

## List of papers – Prof. univ. dr. SAVIN TREANȚĂ

- 152)** S. Treanță, I. Ahmad, *Controlled nonlinear dynamics generated by isoperimetric constrained optimization problems involving second-order partial derivatives*, Systems and Control Letters, accepted.
- 151)** N. Abdulaleem, S. Treanță, *Optimality conditions and duality for E-differentiable multiobjective programming involving V -E-type I functions*, Opsearch, accepted.
- 150)** B.B. Upadhyay, A. Ghosh, S. Treanță, *Optimality conditions and duality for nonsmooth multiobjective semi-infinite programming problems on Hadamard manifolds*, Bulletin of the Iranian Mathematical Society, Vol. 49, 45, 2023; DOI: 10.1007/s41980-023-00791-7; WOS: 001011345300002; eISSN: 1735-8515.
- 149)** S. Treanță, T. Saeed, *On Weak Variational Control Inequalities via Interval Analysis*, Mathematics, Vol. 11, No. 9, 2177, 2023; DOI: 10.3390/math11092177; WOS: 000987591300001; eISSN: 2227-7390.
- 148)** T. Saeed, M.B. Khan, S. Treanță, H.H. Alsulami, M.S. Alhodaly, *Study of Log Convex Mappings in Fuzzy Aunnam Calculus via Fuzzy Inclusion Relation over Fuzzy-Number Space*, Mathematics, Vol. 11, No. 9, 2043, 2023; DOI: 10.3390/math11092043; WOS: 000987584000001; eISSN: 2227-7390.
- 147)** M.B. Khan, A.U. Rahman, A.A. Maash, S. Treanță, M.S. Soliman, *Some New Estimates of Fuzzy Integral Inequalities for Harmonically Convex Fuzzy-Number-Valued Mappings via up and down Fuzzy Relation*, Axioms, Vol. 12, No. 4, 365, 2023; DOI: 10.3390/axioms12040365; WOS: 000980883100001; ISSN: 2075-1680.
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**139) S. Treanță**, *Variational Problems and Applications* (Editor); ISBN 978-3-0365-6589-7 (hardback); ISBN 978-3-0365-6588-0 (PDF); MDPI Switzerland, 2023.

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**136) S.K. Sahoo, H. Alrweili, S. Treanță, Z.A. Khan**, *New Fractional Integral Inequalities pertaining to Center-Radius  $(cr)$ -Ordered Convex Functions*, Fractal and Fractional, Vol. 7, No. 1, 81, 2023; DOI: 10.3390/fractalfract7010081; WOS: 000919932800001; ISSN: 2504-3110.

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- 132)** T. Saeed, W. Afzal, K. Shabbir, S. Treanță, M. De la Sen, *Some Novel Estimates of Hermite-Hadamard and Jensen Type Inequalities for  $(h_1, h_2)$ -Convex Functions Pertaining to Total Order Relation*, Mathematics, Vol. 10, No. 24, 4777, 2022; DOI: 10.3390/math10244777; WOS: 000904438300001; eISSN: 2227-7390.
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- 60)** **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.
- 59)** K. Das, **S. Treanță**, *On Constrained Set-Valued Semi-Infinite Programming Problems with  $\rho$ -Cone Arcwise Connectedness*, Axioms, Vol. 10, No. 4, 302, 2021; DOI: 10.3390/axioms10040302; WOS: 000735838400001; ISSN: 2075-1680.
- 58)** **S. Treanță**, *On well-posedness of some constrained variational problems*, Mathematics, Vol. 9, No. 19, 2478, 2021; DOI: 10.3390/math9192478; WOS: 000708205200001; eISSN: 2227-7390.
- 57)** 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.
- 56)** **S. Treanță**, *On a dual pair of multiobjective interval-valued variational control problems*, Mathematics, Vol. 9, No. 8, 893, 2021; DOI: 10.3390/math9080893; WOS: 000644514500001; eISSN: 2227-7390.
- 55)** **S. Treanță**, *Duality theorems for  $(\rho, \psi, d)$ -quasiinvex multiobjective optimization problems with interval-valued components*, Mathematics, Vol. 9, No. 8, 894, 2021; DOI: 10.3390/math9080894; WOS: 000644527900001; eISSN: 2227-7390.
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- 45) **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.
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- 8) **S. Treanță**, C. Vârsan, *Linear higher order PDEs of Hamilton-Jacobi and parabolic type*, Mathematical Reports, Vol. 16(66), No. 2, pp. 319-329, 2014; WOS: 000339642200011; ISSN: 1582-3067.
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- 6) **S. Treanță**, *Optimal control problems on higher order jet bundles*, BSG Proceedings 21, The International Conference "Differential Geometry - Dynamical Systems", DGDS-2013, October 10-13, 2013, Bucharest-Romania, Vol. 21, pp. 181-192, 2014; ISSN 1843-2654; eISSN 1843-2859.
- 5) **S. Treanță**, C. Vârsan, *Weak small controls and approximations associated with controllable affine control systems*, Journal of Differential Equations, Vol. 255, No. 7, pp. 1867-1882, 2013; DOI: 10.1016/j.jde.2013.05.028; WOS: 000322092900018; ISSN: 0022-0396.
- 4) **S. Treanță**, C. Udriște, *Optimal control problems with higher order ODEs constraints*, Balkan Journal of Geometry and Its Applications, Vol. 18, No. 1, pp. 71-86, 2013; WOS: 000320754500007; ISSN: 1224-2780.



3) **S. Treanță**, C. Udriște, *On efficiency conditions for multiobjective variational problems involving higher order derivatives*, Proceedings of the 15th International Conference on Automatic Control, Modelling & Simulation (ACMOS' 13), pp. 157-164, 2013; ISBN: 978-1-61804-189-0.

2) **S. Treanță**, C. Udriște, *On auto-parallel behaviour of some special plane or space curves*, Proceedings of the 17th International Conference on Systems, Control, Signal Processing and Informatics (SCSI' 13), pp. 90-94, 2013; ISBN: 978-960-474-314-8.

1) M. Doroftei, **S. Treanță**, *Higher order hyperbolic equations involving a finite set of derivations*, Balkan Journal of Geometry and Its Applications, Vol. 17, No. 2, pp. 22-33, 2012; WOS: 000302643700003; ISSN: 1224-2780.

# Curriculum Vitae – Prof. univ. dr. SAVIN TREANȚĂ

## PERSONAL INFORMATION

Sex: Male | Date of birth: 03/03/1986 | Nationality: romanian

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## WORK EXPERIENCE

*October 2023 – Present:* Full Professor, University “Politehnica” of Bucharest, Faculty of Applied Sciences

*October 2020 – September 2023:* Associate Professor, University “Politehnica” of Bucharest, Faculty of Applied Sciences

*October 2017 – September 2020:* Lecturer, University “Politehnica” of Bucharest, Faculty of Applied Sciences

*October 2011 – September 2017:* Assistant Professor, University “Politehnica” of Bucharest, Faculty of Applied Sciences

*August 2011 – January 2012:* BITDEFENDER Junior Research Position, “Simion Stoilow” Institute of Mathematics of the Romanian Academy

*September 2009 – September 2010:* Teacher in Maths, School 127, Bucharest

*April 2008 - February 2009:* Computer Engineer, Renault Technologie Roumanie

## EDUCATION AND TRAINING

*December 2021:* Habilitation Thesis, Mathematics, University “Politehnica” of Bucharest, <https://upb.ro/conf-dr-savin-treanta-results-in-variational-analysis-theory-with-application-in-optimization-and-control-17-12-2021/> (thesis title: “Results in Variational Analysis Theory with Applications in Optimization and Control”)

*October 2010 - October 2013:* PhD Studies in Mathematics, University “Politehnica” of Bucharest, Faculty of Applied Sciences, <http://www.mathem.pub.ro/indexe.htm>, (thesis title: “Geometric PDEs and Control Problems”)

*October 2009 - October 2011:* Master cycle in Fundamental Structures with Applications in Algebra, Geometry and Topology, “Simion Stoilow” Institute of Mathematics of the Romanian

Academy, Școala Normală Superioară-Bucharest (SNS-B), Department of Mathematics, (thesis title: “Higher Order Differential Equation and Associated Gradient Structures”)

*October 2008 - October 2010*: Master of Science in Mathematics Applied in Finance, Insurances and Biostatistics, University of Bucharest, Faculty of Mathematics and Computer Science, (thesis title: “Study of Several Variational Inequalities. Applications”)

*October 2005 - October 2008*: Bachelor of Science in Mathematics, University of Bucharest, Faculty of Mathematics and Computer Science, (thesis title: “Cartan’s Theorem. Chevalley’s Theorem. Applications”)

*September 2001 - September 2005*: High school graduate, “Constantin Brancoveanu” Theoretical High School, Dabuleni, Romania

## OTHER SCIENTIFIC ACTIVITIES

### I. International Conferences

- The 5-Day International Workshop on Optimization Techniques in Industrial and Engineering Applications, January 06-10, online, India, 2023 (invited speaker)
- The Third International Conference on Mathematical Techniques and Applications (eICMTA- 2022), March 23-25, online, India, 2022 (invited speaker)
- The Third Romanian Itinerant Seminar on Mathematical Analysis and its Applications, September 10-12, Alba Iulia, Romania, 2021
- The 13th International Conference on Multiple Objective Programming and Goal Programming, October 28-31, Marrakech, Morocco, 2019
- The 6th World Congress on Global Optimization, July 8-10, Metz, France, 2019
- The I Conference on Minimax Inequalities and Equilibrium Problems, May 6-7, Granada, Spain, 2019
- The 7th Workshop for Young Researchers in Mathematics (WYRM), May 17 - 20, Bucharest, Romania, 2017
- The 5th Workshop for Young Researchers in Mathematics (WYRM), May 21 - 24, Constanta, Romania, 2015
- Real and Complex Differential Geometry, September 8 - 12, Bucharest, Romania, 2014
- The 8th International Conference of Differential Geometry and Dynamical Systems, (DGDS - 2014), September 1 - 4, Mangalia, Romania, 2014

- The 7th International Conference of Differential Geometry and Dynamical Systems, (DGDS - 2013), October 10 - 13, Bucharest, Romania, 2013
- The 17th International Conference on Systems, Control, Signal Processing and Informatics (SCSI' 13), July 16 - 19, Rhodes, Greece, 2013
- The 15th International Conference on Automatic Control, Modelling & Simulation (ACMOS' 13), June 1 - 3, Brasov, Romania, 2013
- The 6th International Conference of Differential Geometry and Dynamical Systems, (DGDS - 2012), August 29 - September 2, Mangalia, Romania, 2012
- The International Conference "Poisson Geometry - 2012", July 30 - August 3, Utrecht, The Netherlands (Olanda), 2012
- The 5th International Conference of Differential Geometry and Dynamical Systems, (DGDS - 2011), October 6 - 9, Bucharest, Romania, 2011

## II. Research fellowships and member in research teams

2022 - 2023: project leader of the research project "Well-posedness, existence and characterization results of solutions for certain variational problems", Academy of Romanian Scientists, "AOSR-TEAMS" 2022-2023

2021 - 2026: Degree of Merit from the University "Politehnica" of Bucharest

2019 - 2024: member of research team for the project "AG 148 / SGU / NC / II / 10.09.2019 - Opportunities for professional development within the educational process of the Faculty of Applied Chemistry and Materials Science", project leader Cristina Orbeci

2018 - 2019: project leader of the research grant "Nonlinear Analysis with Applications in Optimization and Control"

2016 - 2017: member of research team for the project "Applied Mathematics in Urbanism", project leader Corina Cipu

2011 - 2014: member of research team for the project "Qualitative study of delay differential equations with applications to modeling and simulation of leukemia therapy", project leader Andrei Halanay

2011 - 2012: BITDEFENDER fellowship (Junior Research Position) at "Simion Stoilow" Institute of Mathematics of the Romanian Academy

ADDITIONAL INFORMATION

- \* Guest Editor for the Special Issue “New Developments in Analysis of Variational Inequalities and Related Fields” in the Axioms journal (ISSN: 2075-1680)
- \* 2023 - Participation in the training program Internal Managerial Control System, 06-08 June 2023
- \* 2023 - Member of The International Society of Global Optimization
- \* Review Editor for the “Frontiers in Artificial Intelligence” journal (ISSN: 2624-8212)
- \* Guest Editor (with Octav Olteanu) for the Special Issue “Symmetry in Mathematical Analysis and Functional Analysis – Volume II” in the Symmetry journal (ISSN: 2073-8994)
- \* Guest Editor for the Special Issue “Variational Problems and Applications – Volume II” in the Mathematics journal (ISSN: 2227-7390)
- \* Guest Editor for the Special Issue “Advances in Optimization and Nonlinear Analysis – Volume II” in the Fractal and Fractional journal (ISSN: 2504-3110)
- \* Expert evaluator within the Call “Equipping pre-university education units and related units with furniture, teaching materials and digital equipment”, PNRR, 2023
- \* Expert evaluator within the Call “Scheme of Grants for the Digitization of Universities, financed by the National Plan for Recovery and Resilience (PNRR)”, Iunie 2022
- \* Author/ co-author/ editor of 7 (seven) specialized books in international publishing houses (Springer Nature, LAP Lambert Academic Publishing, Cambridge Scholars Publishing, MDPI Switzerland)
- \* Author/ co-author of 8 (eight) book chapters
- \* Reviewer of “The 4th International Conference on Computational Modeling, Simulation and Applied Mathematics (CMSAM2019)”, 27-29 December 2019, Guangzhou, China
- \* Topical Advisory Panel Member of the Axioms journal (ISSN: 2075-1680)
- \* Guest Editor (with Maria Alessandra Ragusa) for the Special Issue “Advances in Partial Differential Equations: Theory and Applications” in the AIMS Mathematics journal (ISSN: 2473-6988)
- \* Guest Editor for the Special Issue “Calculus of Variations and Nonlinear Partial Differential Equations” in the Axioms journal (ISSN: 2075-1680)
- \* Guest Editor (with Octav Olteanu) for the Special Issue “Symmetry in Mathematical Analysis and Functional Analysis” in the Symmetry journal (ISSN: 2073-8994)

- \* Guest Editor for the Special Issue “Advances in Optimization and Nonlinear Analysis” in the Fractal and Fractional journal (ISSN: 2504-3110)
- \* Guest Editor for the Special Issue “Variational Problems and Applications” in the Mathematics journal (ISSN: 2227-7390)
- \* Guest Editor for the Special Issue “An Application of Differential Equation and Numerical Analyses to the Multidisciplinary and Interdisciplinary Sciences“, proposed by the Lead Guest Editor Mahammad Nurmammadov
- \* Topical Advisory Panel Member of the Mathematics journal (ISSN: 2227-7390)
- \* International Program Committee Member and Reviewer of “Automation, Robotics & Communications for Industry 4.0 (ARCI): 1st IFSA Winter Conference”, 3-5 February 2021, Chamonix-Mount-Blanc, France
- \* *2021-Present*: editorial board member of “European Journal of Mathematics and Applications”, “International Journal of Mathematics and Physics”
- \* *2018-Present*: editorial board member of “ACE Journal of Mathematical Research“, “International Journal of Mathematics and Systems Science”
- \* *2017-Present*: editorial board member of “Transnational Journal of Mathematical Analysis and Applications”, “SCIREA Journal of Mathematics”, “Transnational Journal of Pure and Applied Mathematics”, “SCIREA Journal of Information Science and Systems Science”, “International Journal of Mathematical Analysis and Applications”
- \* *2016-2018*: editorial board member of “International Journal of Theoretical and Applied Mathematics”
- \* *2017-Present*: reviewer for “zbMATH”, “Mathematical Reviews / MathSciNet”
- \* reviewer for the following international journals U.P.B. Scientific Bulletin, Series A (2014), Optimal Control, Applications and Methods (2018, 2020), Journal of Physics A: Mathematical and Theoretical (2018), Journal of Progressive Research in Mathematics (2018), Complexity (2018), International Journal of Control (2019, 2023), European Journal of Control (2019), Asia-Pacific Journal of Operational Research (2019), Symmetry-Basel (2019, 2020, 2021, 2022), Axioms (2019, 2020, 2021, 2022), Mathematics (2019, 2020, 2021, 2022), AIMS Mathematics (2020, 2021, 2022, 2023), Acta Mathematica Scientia (2020, 2023), Asian Journal of Probability and Statistics (2020, 2023), Iranian Journal of Mathematical Sciences and Informatics (2020), Contemporary Mathematics (2020), Journal of Mathematical and Statistical Analysis (2018, 2020,

2022), Asian Research Journal of Mathematics (2020), Journal of Scientific Research and Reports (2020), Intelligent Control and Automation (2021), SN Operations Research Forum (2021), European Journal of Pure and Applied Mathematics (2021), Journal of Biostatistics and Biometric Applications (2021), WSEAS Transactions (2021); Journal of Optimization Theory and Applications (2022, 2023), Journal of Global Optimization (2022), Mathematical Communications (2022), Bulletin of the Malaysian Mathematical Sciences Society (2022, 2023), Italian Journal of Pure and Applied Mathematics (2022), Open Mathematics (2022), Applied Sciences (2021, 2022), Annales Polonici Mathematici (2022), Mathematical Control and Related Fields (2022), Journal of Computational and Applied Mathematics (2022), Demonstratio Mathematica (2022), Optimization (2022), Journal of the Franklin Institute (2022), Miskolc Mathematical Notes (2022), Soft Computing (2022, 2023), Transnational Journal of Pure and Applied Mathematics (2022), Kibernetika (2022), International Journal of Robust and Nonlinear Control (2022), Fractal and Fractional (2021, 2022), Advances in Mathematical Physics (2022), RAIRO - Operations Research (2022, 2023), Journal of King Saud University – Science (2022), Punjab University Journal of Mathematics (2022), Computational and Applied Mathematics (2023), Yugoslav Journal of Operations Research (2023), Mathematical Methods in the Applied Sciences (2023), Frontiers in Applied Mathematics and Statistics (2023), Annals of Mathematics and Physics (2023), Systems and Soft Computing (2023), International Journal of Industrial and Operations Research (2023), Opsearch (2023), Applied Set-Valued Analysis and Optimization (2023), Computers and Mathematics with Applications (2023), Qeios (2023).

\* *2014, 2017-Present*: “Rewarding of scientific results”, for publication of articles in prestigious international journals (CNCS/UEFISCDI)

\* *2013-Present*: member of “Balkan Society of Geometers”

#### FIELDS OF INTEREST

- \* Multiobjective Optimization
- \* Optimal Control Problems
- \* Mathematical Modeling
- \* Geometric PDEs
- \* Information Theory
- \* Variational Analysis