

a) lista celor 10 lucrări considerate de candidat a fi cele mai relevante pentru realizările profesionale proprii

- 1) C.P. Landee, M.M. Turnbull, C. Galeriu, J. Giantsidis, F.M. Woodward, Magnetic properties of a molecular-based spin-ladder system: $(5IAP)_2CuBr_4 \cdot H_2O$, *Physical Review B* **63**, 100402 (2001).
- 2) L. C. Lew Yan Voon, C. Galeriu, B. Lassen, M. Willatzen, R. Melnik, Electronic structure of wurtzite quantum dots with cylindrical symmetry, *Applied Physics Letters* **87**, 041906 (2005).
- 3) C. Galeriu, Magnetostatics Analysis, Design, and Construction of a Loudspeaker, *The Physics Teacher* **48**, 537 (2010).
- 4) C. Galeriu, An Arduino Controlled Photogate, *The Physics Teacher* **51**, 156 (2013).
- 5) C. Galeriu, C. Letson, G. Esper, An Arduino Investigation of the RC Circuit, *The Physics Teacher* **53**, 285 (2015).
- 6) C. Galeriu, Electric charge in hyperbolic motion: the early history, *Archive for History of Exact Sciences* **71**, 363 (2017).
- 7) C. Galeriu, Electric charge in hyperbolic motion: the special conformal transformation solution, *European Journal of Physics* **40**, 065203 (2019).
- 8) C. Galeriu, The geometrical origin of the Doppler factor in the Liénard-Wiechert potentials, *European Journal of Physics* **42**, 055204 (2021).
- 9) C. Galeriu, An Arduino Investigation of the Temperature Dependence of the Speed of Sound in Air, *The Physics Teacher* **60**, 284 (2022).
- 10) C. Galeriu, The algebraic origin of the Doppler factor in the Liénard-Wiechert potentials, *European Journal of Physics* **44**, 035203 (2023).

b) teza de doctorat

Calin Galeriu, k-p Theory of Semiconductor Nanostructures, (Worcester Polytechnic Institute, 2005).

c) brevete de invenție și alte titluri de proprietate industrială

Nu este cazul.

d) cărți și capitole în cărți

- 1) Cornel I. Nistor și Călin Galeriu, Prelucrarea automată a datelor fizice și metode numerice, (Editura Universității din București, București, 1996, ISBN 973-575-079-1).
- 2) Călin Galeriu, Foundations of Java Programming, (Lulu Press, Research Triangle, 2020, ISBN 978-1-4478-7353-2).

e) articole / studii în extenso, publicate în reviste din fluxul științific internațional principal, indexate ISI (Science Citation Index Expanded)

A) Magneți moleculari

- 1) C.P. Landee, M.M. Turnbull, C. Galeriu, J. Giantsidis, F.M. Woodward, Magnetic properties of a molecular-based spin-ladder system: $(5\text{IAP})_2\text{CuBr}_4 \cdot \text{H}_2\text{O}$, *Physical Review B* **63**, 100402 (2001).
- 2) J. Giantsidis, M.M. Turnbull, C. Galeriu, C.P. Landee, F.M. Woodward, $S=1/2$ quantum Heisenberg antiferromagnet ladders, *Synthetic Metals* **122**, 517 (2001).
- 3) J. Giantsidis, C. Galeriu, C. P. Landee, M. M. Turnbull, Transition Metal Halide Salts of 2-Amino-5-substituted-pyridines: Synthesis, Crystal Structure and Magnetic Properties of Two Polymorphs of $(5\text{-IAP})_2\text{CuCl}_4$ [5-IAP = 2-amino-5-iodopyridinium], *Journal of Coordination Chemistry* **55**, 795 (2002).
- 4) M.M. Turnbull, C. Galeriu, J. Giantsidis, C.P. Landee, Synthesis, Structure and Magnetic Susceptibility of two 5- Nitro-2-Aminopyridinium Cuprates: $(5\text{-NAP})_2\text{CuCl}_4$ and the Quantum Magnetic Ladder $(5\text{-NAP})_2\text{CuBr}_4 \cdot \text{H}_2\text{O}$, *Molecular Crystals and Liquid Crystals* **376**, 469 (2002).
- 5) C.P. Landee, A. Delcheva, C. Galeriu, G. Pena, M.M. Turnbull, R.D. Willett, Molecularbased quantum magnets: the isotropic spin ladder $\text{Cu}(\text{quinoxaline})\text{Br}_2$, *Polyhedron* **22**, 2325 (2003).
- 6) R.D. Willett, C. Galeriu, C.P. Landee, M.M. Turnbull, B. Twamley, Structure and Magnetism of a Spin Ladder System: $(\text{C}_5\text{H}_9\text{NH}_3)_2\text{CuBr}_4$, *Inorganic Chemistry* **43**, 3804 (2004).

B) Structura electronică a semiconductorilor

- 1) L.C. Lew Yan Voon, C. Galeriu, M. Willatzen, Comment on 'Confined states in twodimensional flat elliptic quantum dots and elliptic quantum wires', *Physica E* **18**, 547 (2003).
- 2) C. Galeriu, L. C. Lew Yan Voon, R. Melnik, M. Willatzen, Modeling a nanowire superlattice using the finite difference method in cylindrical polar coordinates, *Computer Physics Communications* **157**, 147 (2004).

- 3) M. Willatzen, R. V. N. Melnik, C. Galeriu, L. C. Lew Yan Voon, Quantum confinement phenomena in nanowire superlattice structures, *Mathematics and Computers in Simulation* **65**, 385 (2004).
 - 4) L. C. Lew Yan Voon, C. Galeriu, B. Lassen, M. Willatzen, R. Melnik, Electronic structure of wurtzite quantum dots with cylindrical symmetry, *Applied Physics Letters* **87**, 041906 (2005).
 - 5) R. V. N. Melnik, B. Lassen, L. C. Lew Yan Voon, M. Willatzen, C. Galeriu, Nonlinear strain models in the analysis of quantum dot molecules, *Nonlinear Analysis - Theory, Methods & Applications* **63**, 2165 (2005).
- C) Fizică educațională
- 1) C. Galeriu, Magnetostatics Analysis, Design, and Construction of a Loudspeaker, *The Physics Teacher* **48**, 537 (2010).
 - 2) C. Galeriu, An Arduino Controlled Photogate, *The Physics Teacher* **51**, 156 (2013).
 - 3) C. Galeriu, S. Edwards, G. Esper, An Arduino Investigation of Simple Harmonic Motion, *The Physics Teacher* **52**, 157 (2014).
 - 4) C. Galeriu, C. Letson, G. Esper, An Arduino Investigation of the RC Circuit, *The Physics Teacher* **53**, 285 (2015).
 - 5) C. Galeriu, An Arduino Investigation of Newton's Law of Cooling, *The Physics Teacher* **56**, 618 (2018).
 - 6) C. Galeriu, An Arduino Investigation of the Temperature Dependence of the Speed of Sound in Air, *The Physics Teacher* **60**, 284 (2022).
 - 7) C. Galeriu, Nuclear physics with MightyOhm: the natural background radiation, *Romanian Reports in Physics* **75**, 906 (2023).
- D) Teoria relativității restrânse
- 1) C. Galeriu, Electric charge in hyperbolic motion: the early history, *Archive for History of Exact Sciences* **71**, 363 (2017).
 - 2) C. Galeriu, Electric charge in hyperbolic motion: the special conformal transformation solution, *European Journal of Physics* **40**, 065203 (2019).
 - 3) C. Galeriu, A derivation of the Doppler factor in the Liénard-Wiechert potentials, *European Journal of Physics* **42**, 055203 (2021).
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 - 5) C. Galeriu, The algebraic origin of the Doppler factor in the Liénard-Wiechert potentials, *European Journal of Physics* **44**, 035203 (2023).

- f) publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate
- 1) M. Willatzen, R.V.N. Melnik, C. Galeriu, L.C. Lew Yan Voon, Finite Element Analysis of Nanowire Superlattice Structures, In: V. Kumar , M.L. Gavrilova, C.J.K. Tan, P. L'Ecuyer (eds.), Computational Science and Its Applications - ICCSA 2003, Proc. Part II, Lecture Notes in Computer Science, vol. 2668, 755 (Springer, Berlin, 2003, ISBN 3-540-40161-X).
- g) alte lucrări și contribuții științifice, publicate în reviste din fluxul științific internațional secundar, neindexate ISI (Science Citation Index Expanded), sau postate pe arXiv
- A) Matematică educațională
- 1) C. Galeriu, Programming in BASIC on a Nintendo DS Console, Letter to the Editor, *Mathematical Spectrum* **42**, 93 (2009/2010).
 - 2) C. Galeriu, Nintendo DS Lite Consoles in the Mathematics Classroom, *Far East Journal of Mathematical Education* **9**, 81 (2012).
 - 3) C. Galeriu, Hikaru no Go: The Maths Moves, *SYMmetry plus* **57**, 2 (2015).
- B) Teoria relativității restrânse
- 1) C. Galeriu, Time-Symmetric Action-at-a-Distance Electrodynamics and the Structure of Space-Time, *Physics Essays* **13**, 597 (2000).
 - 2) C. Galeriu, An Introduction to Minkowski Space, *Mathematical Spectrum* **36**, 5 (2003).
 - 3) C. Galeriu, Addition of velocities and electromagnetic interaction: geometrical derivations using 3D Minkowski diagrams, *Apeiron* **10**, 1 (2003).
 - 4) C. Galeriu, Radiation reaction 4-force: orthogonal or parallel to the 4-velocity?, *Annales de la Fondation Louis de Broglie* **28**, 49 (2003).
 - 5) C. Galeriu, A derivation of two homogenous Maxwell equations, *Apeiron* **11**, 303 (2004).
 - 6) C. Galeriu, Relativistic Point Particles and Classical Elastic Strings, arXiv:1711.03568 (2017).
 - 7) C. Galeriu, Electric charge in hyperbolic motion: arcane geometrical aspects, arXiv: 1712.02213 (2017).
 - 8) C. Galeriu, Time symmetric electrodynamics, electric charge conservation, and the Lorenz gauge, arXiv: 2204.10763 (2022). Acest articol a fost acceptat spre publicare de către revista *Advances in Theoretical and Mathematical Physics*, revistă indexată ISI.
 - 9) C. Galeriu, Comment on "Doppler signature in electrodynamic retarded potentials", arXiv: 2302.13404 (2023).