *Optimization Methods and Software*, Vol. 38, No. 4, 804-812, 2023; DOI: 10.1080/10556788.2023.2189712; WOS: 000959137400001; ISSN: 1055-6788.

- 2) **S. Treanță**, *LU-optimality conditions in optimization problems with mechanical work objective functionals*, IEEE Transactions on Neural Networks and Learning Systems, Vol. 33, No. 9, pp. 4971-4978, 2022; DOI: 10.1109/TNNLS.2021.3066196; WOS: 000733293400001; ISSN: 2162-237X.
- 3) **S. Treanță**, *On well-posed isoperimetric-type constrained variational control problems*, Journal of Differential Equations, Vol. 298, pp. 480-499, 2021; DOI: 10.1016/j.jde.2021.07.013; WOS: 000681321100016; ISSN: 0022-0396.
- 4) **S. Treanță**, *Robust saddle-point criterion in second-order PDE&PDI constrained control problems*, International Journal of Robust and Nonlinear Control, Vol. 31, No. 18, pp. 9282-9293, 2021; DOI: 10.1002/rnc.5767; WOS: 000693301500001; eISSN: 1099-1239.
- 5) **S. Treanță**, Y. Guo, *The study of certain optimization problems via variational inequalities*, Research in the Mathematical Sciences, Vol. 10, No. 1, 7, 2023; DOI: 10.1007/s40687-022-00372-w; WOS: 000919776900001; ISSN: 2522-0144.
- 6) **S. Treanță**, M. Arana-Jiménez, T. Antczak, *A necessary and sufficient condition on the equivalence between local and global optimal solutions in variational control problems*, Nonlinear Analysis-Theory Methods & Applications, Vol. 191, UNSP 111640, 2020; DOI: 10.1016/j.na.2019.111640; WOS: 000500478900002; ISSN: 0362-546X; eISSN: 1873-5215.
- 7) Y. Guo, G. Ye, W. Liu, D. Zhao, **S. Treanță**, *Solving nonsmooth interval optimization problems based on interval-valued symmetric invexity*, Chaos, Solitons and Fractals, Vol. 174, 113834, 2023; DOI: 10.1016/j.chaos.2023.113834; WOS: 001053527500001; ISSN: 0960-0779.
- 8) F. Shi, G. Ye, W. Liu, D. Zhao, **S. Treanță**, *Lagrangian dual theory and stability analysis for fuzzy optimization problems*, Information Sciences, Vol. 657, 119953, 2023; DOI: 10.1016/j.ins.2023.119953; WOS: 001135568400001; ISSN: 0020-0255.
- 9) Y. Guo, G. Ye, W. Liu, D. Zhao, **S. Treanță**, *On symmetric gH -derivative applications to dual interval-valued optimization problems*, Chaos, Solitons and Fractals, Vol. 158, 112068, 2022; DOI: 10.1016/j.chaos.2022.112068; WOS: 000830316700008; ISSN: 0960-0779.

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- 1) **S. Treanță**, *Lagrange-Hamilton approach in optimization problems with isoperimetric-type constraints*, Journal of Optimization Theory and Applications, Vol. 194, No. 2, pp. 508-520, 2022; DOI: 10.1007/s10957-022-02036-9; WOS: 000791053800003; ISSN: 0022-3239; eISSN: 1573-2878.
- 2) **S. Treanță**, *On a global efficiency criterion in multiobjective variational control problems with path-independent curvilinear integral cost functionals*, Annals of Operations Research, Vol. 311, pp. 1249-1257, 2022; DOI: 10.1007/s10479-020-03579-8; WOS: 000522601800002; ISSN: 0254-5330; eISSN: 1572-9338.

- 3) **S. Treanță**, *On a class of interval-valued optimization problems*, Continuum Mechanics and Thermodynamics, Vol. 34, No. 2, 617-626, 2022; DOI: 10.1007/s00161-022-01080-0; WOS: 000750352200001; ISSN: 0935-1175; eISSN: 1432-0959.
- 4) **S. Treanță**, *Characterization results of solutions in interval-valued optimization problems with mixed constraints*, Journal of Global Optimization, Vol. 82, No. 4, pp. 951-964, 2022; DOI: 10.1007/s10898-021-01049-4; WOS: 000668875400001; ISSN: 0925-5001.
- 5) **S. Treanță**, *Robust optimality in constrained optimization problems with application in mechanics*, Journal of Mathematical Analysis and Applications, Vol. 515, No. 2, 126440, 2022; DOI: 10.1016/j.jmaa.2022.126440; WOS: 000833524000012; ISSN: 0022-247X.
- 6) **S. Treanță**, *On a class of constrained interval-valued optimization problems governed by mechanical work cost functionals*, Journal of Optimization Theory and Applications, Vol. 188, No. 3, pp. 913-924, 2021; DOI: 10.1007/s10957-021-01815-0; WOS: 000609071400002; ISSN: 0022-3239; eISSN: 1573-2878.
- 7) **S. Treanță**, *Efficiency in uncertain variational control problems*, Neural Computing and Applications, Vol. 33, No. 11, pp. 5719-5732, 2021; DOI: 10.1007/s00521-020-05353-0; WOS: 000571688500002; ISSN: 0941-0643; eISSN: 1433-3058.
- 8) **S. Treanță**, I. Ahmad, *Controlled nonlinear dynamics generated by isoperimetric constrained optimization problems involving second-order partial derivatives*, Systems and Control Letters, Vol. 179, 105591, 2023; DOI: 10.1016/j.sysconle.2023.105591; WOS: 001047173900001; ISSN: 0167-6911.
- 9) **S. Treanță**, Șt. Mititelu, *Efficiency for variational control problems on Riemann manifolds with geodesic quasiinconvex curvilinear integral functionals*, Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas, Vol. 114, No. 3, 113, 2020; DOI: 10.1007/s13398-020-00842-2; WOS: 000529292100002; ISSN: 1578-7303; eISSN: 1579-1505.
- 10) **S. Treanță**, S. Singh, A. Jayswal, *On a class of variational-type inequalities involving curvilinear integral functionals*, Optimization, Vol. 71, No. 16, pp. 4835-4853, 2022; DOI: 10.1080/02331934.2021.1969394; WOS: 000688320100001; ISSN: 0233-1934.
- 11) **S. Treanță**, K. Nonlaopon, M.B. Khan, *On controlled Hamilton and Hamilton-Jacobi differential equations of higher-order*, Scientific Reports, Vol. 12, No. 1, 14633, 2022; DOI: 10.1038/s41598-022-18626-6; WOS: 000846428600001; ISSN: 2045-2322.
- 12) S. Singh, **S. Treanță**, *Characterization results of weak sharp solutions for split variational inequalities with application to traffic analysis*, Annals of Operations Research, Vol. 302, No. 1, pp. 265-287, 2021; DOI: 10.1007/s10479-021-03971-y; WOS: 000618124900001; ISSN: 0254-5330; eISSN: 1572-9338.

13) B.B. Upadhyay, **S. Treanță**, P. Mishra, *On Minty Variational Principle for Nonsmooth Multiobjective Optimization Problems on Hadamard Manifolds*, *Optimization*, Vol. 72, No. 12, pp. 3081-3100, 2023; DOI: 10.1080/02331934.2022.2088369; WOS: 000812669400001; ISSN: 0233-1934.

14) M.A. Aslam Noor, K.I. Noor, **S. Treanță**, K. Nonlaopon, *On three-step iterative schemes associated with general quasi-variational inclusions*, *Alexandria Engineering Journal*, Vol. 61, No. 12, 12051-12059, 2022; DOI: 10.1016/j.aej.2022.05.031; WOS: 000812795100014; ISSN: 1110-0168.

15) B.B. Upadhyay, A. Ghosh, **S. Treanță**, *Constraint Qualifications and Optimality Criteria for Nonsmooth Multiobjective Programming Problems on Hadamard Manifolds*, *Journal of Optimization Theory and Applications*, 2023; DOI: 10.1007/s10957-023-02301-5; WOS: 001072826900001; ISSN: 0022-3239; eISSN: 1573-2878.

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți

Nu este cazul.

E. Brevete obținute în întreaga activitate

Nu este cazul.