

UNIVERSITATEA DIN CRAIOVA
FACULTATEA DE ȘTIINȚE
DEPARTAMENTUL DE FIZICĂ
Prof.univ.dr. Radu Constantinescu

CURRICULUM VITAE

Nume: CONSTANTINESCU

Prenume: RADU DAN

Cetățenie: română

Titlul științific: doctor în științe, domeniul Fizică, specialitatea Fizică teoretică

Titlul tezei de doctorat, anul susținerii: “Implicații dinamice ale simetriilor în modele din teoria cuantică a câmpului”, 1997.

Locul de muncă actual: Universitatea din Craiova

Funcția: Profesor

Conducere de doctorat: DA, în domeniul Fizică, din anul 2010.

Teze de doctorat conduse: 10

Membru în asociații profesionale: Societatea Română de Fizica, IEEE, Societatea Europeană de Fizică, Uniunea Balcanică de Fizică.

Atribuții îndeplinite:

- Recenzor la diferite reviste cotate ISI
- Expert pe probleme ECTS/DS al Comisiei Europene (2005-2009)
- Membru în echipa de promotori Bologna pentru România (2009-2013)
- Decan la Facultatea de Fizică de la UCV (2000-2004)
- Prorector cu activitatea de cercetare științifică (2005-2009, 2016-2020)
- Secretar general al Societății Române de Fizică (2009-2015)
- Președinte al Uniunii Balcanice de Fizică (2022-prezent)

Limbi străine cunoscute: Franceza, Engleza

Aspecte relevante ale activității de cercetare științifică

Granturi/contracte de cercetare câștigate prin competiție:

- în calitate de director (sau responsabil științific): **14** (din care 7 granturi internaționale și 7 granturi în programe naționale de cercetare).
- în calitate de membru: **11** (din care 3 granturi internaționale și 8 granturi în programe naționale).

Cărți, monografii, capitole de cărți de specialitate publicate în edituri naționale recunoscute de CNCSIS: 6

Lucrări științifice publicate în reviste sau prezentate la conferințe internaționale: 122

Numărul de citări

Web of Science: 291

Google Scholars: 502

Indice Hirsch

Web of Science: 10

Google Scholars: 14

Lucrări reprezentative, publicate în reviste cotate ISI în ultima perioadă:

1. R.Cimpoiasu, R.Constantinescu: "Lie Symmetries and Invariants for 2D Nonlinear Heat Equation", *Nonlinear Analysis Series A: Theory, Methods & Applications* vol 68, no.8 (2008), 2261-2268.
2. R.Constantinescu, C. Ionescu: "A Chern-Simons gauge-fixed Lagrangean in a non-canonical BRST approach", *J. Phys. A: Math.Theor.*, Vol. 42, No 8 (2009) 085401
3. R.Constantinescu, C. Ionescu: "The Yang-Mills fields - from gauge theory to the mechanical model", *Central European Journal of Physics*, Vol. 7 (2009), 711 – 720.
4. R.Cimpoiasu, R.Constantinescu: "The inverse symmetry problem for a 2D generalized second order evolutionary equation". *Nonlin.Analysis-Theor.Meth&Appl.*, Vol 73 No 1 (2010) 147-154
5. R. Cimpoiasu, V. Cimpoiasu, R.Constantinescu: "Nonlinear dynamical systems in various space-time dimensions", *Rom.J. Phys.*, Vol. 55 No. 1-2 (2010), 25-35
6. R.Constantinescu, C. Ionescu: "Lagrangean $sp(3)$ BRST formalism for massive vectorial bosonic fields", *Rom.J. Phys.*, Vol. 55 No. 9-10 (2010), 961-970.
7. R.Constantinescu, C. Ionescu: "Hot quark-gluon plasma and the Chapline-Manton model." *Rom.J. Phys.*, Vol. 56 No. 1-2 (2011), 53-61
8. R.Cimpoiasu, R.Constantinescu: "Nonlinear self-adjointness and invariant solutions of a 2D Rossby wave equation", *Cent.Eur.J.Phys*, Vol.12 (2014), 81-89.
9. C.Babalic, R.Constantinescu, V.Gerdjikov: "On Tzitzeica equation and spectral properties of related Lax operators", *Balkan J.Geom.Appl.* 19 (2014), 11-22.
10. R.Constantinescu: "Generalized conditional symmetries, related solutions and conservation laws of the Klein-Gordon-Fock equation with central symmetry", *Rom.J.Phys*, Vol.61 (2016), 77-88.
11. R.Constantinescu: "New solutions of Dodd-Bullough-Mikhailov equation by using an improved tanh-method", *Rom. Rep. Phys.* 69 (2017), 112.
12. R.Constantinescu, R.Cimpoiasu: "Invariant solutions of the Eckhaus-Kundu model with nonlinear dispersion and non-Kerr", *Waves in Random and Complex Media*, Vol. (2019), <https://doi.org/10.1080/17455030.2019.1587210>

13. C.Ionescu, R.Constantinescu, M.Stoicescu: "Functional expansion for finding traveling waves solutions", Journal of Applied Analysis and Computation (JAAC), Vol.10, (2), 2020, 569-583, <https://doi:10.11948/20180314>
14. R.Constantinescu, A. Florian: Integrability via Functional Expansion for the KMN Model", Symmetry Vol 12 (2020) 1819; <https://doi:10.3390/sym12111819>
15. R.Constantinescu, R.Cimpoiasu: "Invariant solutions of the Eckhaus-Kundu model with nonlinear dispersion and non-Kerr", Waves in Random and Complex Media, Vol. 31 (2), 331-341 (2021), <https://doi.org/10.1080/17455030.2019.1587210>
16. J. Sabi'u, H. Rezazadeh, R. Cimpoiasu, R. Constantinescu - Traveling wave solutions of the generalized Rosenau-Kawahara-RLW equation via the sine-cosine method and a generalized auxiliary equation method, Int. J. Nonlinear Sci. Numer. Simul., Vol 23 (2022), <https://doi.org/10.1515/ijnsns-2019-0206>
17. G.Mosa, L.Bucur, D.Constantinescu, R.Constantinescu, R.Efrem - Analysis of a class of Lotka-Volterra systems, Qualitative Theory of Dynamical Systems, Vol.21, Art 32 (2022), <https://doi.org/10.1007/s12346-022-00563-4>
18. C. Ionescu, C.N. Babalic, R. Constantinescu, R. Efrem, "The Functional Expansion Approach for Solving NPDEs as a Generalization of the Kudryashov and G'/G Methods!", Symmetry 14(4), 827 (2022), <https://doi.org/10.3390/sym14040827>
19. C. Ionescu, R. Constantinescu, "Solving Nonlinear Second-Order Differential Equations through the Attached Flow Method", Mathematics 2022, 10, 2811. <https://doi.org/10.3390/math10152811>
20. R.Cimpoiasu, R. Constantinescu, "New Wave Solutions for the Two-Mode Caudrey-Dodd-Gibbon Equation", Axioms 2023, 12(7), 619; <https://doi.org/10.3390/axioms12070619>
21. R. Cimpoiasu, R. Constantinescu, "Wave Solutions for a (2 + 1)-Dimensional Burgers-KdV Equation with Variable Coefficients via the Functional Expansion Method". Symmetry. 2024; 16(1):96. <https://doi.org/10.3390/sym16010096>
22. C.Ionescu, R.Constantinescu, "Optimal Choice of the Auxiliary Equation for Finding Symmetric Solutions of Reaction-Diffusion Equations", Symmetry 2024, 16(3), 335; <https://doi.org/10.3390/sym16030335>

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LISTA

lucrărilor științifice în domeniul disciplinelor din postul didactic

Teza de doctorat:

Implicații dinamice ale simetriilor în modele din teoria cuantică a câmpului, 1997.

Autor: Radu Constantinescu

Lucrări publicate în reviste cotate ISI în ultimii 10 ani:

1. R.Cimpoiasu, R.Constantinescu: "Nonlinear self-adjointness and invariant solutions of a 2D Rossby wave equation", Cent.Eur.J.Phys, Vol.12 (2014), 81-89.
2. C.Babalic, R.Constantinescu, V.Gerdjikov: "On Tzitzeica equation and spectral properties of related Lax operators", Balkan J.Geom.Appl. 19 (2014), 11-22.
3. 10. R.Constantinescu: "Generalized conditional symmetries, related solutions and conservation laws of the Klein-Gordon-Fock equation with central symmetry", Rom.J.Phys, Vol.61 (2016), 77-88.
4. R.Constantinescu: "New solutions of Dodd-Bullough-Mikhailov equation by using an improved tanh-method", Rom. Rep. Phys. 69 (2017), 112.
5. R.Constantinescu, R.Cimpoiasu: "Invariant solutions of the Eckhaus-Kundu model with nonlinear dispersion and non-Kerr", Waves in Random and Complex Media, Vol. (2019), <https://doi.org/10.1080/17455030.2019.1587210>
6. C.Ionescu, R.Constantinescu, M.Stoicescu: "Functional expansion for finding traveling waves solutions", Journal of Applied Analysis and Computation (JAAC), Vol.10, (2), 2020, 569-583, <https://doi:10.11948/20180314>
7. R.Constantinescu, A. Florian: Integrability via Functional Expansion for the KMN Model", Symmetry Vol 12 (2020) 1819; <https://doi:10.3390/sym12111819>
8. R.Constantinescu, R.Cimpoiasu: "Invariant solutions of the Eckhaus-Kundu model with nonlinear dispersion and non-Kerr", Waves in Random and Complex Media, Vol. 31 (2), 331-341 (2021), <https://doi.org/10.1080/17455030.2019.1587210>
9. J. Sabi'u, H. Rezazadeh, R. Cimpoiasu, R. Constantinescu - Traveling wave solutions of the generalized Rosenau-Kawahara-RLW equation via the sine-cosine method and a generalized auxiliary equation method, Int. J. Nonlinear Sci. Numer. Simul., Vol 23 (2022), <https://doi.org/10.1515/ijnsns-2019-0206>
10. G.Mosa, L.Bucur, D.Constantinescu, R.Constantinescu, R.Efrem - Analysis of a class of Lotka-Volterra systems, Qualitative Theory of Dynamical Systems, Vol.21, Art 32 (2022), <https://doi.org/10.1007/s12346-022-00563-4>
11. C. Ionescu, C.N. Babalic, R. Constantinescu, R. Efrem, "The Functional Expansion Approach for Solving NPDEs as a Generalization of the Kudryashov and G ' /G Methods!, Symmetry 14(4), 827 (2022), <https://doi.org/10.3390/sym14040827>

12. C. Ionescu, R. Constantinescu, "Solving Nonlinear Second-Order Differential Equations through the Attached Flow Method", Mathematics 2022, 10, 2811.
<https://doi.org/10.3390/math10152811>

Lucrări publicate în reviste și Proceedings-uri indexate ISI sau în alte baze de date:

1. C.N.Babalic, R.Constantinescu, V.Gerdjikov: "On Tzitzeica equation and spectral properties of related Lax operators", Balkan Journal of Geometry and Its Applications", Vol.19, No.2, 2014, pp. 11-22.
2. C.N. Babalic, R. Constantinescu, V.S.Gerdjikov: "2-Soliton solution of Tzitzeica equation", Physics AUC, Vol. 23 (2013), 36-41.
3. R.Cimpoiasu, R.Constantinescu: "Conservation laws and solutions of two-dimensional Ricci flow in the solitonic sector", presented in "The 10th QFT and Hamiltonian Systems", Sinaia, March 2016.
4. R.Constantinescu, A.Florian, C.Ionescu, A-M.Pauna: "Power law method for finding soliton solutions of the 2D-Ricci Flow Model" Proc. of The 9th MPHYS Conf., Belgrade 2017, pp135-146
<http://mphys9.ipb.ac.rs/proceedings9/Constantinescu.pdf>
5. R.Constantinescu, F.Iacobescu, A.Streche: "Nonlinear mathematical models for physical phenomena", presented in BPU 10th Conference (Sofia 2018), AIP Conference Proceedings 2075, 100005 (2019). doi: 10.1063/1.5091249
6. R.Constantinescu, C.Ionescu: "Special methods for solving nonlinear differential equations through polynomial expansions", Proc. of 10th MPHYS Conf., Belgrade, sept.2019, <http://www.mphys10.ipb.ac.rs/slides/Constantinescu.pdf>
7. R.Constantinescu, C. Ionescu, A. Pauna: „A reduction method for solving nonlinear PDEs”, Physics AUC, vol. 30 (part II), 158-165 (2020)
8. C. Babalic, R.Constantinescu - Auxiliary equations for solving nonlinear evolutionary equations, Proceedings of the 2nd Conference on Nonlinearity, (October 18 – 22, 2021, Belgrade, Serbia), ISBN: 978-86-905633-7-1, pp 200-211.
9. R. Cimpoiasu, R. Constantinescu, G. Florian, A. Pauna, Reduction methods and travelling wave solutions for nonlinear evolutionary phenomena, Proceedings of the 2nd Conference on Nonlinearity, (October 18 – 22, 2021, Belgrade, Serbia), ISBN: 978-86-905633-7-1, pp 268-279.

Lecții invitate și lucrări prezentate în conferințe:

1. R.Constantinescu, C.Ionescu, M.Stoicescu: "Modeling neural flow through linearization procedures", work presented in Theoretical Approaches to BioInformation Systems - TABIS2013, Belgrade, 17-23 Sept. 2013
2. R.Constantinescu, C.Ionescu, M.Stoicescu: "From Chua circuits to Hopfield neurons", work presented in TIM-13 (21-24Nov.2013).
<http://www.timconference.com/>
3. C.Babalic, R.Constantinescu, V.Gerdjikov: "On the properties of the soliton solutions of Tzitzeika equation", work presented in TIM-13 (21-24Nov.2013)
<http://www.timconference.com/>

4. R.Cimpoiasu, R.Constantinescu: "Lie Symmetries for Lorenz Type Systems", work presented in TIM-13 (21-24Nov.2013) <http://www.timconference.com/>
5. R.Constantinescu: "Symmetries and invariant solutions for evolutionary equations", work presented in *International School and Workshop on Nonlinear Mathematical Physics and Natural Hazards*, Sofia, Nov.28- Dec.02 2013, <http://www.inrne.bas.bg/international-school-sofia/index.php/program>
6. R.Constantinescu, C.Ionescu, E.Panaintescu, I.Petrisor: "Techniques for chaos control in nonlinear electronic circuits", presented at TIM'14 (Nov. 2014)
7. R.Constantinescu, C.Ionescu, E.Panaintescu, I.Petrisor: "Control and optimization techniques for "jerk" type circuits", Conf. "Theoretical and computational methods in dynamical systems and fractal geometry", Maribor, April 2015 http://www.camtp.uni-mb.si/camtp/valera/DS2015/book_abstracts.pdf
8. R.Constantinescu: "Symmetries and conservation laws for nonlinear PDEs", presented in "Workshop on qualitative Theory of differential Equations and Singular Perturbation Theory", Shanghai Jiao Tong University, May 6-8, 2016. http://math.sjtu.edu.cn/conference/Ot2016/content.aspx?info_lb=2&flag=2
9. R.Constantinescu: "First order systems of nonlinear ODEs with chaotic behavior" Colloquia SJTU, Shanghai, China, June 1st 2016 <http://www.math.sjtu.edu.cn/research/seminar-show.php?id=-2545>
10. R.Cimpoiasu, R.Constantinescu, M.A.Streche: "Chaos and symmetries in mathematical neural flow models", presented in BELBI Conference, Belgrade, April 2016, http://alas.matf.bg.ac.rs/~websites/bioinfo/?page_id=639
11. R.Constantinescu, C.Ionescu: "Nonlinear Mechanical Models for Field Theories", Workshop "Advances in Fields, Particles and Cosmology", Ioannina 7-10 June 2019, <https://www.seenet-mtp.info/events/network-meetings/workshop-advances-in-fields-particles-and-cosmology>
12. R.Constantinescu, C.Ionescu: "Nonlinear differential equations from Field theories", Conf. at the "SEENET-ICTP Assessment Meeting", Trieste, 20-22 Oct.2019, <https://www.seenet-mtp.info/news/assessment-meeting-and-sac-meeting-in-trieste>
13. R.Constantinescu, A.Pauna, M.Poenaru, Waves and bifurcations in describing the proliferation of the brain tumors, BPU11 Congress, Aug.2022, will appear in Proc. of Science (PoS).

Data

15.02.2023

Semnătura

