



Curriculum vitae Europass

Informații personale

Nume/Prenume
Dariescu /Ciprian

Adresă: Trc. Dimitrie Ralet nr. 8, Iasi, Romania

Telefon: 0742910549

E-mail: ciprian.dariescu@uaic.ro

Naționalitate: Romana

Data nașterii

Sex: M

Experiența profesională

Perioada 1985-1988

Funcția sau postul ocupat Profesor de fizică

Numele și adresa angajatorului Liceele Nr. 2 si 5, Bacau

Tipul activității sau sectorul de activitate Didactic

Perioada 1988-1990

Funcția sau postul ocupat Cercetator fizician

Numele și adresa angajatorului Universitatea Alexandru Ioan Cuza din Iași

Tipul activității sau sectorul de activitate Cercetare

Perioada 1990-1993

Funcția sau postul ocupat Asistent universitar

Numele și adresa angajatorului Universitatea Alexandru Ioan Cuza din Iași

Tipul activității sau sectorul de activitate Didactic

Perioada 1993-1997

Funcția sau postul ocupat Lector universitar

Numele și adresa angajatorului Universitatea Alexandru Ioan Cuza din Iași

Tipul activității sau sectorul de activitate Didactic

Perioada 1997-1999

Funcția sau postul ocupat Conferentiar universitar

Numele și adresa angajatorului Universitatea Alexandru Ioan Cuza din Iași

Tipul activității sau sectorul de activitate Didactic

Perioada 1999--2024

Funcția sau postul ocupat Profesor universitar

Numele și adresa angajatorului Universitatea Alexandru Ioan Cuza din Iași

Tipul activității sau sectorul de activitate

Didactic

Educație și formare

Conducator de Doctorat, Universitatea Alexandru Ioan Cuza din Iași/ din 2005

1969-1973: Scoala primara,
1973-1977:Gmnaziu, Liceul M. Eminescu, Iasi,
1977-1981: Liceul M. Eminescu si Liceul C. Negruzzi, Iasi,
1981-1985: Facultatea de Fizica, Universitatea Alexandru Ioan Cuza din Iași

STUDII POSTUNIVERSITARE:

Doctorat in Fizica, specializarea Fizica Teoretica, Universitatea *Alexandru Ioan Cuza*, Iasi, Aprilie 1993;

Tema Tezei: *Studiul Campului Gravitational utilizand Formalismul Newman-Penrose cu Torsiune*

Coordonator: Prof. univ. dr. Ioan Gottlieb

Bursa MONBUSHO de 18 luni la Universitatea din Toyama, Japonia (1994-1996);
Accredited Diploma of graduating the 6 Months Intensive Course of Japanese Language from Nagoya University, Japan

Visiting cu statut de **Courtesy Research Professor** la Institute of Theoretical Science, *Univ. of Oregon*, Eugene, **USA**, Nov., 2002 – Mai, 2003.

Diploma on Cosmology, *First Aegean Summer School on Cosmology* Karlovassi, **Greece**, Sept. 2001 si la *4th Aegean Summer School: Black Holes*, Mytilene, **Greece**, sept. 2007.

Aptitudini și competențe personale

Limba(i) maternă(e)

ROMANA

Limba(i) străină(e) cunoscută(e)

Engleza, Japoneza, Franceza

Autoevaluare

Nivel european (*)

Engleza

Japoneza

Franceza

Înțelegere		Vorbire		Scriere
Ascultare	Citare	Participare la conversație	Discurs oral	Exprimare scrisă
B2	B2	B2	B2	B2
Bine	Bine	Bine	Bine	Bine
Bine	Bine	Bine	Bine	Bine

(*) [Nivelul Cadrului European Comun de Referință Pentru Limbi Străine](#)

Accredited Diploma of graduating the 6 Months Intensive Course of *Japanese Language* from Nagoya University, Japan

Competențe și aptitudini organizatorice

In the Organizer Committee si Scientific Committee la Conferinte internationale si nationale (selectie)

First Tah Poe School on Cosmology, Tailanda, aprilie, 2002.

International Conference on Relativity, ICR-2005, Amravati University, Amravati, India, ianuarie, 2005.

Conferinta nationala de Fizica Teoretica, Universitatea Alexandru Ioan Cuza, Iasi, Iunie 2010.

Activitati de predare

ACTIVITATE DIDACTICA UNIVERSITARA:

Ore de laborator si/sau seminar la disciplinele:

Mecanica analitica si a mediilor deformabile (Fizica II), Mecanica cuantica (Fizica III), Metode matematice ale fizicii teoretice (Fizica III), Metoda integralei functionale (Fizica III), Statistica cuantica (Fizica Tehnologica III), Teorii gauge generalizate ale gravitatiei (Master II), Probleme filosofice in fizica moderna (Filosofie, I), Teoria fenomenelor neliniare (Master I), Metode matematice moderne ale fizicii teoretice (Fizica, III).

Ore de curs la disciplinele:

Probleme filosofice moderne in fizica teoretica (Filosofie, I), Metode matematice moderne ale fizicii teoretice (Fizica, III), Mecanica cuantica si fizica statistica (Fizica Tehnologica III), Capitole speciale de fizica teoretica (Fizica Tehnologica III), Mecanica cuantica (Fizica III), Evolutia ideilor fundamentale in fizica (III, curs credit), Utilizarea integralei functionale in cuantificarea campurilor (Fizica III), Teorii gauge generalizate ale gravitatiei (Master II), Teoria fenomenelor neliniare (Master I),

Cursuri universitare predate la Masterat:

Capitole Speciale de Mecanica Cuantica (Master I),
Teorii gauge generalizate ale gravitatiei (Master II),
Teoria fenomenelor neliniare (Master I),
Fundamentele Fizicii Matematice (incepand cu anul scolar 2008-2009).
Modele in astronomie si astrofizica (Master Modelare si Simulare, II)

Cursuri la **Scoala Doctorala**: Teorii cuantice de camp, Fizica teoretica

Rezultatele activitatii stiintifice

7 monografii, capitole in 5 carti de editor (nationale si international), 14 granturi de cercetare, 105 articole ISI, 58 articole in reviste non-ISI cu referenti, 29 prelegeri in conferinte international si 18 in conferinte nationale. **(Vezi Anexa)**

Premiul **Constantin Miculescu**, acordat de *Academia Romana*, pentru lucrarile publicate in 2011 (in colaborare cu Marina Dariescu), asupra *Teoriei campului gravitacional in modele cu extra-dimensiuni si Moduri cuantice exacte in campuri extreme*, Decembrie 2013.

Diploma de onoare Stiinta pentru oameni, Gala premiilor de excelenta *Sunt lesean, deci European*, Editia a-II-a, Ianuarie 2008.

Informații suplimentare

Premiul **Constantin Miculescu**, acordat de *Academia Romana*, pentru lucrarile publicate in 2011 (in colaborare cu Marina Dariescu), asupra *Teoriei campului gravitacional in modele cu extra-dimensiuni si Moduri cuantice exacte in campuri extreme*, Decembrie 2013.

Diploma de onoare Stiinta pentru oameni, Gala premiilor de excelenta *Sunt Iesean, deci European*, Editia a-II-a, Ianuarie 2008.

Domenii de competenta:

**Teorii gauge generalizate ale gravitației și surselor materiale;
Implicații fenomenologice ale teoriilor gauge în fizica particulelor elementare;
Efecte speciale în teorii moderne de cuantificare**

Prelegeri cu statut de **Invited Plenary Report** la:

The VI-th Friedmann International Seminar on Gravitation and Cosmology, Cargese, France, iulie 2004.

International Conference on Relativity, ICR-2005, Amravati, India, ianuarie 2005.

International Symposium Mathematical Methods in Engineering, MME06, Cankaya University, Ankara, Aprilie 2006.

The VII-th Friedmann International Seminar on Gravitation and Cosmology, Joao Pessoa, Brazil, iunie-iulie 2008.

The 5TH AUSTRALASIAN CONFERENCE ON GENERAL RELATIVITY AND GRAVITATION, University of Canterbury, Christchurch, New Zealand, Dec. 2009.

Prezentare orala la *6th Bangkok Workshop on High-Energy Theory*

Physics Department of Chulalongkorn University, Bangkok, Thailand, Ianuarie 2017.

Seminarii sustinute la Universitati din strainatate (selectie):

Pe teme de fizica energiilor inalte si gravitatie:

Institute of Theoretical Physics, Friedrich-Schiller Univ., Jena, Germany

Institute of Theoretical Physics, Dortmund University, Germany,

Institute of Information Sciences and Electronics, Tsukuba Univ., Japan,

High Energy Physics Dept., Univ. of Hawaii, Honolulu, USA,

La Plata National University, Argentina,

Buenos Aires University si IAFE, Argentina,

UFPB, Brazilia.

Conventie de colaborare bilaterala cu *Canakkale Onsekiz Mart University*, programul ERASMUS.

Conventie de colaborare bilaterala cu *Helsinki University*, programul ERASMUS.

International Scientific Contract with the Institute of Theoretical Physics,

Friedrich-Schiller University, Jena, Germany, on **Exacte Losungen fur**

Axialsymmetrisch Stationare Felder im Rahmen der Allgemeinen Relativitatstheorie und der Riemann-Cartan Theorie, November 1991 - November 1996.

Membru al Societatilor Stiintifice:

American Mathematica Society

Tensor Society (Japan)

European Physical Society

Romanian Physical Society

Romanian Society on General Relativity and Gravitation

Carti publicate:

1. FUNDAMENTAREA MECANICII CUANTICE,
Ioan Gottlieb, Ciprian Dariescu, Marina-Aura Dariescu
Editura "TEHNICA", Chişinău (1997) 568 pagini, ISBN 5-7790-01-55-3
2. GRAVITAŢIE ŞI CÂMPURI ÎN UNIVERSUL EINSTEIN
Ciprian Dariescu, Marina-Aura Dariescu
Editura "VESPER", Iaşi (1997) 201 pagini, ISBN 973-96589-6-2
3. CÂMPURI CUANTICE LIBERE
Ciprian Dariescu, Marina-Aura Dariescu, Ioan Gottlieb
Editura "BIT", Iaşi (1998) 582 pagini, ISBN 973-9327-29-x
4. MECANICĂ CUANTICĂ
Ioan Gottlieb, Marina-Aura Dariescu, Ciprian Dariescu
Editura "BIT", Iaşi (1999) 310 pagini, ISBN 973-9327-33-8.
5. CAPITOLE DE BAZĂ ÎN MECANICA CUANTICĂ. MICROPARTICULE ŞI CÂMPURI
Ciprian Dariescu, Marina-Aura Dariescu, Ioan Gottlieb
Editura "Venus", Iaşi (2007) 400 pagini, ISBN 978-973-756-061-2
6. MODELE SPECIALE DE UNIVERS ŞI PATOLOGII SPAŢIO-TEMPORALE
Iordana Aştefănoaei, Ciprian Dariescu, Marina-Aura Dariescu
Editura Univ. Al. I. Cuza, Iaşi (2007) 230 pagini, ISBN 973-703-205-5 (978-973-703-205-8).
7. TOPICI DE ASTRONOMIE, ASTROFIZICĂ ŞI COSMOLOGIE PENTRU ÎNCEPĂTORI,
Marina-Aura Dariescu, Ciprian Dariescu, Lucian-Mihai Cosovanu, Cristian-Ionut Stelea
Editura Ars Longa, Iaşi (2015) 200 pagini, ISBN 978-973-148-200-2.

Capitole in carti internationale

On the Quantization of the Complex Scalar Fields in $S^3 \times R$ Space-Time

C Dariescu and M. A. Dariescu

In *Lagrange and Finsler Geometry: Applications to Physics and Biology*, Springer, 1996,
edited by P.L. Antonelli and R. Miron, ISBN 978-90-481-4656-7.

DOI 10.1007/978-94-015-86.50-4, pgs. 233-240.

Basic General Relativity, 150 pagini, Proceedings of First Tah Poe School on Cosmology,
Naresuan University, Pithanulok, Thailand, 2002.

Proiecte de cercetare-dezvoltare-inovare pe baza de contract-grant

- 1) Studiul campului gravitacional utilizand Formalismul Tetric Null-Complex fara Torsiune
Contract 90/1989 (Faza 2.1, 1989) cu Inst. de Gravitatie si Stiinte Spatiale, Bucuresti;
- 2) Studiul campului gravitacional utilizand Formalismul Tetric Null-Complex cu Torsiune
Contract 90/1989 (Faza 2.2, 1990) cu Inst. de Gravitatie si Stiinte Spatiale, Bucuresti;
- 3) Teorii ale gravitatiei pe spatii cu topologie $S^3 \times R$
Contract 4/1991 (Faza 1.2, 1991) cu Inst. de Gravitatie si Stiinte Spatiale, Bucuresti;
- 4) Teorii extinse ale gravitatiei pe spatii Riemann-Cartan
Contract 4/1991 (Faza 2.2, 1992) cu Inst. de Gravitatie si Stiinte Spatiale, Bucuresti;
- 5) Teorii gauge cu aplicatii in astrofizica si cosmologie
Contract 15/1994 cu Ministerul Cercetarii si Tehnologiei, Bucuresti;
- 6) Metode de cuantificare neperturbativa a Universului Robertson-Walker spatial plat cu constanta cosmologica pozitiva, in imagine Heisenberg, cu aplicatii la sectorul stationar al Universului de Sitter
Contract 42/1996 cu Inst. de Gravitatie si Stiinte Spatiale, Bucuresti;
- 7) Contributii la studiul modelelor spatio-temporale cu simetrii speciale, cu aplicatii la surse scalare si interactiuni gauge pe structuri patologice globale
Contract 43/1996 cu Ministerul Cercetarii si Tehnologiei, Bucuresti
- 8) Studiul teoretic si aplicativ al fenomenelor neliniare
Grant international (Banca Mondiala si Guvernul Romaniei).
Tip proiect: 5D, Cod CNCSU: 39/1998.
- 9) Simulator cuantic pentru dispozitive semiconductoare nanometrice,
Proiect CEEEX – QUANET (2005-2008).
- 10) Campuri cuantice si solutii exacte ale ecuatiilor Einstein cu aplicatii in astrofizica si cosmologie. (Director Grant)
Grant tip A, COD CNCSIS 1160/2006-2008.
- 11) Dinamica unitara a campurilor cuantice si de meso-scala
Grant tip A, COD CNCSIS 1433/2007.
- 12) Platforma integrata pentru studii avansate in nanotehnologii moleculare (AMON),
Proiect CNCSIS tip Platforme de cercetare (2006-2008).
- 13) Dezvoltarea de noi concepte, tehnici si abilitati bazate pe metode sinergice de evaluare neinvaziva a materialelor noi si avansate, a materialelor micro si nanostructurate, estimari de ciclu de viata a structurilor realizate de acestea (SINERMAT)
Proiect CEEEX – SINERMAT (2005-2008).
- 14) Mathieu and Heun functions in quantum field dynamics (MHFQFD).
Grant PN-III-P4-ID-PCE-2016-0131 (2017-2019)

I. Articole publicate în reviste cotate ISI

1. **U(1) Gauge Theory for Charged Bosonic Fields on $R \times S^3$ Topology**
C. Dariescu and M.A. Dariescu
Foundations of Physics, **21**, No. 11, p. 1323-1327 (1991).
2. **U(1) Gauge Theory of the Quantum Hall Effect**
C. Dariescu and M.A. Dariescu
Foundations of Physics, **21**, No. 11, p. 1329-1333 (1991).
3. **The SU(2) x U(1) Gauge Theory of Bosonic and Fermionic Fields in $S^3 \times R$ Space-Time**
C. Dariescu and M.A. Dariescu
Foundations of Physics, **24**, No. 11, p. 1577-1582 (1994).
4. **Gauge Theory of Fermions on $S^3 \times R$ Spacetime**
M.A. Dariescu, C. Dariescu and I. Gottlieb
Foundations of Physics, **25**, No. 6, p. 957-961 (1995).
5. **Fermions in a Kerr-Newman Spacetime**
M.A. Dariescu, C. Dariescu and I. Gottlieb
Foundations of Physics, **25**, No. 10, p. 1523-1528 (1995).
6. **A Special Lagrange Metric in Particle Mechanics**
M. Agop, C. Dariescu, M.A. Dariescu and D. Tatomir
Il Nuovo Cimento, **110B**, No. 4, p. 371-375 (1995).
7. **Perturbative QCD Estimation of the $B \rightarrow K^* + \gamma$ Branching Ratio**
M.A. Dariescu and C. Dariescu
Physics Letters B, **367**, No. 1-4, p. 349-352 (1996).
8. **Perturbative QCD analyses of the nonleptonic B meson decays**
C. Dariescu and M.A. Dariescu
Physics Letters B, **378**, No. 1-4, p.323-328 (1996).
9. **Planary Symmetric Static Worlds with Massless Scalar Sources**
C. Dariescu
Foundations of Physics, **26**, No.8, p. 1069-1080 (1996).
10. **Quantizing de Sitter Spacetime in Heisenberg Picture**
C. Dariescu, S. Hamamoto and M.A. Dariescu
Progress of Theoretical Physics, **95**, No.6, p. 1199-1210 (1996).
11. **A Heavy-to-heavy Approach of $B \rightarrow K^* \gamma$ via Perturbative QCD**
C. Dariescu and M.A. Dariescu
Physics Letters B, **398**, No. 4, p. 361-364 (1997).
12. **Non-Inertial First Order Transition Amplitude for $1/2$ - Spin Fermions in AlmostUniformly Accelerated Frames**
C. Dariescu and M.A. Dariescu
Il Nuovo Cimento, **113B**, No. 2, p. 207-212 (1998).
13. **Zero Energy Modes of Massless Fermions in $S^3 \times R$ Spacetime**
C. Dariescu and M.A. Dariescu
Foundations of Physics, **28**, No. 8, p. 1393-1396 (1998).
14. **Rotationally Symmetric Massless Modes in Closed Robertson-Walker Universe**
C. Dariescu and M.A. Dariescu
Foundations of Physics Letters, **12**, No. 3, p. 267-279 (1999).
15. **A Maxwell Field Equations Class of Exact Solutions on Matter Dominated Spatially Closed Friedman-Robertson-Walker Universe**
M.A. Dariescu and C. Dariescu.
Foundations of Physics Letters, **12**, No. 4, p. 383-391 (1999).
16. **Non-Leptonic B Meson Decays using Perturbative QCD**
M.A. Dariescu and C. Dariescu
Australian Journal of Physics, **52**, No. 6, p. 949-954 (1999).
17. **Large Scale Pathology of Universes with VII₀ x VIII Isometries**
C. Dariescu and M.A. Dariescu.
Foundations of Physics Letters, **13**, No.4, p. 147-166, (2000).
18. **Magnetic Fields in Spaces with VII₀ x VIII Isometries**
C. Dariescu and M.A. Dariescu
Australian Journal of Physics, **53**, No. 3, p. 345-353 (2000).
19. **Wess-Zumino Currents on $S^3 \times R$ Spacetime**
M.A. Dariescu and C. Dariescu
Foundations of Physics Letters, **15**, No. 1, p. 85-94 (2001).
20. **Large Scale Pathology and Gravitomagnetic Resonances in Static VII₀ x VIII Spacetimes with Mixed Matter-Sources**
C. Dariescu and M.A. Dariescu
International Journal of Modern Physics A, **16**, No. 22, p. 3707-3716 (2001).
21. **Quantum Flux-based Resonances in Solitonic Vortices**
M.A. Dariescu and C. Dariescu
Chaos, Solitons and Fractals, **13**, No. 9, p. 1851-1855 (2002).
22. **SU(N) Supersymmetry on $S^3 \times R$ Spacetime**
M.A. Dariescu and C. Dariescu
Foundations of Physics Letters, **15**, No. 3, p. 277-286 (2002).

23. **First-Order Perturbative Approach to Charged Boson Stars**
M.A. Dariescu and C. Dariescu
 Physics Letters B, **548**, Nos. 1-2, p. 24-28 (2002).
24. **Transition Rates in Charged Boson Nebulae**
C. Dariescu and M.A. Dariescu
 Physics Letters B, **566**, Nos. 1-2, p. 19-26 (2003).
25. **Vacuum Electromagnetic Modes in Friedman-Robertson-Walker Universe**
C. Dariescu and M.A. Dariescu
 International Journal of Modern Physics A, **18**, No. 31, p. 5725-5732 (2003).
26. **A Lagrangian approach to the theory of gravito-magnetofluid systems**
C. Dariescu and I. Mercheş
 Physics Letters A, **322**, Nos. 3-4, p. 231-238 (2004).
27. **Higgs-anti-de Sitter Spacetime Bubbles from Spontaneous Z_2 -Violation at Electroweak Symmetry Breaking Scale**
C. Dariescu
 International Journal of Modern Physics D, **13**, No. 4, p. 641-657 (2004).
28. **Alternative Approach to $B^0 K$ to K^0 Branching Ratio Calculation**
M. A. Dariescu and C. Dariescu
 Eur. Phys. J. C, **36**, No. 2, p. 215-220 (2004).
29. **CP Violating SUSY effects in penguin dominated modes $B \rightarrow K \Phi$ and $B \rightarrow K \Phi^*$**
C. Dariescu, M.A. Dariescu, N.G. Deshpande and D.K. Ghosh
 Phys. Rev. **D69**:112003 (2004).
30. **Quantized Planary Dynamics in Orthogonal Magneto-electrostatic Fields**
M.A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **23**, No. 3, p. 1005-1011 (2005).
31. **Transition and Regeneration Rates in Charged Boson Stars via Perturbative Calculations**
C. Dariescu and M.A. Dariescu
 International Journal of Modern Physics A, **20**, No. 11, p. 2326-2330 (2005).
32. **Scalar and Electromagnetic Configurations in $k=1$ Friedmann-Robertson-Walker Universes**
M.A. Dariescu and C. Dariescu
 International Journal of Modern Physics A, **20**, No. 11, p. 2510-2514 (2005).
33. **Topological quantum dynamics of charged bosons**
M.A. Dariescu, C. Dariescu and G. Murariu
 Chaos, Solitons and Fractals, **28**, No. 1, p. 1-7 (2006).
34. **Gravitoelectromagnetically induced transitions in charged boson nebulae**
M. A. Dariescu, C. Dariescu and G. Murariu
 Europhysics Letters, **74**, No. 6, p. 978-984 (2006).
35. **TE-Compatible Maxwell fields in spatially closed Friedman-Robertson-Walker Universe**
C. Dariescu and M. A. Dariescu
 Chaos, Solitons and Fractals, **32**, No. 1, p. 8-14 (2007).
36. **Finite temperature analysis of quantum Hall-type behavior of charged bosons**
M. A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **33**, No.3, p. 776-781 (2007).
37. **The Mesoscopic Nonlinear Electro-Quantum Origin of the Langmuir Law**
C. Dariescu and M. A. Dariescu
 Chaos, Solitons and Fractals, **34**, No. 3, p. 955-965 (2007).
38. **TE Modes in Einstein's Universe**
C. Dariescu, M. A. Dariescu and G. Murariu
 Chaos, Solitons and Fractals, **34**, No. 4, p. 1030-1036 (2007).
39. **Persistent currents and critical magnetic field in planar dynamics of charged bosons**
M. A. Dariescu and C. Dariescu
 J. Phys.: Condens Matter, **19**, No. 25 (2007) 256203.
40. **From Nucleation to Inflation—A Better Timing**
C. Dariescu and M.A. Dariescu
 International Journal of Nonlinear Science and Numerical Simulation, **9**, No. 1, p. 1-8 (2008).
41. **MAPLE Routines for Bosons on Curved Manifolds**
G. Murariu, C. Dariescu, M.A. Dariescu
 Rom. J. of Physics, **53**, No. 1-2, p. 99-108 (2008).
42. **SO(3,1)-Invariant Approach to Dipole Radiation**
C. Dariescu and M.A. Dariescu
 International J. of Theoretical Physics, **47**, No. 10, p. 2523-2532(2008).
43. **Semiclassical Analytic Estimation of Charged Boson Nebulae Mass and the Gravitationally Radiated Flux**
C. Dariescu and M.A. Dariescu
 Astroparticle Physics, **29**, No. 5, p. 331-335 (2008).
44. **A WKB Approach to Quantum Hall States**
M.A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **38**, No. 5, p. 1292-1297 (2008).
45. **Fermions on Spacetimes of Spatially Closed Hypersurfaces**
M.A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **39**, No. 5, p. 2522-2529 (2009).
46. **Coherently Perturbed Milne Universe**
C. Dariescu and M.A. Dariescu
 Chaos, Solitons and Fractals, **40**, No. 5, p. 2294-2304 (2009).

47. **The Axially Symmetric p-Modes of Maxwell Radiation in Milne Spacetime**
C. Dariescu and M.A. Dariescu
Astroparticle Physics, **31**, No. 1, p. 46-51 (2009).
48. **Vertical Dipole Radiation in Milne Universe**
C. Dariescu and M. A. Dariescu
International Journal of Modern Physics A, **24**, No. 8-9, p. 1533-1536 (2009).
49. **Quantum Thermodynamics of Massless Bosons in Universes with VII₀ x VIII Isometries**
M.A. Dariescu, C. Dariescu and A. C. Pirghie
International Journal of Modern Physics A, **24**, No. 8-9, p. 1574-1577 (2009).
50. **Mass Spectrum in 5D Warped Einstein Universe and El Naschie's Quantum Golden Field Theory**
M. A. Dariescu, C. Dariescu and A. C. Pirghie
Chaos, Solitons and Fractals, **42**, No. 1, p. 247-252 (2009).
51. **Natural Brane-Confinement from Massive Z₂-Spontaneously Broken Kaluza-Klein Excitations in the Bulk**
M.A. Dariescu, C. Dariescu and C. Romero
Central European Physical Journal, **7**, No. 4, p. 690-695 (2009).
52. **Thermodynamics of Bosons in an Universe with Global Pathology**
M. A. Dariescu, C. Dariescu and A. C. Pirghie
Romanian Reports in Physics, **61**, No. 3, p. 417-426 (2009).
53. **Boson Nebulae Charge**
C. Dariescu and M. A. Dariescu
Chinese Physics Letters, **27**, No. 1, 011101 (2010).
54. **Hawking-de Sitter Thermalization of Quasi-Minkowskian Massless Scalaron Production, Energy Density Content and Back-Reaction**
A.C. Pirghie, C. Dariescu and M. A. Dariescu
International J. of Theoretical Physics, **49**, No. 1, p. 98-109 (2010).
55. **Software approaching of quantized planary dynamics of charged bosons**
G. Murariu, A. M. Dariescu and C. Dariescu
JOAM, **12**, No. 4, p. 927-932 (2010).
56. **5-Dimensional Toy Model for Particle Confinement in Spatially-Warped Einstein Universe**
M.A. Dariescu and C. Dariescu
Modern Physics Letters A, **25**, No. 24, p. 2051-2063 (2010).
57. **Robertson-Walker Branes with Massless Scalars and Cosmological Term**
M. A. Dariescu and C. Dariescu
Astroparticle Physics, **34**, No. 2, p. 116-120 (2010).
58. **Allowed Mass Spectrum for Scalars on Einstein Branes in Five Dimensions**
M. A. Dariescu, C. Dariescu and M. Răuț
Rom. J. of Physics, **55**, No. 9-10, p. 970-978 (2010).
59. **Charged black strings with arbitrary tension in six dimensions**
C. Stelea, C. Dariescu and M. A. Dariescu
Rom. J. of Physics, **55**, No. 9-10, p. 1131-1140 (2010).
60. **Charged Scalars in Transient Stellar Electromagnetic Fields**
M.A. Dariescu, C. Dariescu and O. Buhucianu
Chinese Physics Letters, **28**, No. 1, 010303 (2011).
61. **A Toy Model for Scalars in Transient Magnetic Fields**
C. Dariescu and M. A. Dariescu
Modern Physics Letters A, **26**, No. 17 p. 1245-1255 (2011).
62. **Static charged double-black rings in five dimensions**
C. Stelea, C. Dariescu and M. A. Dariescu
Phys. Rev. D **84**, No. 4, 044009, 7 pgs. (2011).
63. **B meson radiative decay within MSSM**
M.A. Dariescu and C. Dariescu
Rom. J. of Physics, **56**, No. 5-6, p. 644-653 (2011).
64. **Chiral Electrons in Static Fields at Finite Temperature**
M. A. Dariescu, O. Buhucianu and I. Astefanoaei
Rom. J. of Physics, **56**, No. 9-10, p. 1043-1052 (2011).
65. **Chiral Fermions Conductivity in Graphene-Like Samples Subjected to Orthogonal Fields**
C. Dariescu and M. A. Dariescu
Chinese Physics Letters, **29**, No.1, 010304 (2012).
66. **Relativistic Bosons in Time-Harmonic Electric Fields**
O. Buhucianu, M. A. Dariescu and C. Dariescu
International J. of Theoretical Physics, **51**, No. 2, p. 526-535 (2012).
67. **Approximative Analytic Study of Fermions in Magnetar's Crust; Ultra-relativistic Plane Waves, Heun and Mathieu Solutions and Beyond**
M. A. Dariescu and C. Dariescu
Astrophysics and Space Science, **341**, No. 2, 429-435 (2012).
68. **Fermions in Magnetar's Crust in terms of Heun Double Confluent Functions**
C.Dariescu and M. A. Dariescu
Modern Physics Letters A, **27**, No. 32, 1250184 (2012).
69. **Charged black holes on the Taub-bolt instanton**
C. Stelea, C. Dariescu and M. A. Dariescu
Phys. Rev. D, **87**, No. 2, 024039 (2013).
70. **Quantum treatment and Equation of State of a Friedmann-Robertson-Walker Brane embedded in a five dimensional fluid bulk**
M. A. Dariescu and C. Dariescu
Astrophysics and Space Science, **344**, No. 2, p. 529-535 (2013).

71. **The Quantum Treatment of the 5D-Warped Friedmann-Robertson-Walker Universe in Schrödinger Picture**
C. Dariescu, M. A. Dariescu and C. Crețu
International J. of Theoretical Physics, **52**, No. 4, p. 1345-1353 (2013).
72. **Five-Dimensional Anti-de Sitter Bulk with Oscillating Friedmann-Robertson-Walker Branes**
C. Dariescu and M. A. Dariescu
Astrophysics and Space Science, **346**, No. 1, p. 225-231 (2013).
73. **Parametric Resonant States of Charged Fermions in the Magnetar's Crust**
M. A. Dariescu and C. Dariescu
Astroparticle Physics, **46**, p. 34-39 (2013).
74. **Analytic Study of Fermions in Graphene; Heun Functions and Beyond**
M. A. Dariescu, C. Dariescu, C. Crețu and O. Buhucianu
Rom. J. of Physics, **58**, Nos. 7-8, p. 703-712 (2013).
75. **On the Mathieu equation describing ultra-relativistic fermions evolving in a time-harmonic electric field parallel to a static magnetic induction**
M. A. Dariescu and C. Dariescu
Modern Physics Letters A, **28**, No. 35, 1350157 (13 pages) (2013).
76. **Polynomial solutions of Heun equation describing fermions in graphene**
M. A. Dariescu and C. Dariescu
International J. of Modern Physics B, **27**, No. 32, 1350190 (10 pages) (2013).
77. **An Exact Class of Bulk Field Potentials onto the 5D-Warp of de Sitter Spacetime**
M. A. Dariescu and C. Dariescu
International J. of Theoretical Physics, **53**, No. 9, p. 3239-3245 (2014).
78. **Scalar particles mass spectrum and localization on FRW branes embedded in a 5D de Sitter bulk**
M. A. Dariescu and C. Dariescu
Central European Physical Journal, **12**, No. 7, p. 453-459 (2014).
79. **Stationary Solutions to Kompaneets Equation for Relativistic Processes in Astrophysical Objects**
M. A. Dariescu, D. Mihu and C. Dariescu
Rom. J. of Physics, **59**, Nos. 3-4, p. 224-232 (2014).
80. **Exact Einstein-Gordon Phantoms and Their Potentials in the 5D Bulk of de Sitter Worlds**
A. Bodnărescu, M. A. Dariescu and C. Dariescu
Rom. J. of Physics, **59**, Nos. 7-8, p. 686-698 (2014).
81. **From a five dimensional warped Friedmann--Robertson--Walker Universe to the Weyl Integrable Spacetime**
M. A. Dariescu and C. Dariescu
International J. of Theoretical Physics, **54**, No. 7, p. 2446-2452 (2015)
82. **Heun functions describing fermions evolving in parallel electric and magnetic fields**
M. A. Dariescu and C. Dariescu
Chinese Physics Letters, **32**, No. 7, 071101 (2015).
83. **Tunneling of Relativistic Bosons Induced by Magnetic Fields in Magnetar's Crust**
M. A. Dariescu, C. Dariescu and D.A. Mihu
Chinese Physics Letters, **32**, No. 10, 101101 (2015).
84. **Scalar Bosons evolving in an asymptotically AdS₅ bulk with AdS-branes everywhere**
C. Dariescu and M. A. Dariescu
International J. of Theoretical Physics, **54**, No. 10, p. 3788-3798 (2015).
85. **Quantum Analysis of k=-1 Robertson-Walker Universe**
C. Dariescu and M. A. Dariescu
Foundations of Physics, **45**, No. 11, p. 1495-1513 (2015).
86. **The SO(3,1)-gauge invariant approach to fermions on Rindler spacetime**
C. Dariescu and M. A. Dariescu
Chinese Physics Letters, **33**, No. 2, 020201 (2016).
87. **The AdS_s Warp of Spatially Hyperbolic Universes, Spinless Modes and Spectra and the corresponding Wheeler-DeWitt Schrodinger-like Equation**
C. Dariescu, M. A. Dariescu and A. Bodnărescu
International J. of Theoretical Physics, **55**, No. 2, p. 1116-1127 (2016).
88. **First-order transitions induced by periodic magnetic induction in Magnetar's crust**
C. Dariescu and M. A. Dariescu
Romanian Reports in Physics, **68**, No. 1, p. 41-55 (2016).
89. **Magnetic Fields of Quantum Origin in Magnetars' Crust**
M. A. Dariescu, C. Dariescu and D.A. Mihu
PROCEEDINGS OF THE ROMANIAN ACADEMY, Series A, **17**, No. 2, p. 126-132 (2016).
90. **Spatially open Friedmann-Robertson-Walker Universe fueled with interacting sources**
M. A. Dariescu and C. Dariescu
Astrophysics and Space Science, **361**, No. 6, 195 (7 pages) (2016).
91. **Large Spatially-hyperbolic Friedmann--Robertson--Walker Universe with potentially broken Z₂-symmetry**
C. Dariescu, A. Bodnărescu and M. A. Dariescu
International J. of Theoretical Physics, **55**, No. 9, p. 4109-4123 (2016).
92. **Quantum cosmology on (k = -1)-Friedmann Robertson Walker Universe evolving from stiff matter era to the dust dominated one**
M. A. Dariescu and C. Dariescu
Modern Physics Letters A, **32**, No. 1, 1750003 (14 pages)(2017).
93. **Spatially-Flat Robertson-Walker Models with Combined Λ CDM and Stiff Matter Sources and the Corresponding Thermodynamics**
M. A. Dariescu, D.A. Mihu and C. Dariescu
Rom. J. of Physics, **62**, Nos. 1-2, 101 (2017).
94. **Mathieu functions for fermions generated in magnetar's corona**
M. A. Dariescu and C. Dariescu
Modern Physics Letters A, **32**, No. 32, 1750174 (13 pages) (2017).

95. **The $SO(3,1) \times U(1)$ -gauge invariant Approach to Charged Bosons in Relativistic Magnetars**
C. Dariescu, M.A. Dariescu and C. Stelea
 General Relativity and Gravitation, **49**, No. 12, 153 (2017).
96. **Mathieu and Heun solutions to the Wheeler--De Witt Equation for hyperbolic Universes**
M. A. Dariescu and C.Dariescu
 International J. of Theoretical Physics, **57**, No. 3, p. 652–663 (2018).
97. **Coherent Planar Symmetric Spacetimes Generated by Progressive Waves of Nambu-Goldstone Bosons**
C. Dariescu and M.A. Dariescu
 International J. of Theoretical Physics, **57**, No. 8, p. 2280–2292 (2018)
98. **Heun functions describing bosons and fermions on Melvin's spacetime**
Marina--Aura Dariescu and Ciprian Dariescu
 Advances in High Energy Physics, Volume 2018, Article ID 1953586, 7 pages (<https://doi.org/10.1155/2018/1953586>)
99. **Magnetized anisotropic stars**
C. Stelea, M. A. Dariescu and C. Dariescu
 Phys. Rev. D, **97**, No. 10, 104059 (2018).
100. **The $SO(3,1) \times U(1)$ -gauge covariant Dirac equation in relativistic magnetars**
M. A. Dariescu, C. Dariescu and C. Stelea
 General Relativity and Gravitation, **50**, No. 10, 126 (2018)
101. **New bound of the mass-to-radius ratio for electrically charged stars**
C. Stelea, M. A. Dariescu and C. Dariescu
 Phys. Rev. D, **98**, No. 12, 124022 (2018)
102. **Heun-type solutions of the Klein-Gordon and Dirac equations in the Garfinkle-Horowitz-Strominger dilaton black hole background**
M. A. Dariescu, C. Dariescu and C. Stelea
 Advances in High Energy Physics, Volume 2019, Article ID 5769564, 8 pages (<https://doi.org/10.1155/2019/5769564>) (2019)
103. **Exact stationary solutions to a general form of Kompaneets Equation**
M. A. Dariescu, C. Dariescu and Ghe. Amanoloaei
 Astrophysics (Astrofizika), **62**, No. 3, p. 451-462 (2019)
104. **Heun solutions for Dirac fermions in Black Strings Backgrounds**
M. A. Dariescu, C. Dariescu and C. Stelea
 Proceedings of the Romanian Academy, Series A, **21**, No. 2, p. 131–136 (2020)
105. **A new solutions generating technique to generalized Kompaneets equation and the corresponding Heun functions**
M. A. Dariescu and C. Dariescu
 Astrophysics (Astrofizika), **63**, No. 2, p. 335-343 (2020)
106. **Massless fermions on static general prolate metrics and their Heun solutions**
M. A. Dariescu, C. Dariescu and C. Stelea
 Modern Physics Letters A, **35**, No. 7, 2050036 (2020)
107. **The prolate electrically-magnetized Schwarzschild solution with applications to ultra-relativistic magnetars**
M. A. Dariescu and C. Dariescu
 Eur. Phys. J. Plus, **135**, No. 3, 295 (11 pages) (2020).
108. **Reissner–Nordstrom black holes with quintessence**
M. A. Dariescu and C. Dariescu
 Eur. Phys. J. Plus, **136**, No. 4, 375 (14 pages) (2021).
109. **Dirac Equation on the Kerr–Newman Spacetime and Heun Functions**
C. Dariescu, M.A. Dariescu and C. Stelea
 Advances in High Energy Physics, Volume 2021, Article ID 5512735, 10 pages (<https://doi.org/10.1155/2021/5512735>) (2021)
110. **Solutions for massless bosons in the Mannheim-Kazanas space-time**
M. A. Dariescu and C. Dariescu
 Astrophysics (Astrofizika), **64**, No. 2, p. 283-294 (2021)
111. **On the Mannheim–Kazanas solution**
M. A. Dariescu and C. Dariescu
 Astrophysics and Space Science, **366**, 44 (6 pgs) (2021).
112. **Particles behavior close to black holes immersed in dark matter**
M. A. Dariescu and C. Dariescu
 Eur. Phys. J. Plus, **137**, No. 2, 238 (10 pgs) (2022)
113. **Probing the Ellis-Bronnikov wormhole geometry with a scalar field: Clouds, waves and Q-balls**
J. L. Blázquez-Salcedo, M. A. Dariescu, C. Dariescu, E. Radu, C. Stelea
 Phys. Lett. B, **827**, No. 4, 136993 (8 pgs) (2022)
114. **Relativistic particles moving around galaxy's center**
C. Dariescu and M. A. Dariescu
 Proceedings of the Romanian Academy, Series A, **23**, No. 1, p. 39-46 (2022)
115. **The Kiselev solution in power-Maxwell electrodynamics**
M. A. Dariescu, C. Dariescu, V. Lungu, C. Stelea
 Phys. Rev. D, **106**, No. 6, 064017 (2022)
116. **Currents of quantum origin in uniform accelerated frames**
C. Dariescu and A. I. Dariescu
 Proceedings of the Romanian Academy, Series A, **24**, No. 2, pp. 135–142 (2023)
117. **Charging axially symmetric interior solutions in general relativity**
C. Stelea, M. A. Dariescu and C. Dariescu
 Phys. Rev. D, **108**, No. 8, 084034 (2023)
118. **Charged black holes with dark halos**
C. Stelea, M. A. Dariescu and C. Dariescu

- Phys. Lett. B, **847**, 138275 (6 pgs) (2023)
119. **Charged particles in the background of the Kiselev solution in power-Maxwell electrodynamics**
M. A. Dariescu, V. Lungu, C. Dariescu, C. Stelea
 Phys. Rev. D, **109**, No. 1, 024021 (2024)
120. **Dirac Fermions around Schwarzschild black holes with quintessence**
M. A. Dariescu, C. Dariescu
 General Relativity and Gravitation, **56**, 12 (2024)
121. **Charged particles moving around a spherically symmetric dilatonic black hole**
V. Lungu, M. A. Dariescu, C. Dariescu, C. Stelea
 Advances in High Energy Physics, Volume **2024**, Article ID 6666609, 13 pages (2024)

II. Articole publicate în reviste din străinătate necotate ISI (cu referenți)

- 1) **The Use of Six-Vectors in the Theory of Special Relativity**
I. Mercheș and C. Dariescu
 Acta Physica Hungarica, **70**, No. 1-2, p. 63-70 (1991).
- 2) **Unified Gravitation and Gauge Theory on $R \times S^3$ Manifold**
G. Zet, C. Dariescu and M. A. Dariescu
 TENSOR, N.S., **52**, p. 14-26 (1993).
- 3) **U(1) Gauge Invariant in $S^3 \times R$ Geometry**
M. A. Dariescu and C. Dariescu
 TENSOR, N.S., **53**, p. 162-168 (1993).
- 4) **The Tetradic Formulation of the Variational Principle in U4 - Theory and the Complet Set of the Field Equations.**
Part I: The Variation of the U4 - Action with respect to the Tetradic Fields. The Field Equations of the U4 - Gravitational Sector
C. Dariescu and I. Gottlieb
 TENSOR, N.S., **54**, p. 35-45 (1993).
- 5) **The Tetradic Formulation of the Variational Principle in U4 - Theory and the Complet Set of the Field Equations.**
Part II: The Variation of the U4 - Action with respect to the Contortion Field, the U4 - System of Field Equations
C. Dariescu and I. Gottlieb
 TENSOR, N.S., **54**, p. 46-59 (1993).
- 6) **Up To the Second Order Spin Contributions of the Electrostatic Field, the Reissner-Nordstrom Solution Represents an U4 - Spacetime**
C. Dariescu and I. Gottlieb
 TENSOR, N.S., **54**, p. 60-70 (1993).
- 7) **On the Quantization of the Complex Scalar Fields in $S^3 \times R$ Space-Time**
C. Dariescu and M. A. Dariescu
 "Lagrange and Finsler Geometry", P.L. Antonelli and R. Miron (Eds.), (Kluwer Academic Publishers, the Netherlands), p. 233-239 (1996).
- 8) **The SO(3,1) - Gauge Formulation of the Invariance Properties and Conservation Laws in U4 - Field Theory**
C. Dariescu, M. A. Dariescu and I. Gottlieb
 TENSOR N.S., **57**, No. 2, p. 204-211 (1996).
- 9) **Electromagnetic Radiation Field in a Static $S^3 \times R$ Universe**
C. Dariescu and M. A. Dariescu
 TENSOR N.S., **58**, No. 1, p. 108-119 (1997).
- 10) **The Large Scale Pathology in an Exact Class of Solutions with cosh (iz)**
I. Aștefănoaei, C. Dariescu and M. A. Dariescu
 Algebras, Groups and Geometries, **16**, No. 1, p. 63-72 (1999)
- 11) **Photons in Einstein's Universe**
M. A. Dariescu, C. Dariescu
 Journal of Dynamical Systems and Geometric Theories, **4**, No. 1, p. 47-59 (2006).

III. Articole publicate în reviste ale Academiei și Analele Universităților

- 1) **Ecuatiile Newman-Penrose**
Gh. Maftai și C. Dariescu
 Studii și Cercetări de Fizica, Academia Romana, **38**, No. 10, p. 966-978 (1986).
- 2) **Hidrodinamica și Electrodinamica Invariantivă**
M. Agop, M. A. Dariescu și C. Dariescu
 Memoriile Secțiilor științifice, Academia Romana, Seria IV, **XII**, No. 1, p. 131-144 (1989).
- 3) **The Cosmological Solution of a Homogeneous, Isotropic, Ideal Fluid at Local Rest**
C. Dariescu, M. A. Dariescu și M. Agop
 Studii și Cercetări de Fizica, Academia Romana, **42**, No. 4, p. 323-327 (1990).
- 4) **Exact Solutions for Einstein's Equations for a Spherical Metric Using Newman-Penrose Formalism**
C. Dariescu, M. A. Dariescu și M. Agop
 Studii și Cercetări de Fizica, Academia Romana, **42**, No. 4, p. 329-333 (1990).
- 5) **Metrica Plebanski ca Solutie Exactă a Ecuatiilor Einstein-Maxwell**
C. Dariescu, M. Agop și M. A. Dariescu
 Studii și Cercetări de Fizica, Academia Romana, **42**, No. 6, p. 523-528 (1990).
- 6) **Metrici Statice cu Simetrie Cilindrică, Solutie Exactă a Ecuatiilor de Camp Einstein-Maxwell**
C. Dariescu, M. A. Dariescu și M. Agop
 Studii și Cercetări de Fizica, Academia Romana, **42**, No. 6, p. 529-535 (1990).
- 7) **Des Metriques Spheriques pour les Varietes Lagrange**
M. Agop, C. Dariescu și M. A. Dariescu

- Analele stiintifice ale Universitatii "Al.I. Cuza", Iasi, **XXXVI,XXXVII**, s. I. b., Fizica, p. 129-131 (1990-1991).
- 8) **Asupra Regimului Liniar de Contorsiune al Campului Electrostatic Cuplat Minimal la Spatiu-Timpul Riemann-Cartan**
C. Dariescu, M. A. Dariescu și M. Agop
Memoriile Sectiilor stiintifice, Academia Romana, Seria IV, **XV**, Nr. 1, p. 109-124 (1992).
 - 9) **Modele Latticeale in Formalismul Integralei Functionale a Teoriei Cuantice a Campurilor**
M. A. Dariescu, C. Dariescu și M. Agop
Memoriile Sectiilor stiintifice, Academia Romana, Seria IV, **XV**, Nr. 1, p. 125-131 (1992).
 - 10) **Exact Solutions of Einstein-Maxwell Equations on $S^1 \times S^2 \times R$ Topology**
C. Dariescu
Analele stiintifice ale Universitatii "Al.I. Cuza", Iasi, **XXXVIII-XXXIX**, (Fizica Solidelor), p. 412-417 (1992-1993).
 - 11) **Exact Solutions of Einstein-Maxwell Equations for a Twisting Magnetic Field**
C. Dariescu
Analele stiintifice ale Universitatii "Al.I. Cuza", Iasi, **XXXVIII-XXXIX**, (Fizica Solidelor), p. 418-424 (1992-1993).
 - 12) **The Derivation of the Einstein Field Equations and the Conservative Tensor of the Matter using a Variational Method respected to the Cartan's Tetradic Fields**
C. Dariescu and M. A. Dariescu
Analele stiintifice ale Universitatii "Al.I. Cuza", Iasi, **XXXVIII-XXXIX**, (Fizica Solidelor), p. 425-429 (1992-1993).
 - 13) **Spontaneously Broken Gauge Symmetry and the "Hall Resistance"**
M. A. Dariescu and C. Dariescu
Analele Universitatii Timisoara, Seria Stiinte Fizice, **XXX**, p. 71-75 (1993).
 - 14) **The Ultrarelativistic Regime of Quantum Oscillator with Applications to Confinement**
C. Dariescu
Analele Universitatii Timisoara, Seria Stiinte Fizice, **XXX**, p. 77-82 (1993).
 - 15) **No Charmed B Decay in $|V_{ub}/V_{cb}|$ Determination**
M. A. Dariescu and C. Dariescu
Romanian Journal of Physics, **39**, No. 7-8, p. 543-547 (1994).
 - 16) **Form-Factors Decompositions in Heavy Meson Decays**
M. A. Dariescu and C. Dariescu
Romanian Journal of Physics, **40**, No. 2-3, p. 217-222 (1995).
 - 17) **Lie Groups Method in Friedmann-Robertson-Walker Cosmology**
C. Dariescu and M. A. Dariescu
Romanian Astronomical Journal, **V**, No. 1, p. 55-59 (1995).
 - 18) **Electromagnetic Field in $S^3 \times R$ Universe**
M. A. Dariescu and C. Dariescu
Romanian Astronomical Journal, **V**, No. 1, p. 61-64 (1995).
 - 19) **Gauge Theory on $S^2 \times R \times R$ Manifold**
M. A. Dariescu, C. Dariescu and I. Gottlieb
Romanian Journal of Journal of Physics, **41**, No. 3-4, p. 227-232 (1996).
 - 20) **The Rotationally Symmetric Field in a Static $S^3 \times R$ Universe**
C. Dariescu and M.A. Dariescu
Romanian Journal of Physics, **42**, Nos. 3-4, p. 147-159 (1997).
 - 21) **A Bertotti-Robinson Metric Derivation Based on Minimal Symmetry**
C. Dariescu
Analele Universitatii Timisoara, Seria Stiinte Fizice, **XXXVI**, p. 8-15 (1997).
 - 22) **Spatially Flat Robertson-Walker Cosmology with Mixed Radiation and Thermalized Massless Scalar Field Content**
C. Dariescu and S. Hamamoto
Romanian Astronomical Journal, **VII**, No. 2, p. 121-134 (1997).
 - 23) **Dirac Fields in Curved Spacetime. A Formal Approach**
C. Dariescu and M. A. Dariescu
Romanian Astronomical Journal, **VII**, p. 135-141 (1997).
 - 24) **The Globally Pathologic Properties of an Exact Class of Solutions with $g_{44} = \cos^2(z)$**
M. A. Dariescu, C. Dariescu and Iordana Aștefănoaei
Analele Universitatii Timisoara, Seria stiinte Fizica, **XXXIX**, p. 48-54 (1999).
 - 25) **The globally pathologic properties of a static planary symmetric exact solution**
C. Dariescu, M. A. Dariescu and I. Aștefănoaei
Analele Stiintifice ale Universitatii "Al.I. Cuza", Iasi (S.N.), **XLIII-XLIV**, (Fizica Solidelor-Fizica Teoretica), p. 191-200 (1997-1998).
 - 26) **Gravity, Dirac Field and Computer Algebra Using MAPLE**
G. Murariu, C. Dariescu and M. A. Dariescu
Analele Stiintifice ale Universitatii "Al.I. Cuza", Iasi, **XLIX-L**, (Fizica Starii Condensate), p. 93-101 (2003-2004).
 - 27) **Dirac field equation and computer algebra**
G. Murariu, C. Dariescu and M. A. Dariescu
Bul. Institut Politehnic Iasi, **LI(LV)** (Matematica, mecanica teoretica, fizica), fasc. 1-2, p. 95-100 (2005).
 - 28) **Klein-Gordon field equation**
G. Murariu, C. Dariescu, M. A. Dariescu and N. Țigău
Bul. Institut Politehnic Iasi, **LI(LV)** (Matematica, mecanica teoretica, fizica), fasc. 3-4, p. 83-87 (2005).
 - 29) **Quantum field equations and computer algebra**
G. Murariu, C. Dariescu, M. A. Dariescu,
Analele Univ. Dunarea de Jos, Galati, Matematica, Fizica, Mecanica Teoretica, Fasc. II, *Supplement*, Year **XXIII(XXVIII)** p. 263-270 (2005).
 - 30) **Dirac equation in the Robertson-Walker Spacetime**
G. Murariu, C. Dariescu, M. A. Dariescu,
Analele Univ. Dunarea de Jos, Galati, Matematica, Fizica, Mecanica Teoretica, Fasc. II, *Supplement*, Year **XXIII(XXVIII)** p. 271-276 (2005).
 - 31) **Interacting fields. A complete analytical solution**

- G. Murariu, C. Dariescu, M. A. Dariescu,
Analele Univ. Dunarea de Jos, Galați, Matematica, Fizica, Chimie, Mecanica Teoretica, Fasc. II, *Supplement*, Year **XXIII(XXVIII)**, p. 277-286 (2005).
- 32) **A complete analytical solution in Hoffman spacetime**
G. Murariu, M. A. Dariescu, C. Dariescu
Analele Univ. Dunărea de Jos Galați -Fascicula II – Matematica, Fizica, Mecanica Teoretica, **23**, p. 41-46, (2005).
- 33) **A first order solution on a Cveck Spacetime**
G. Murariu, M. A. Dariescu, C. Dariescu,
Analele Univ. Dunărea de Jos Galați – Fascicula II – Matematica, Fizica, Mecanica Teoretica, **23**, p. 47-52, (2005).
- 34) **A bosonic system in a S-diagonal space-time**
G. Murariu, M. A. Dariescu and C. Dariescu
Analele Stiintifice ale Universitatii “Al.I. Cuza”, Iași, **LI-LII**, (Fizica Starii Condensate), p. 104-112 (2005-2006).
- 35) **First Order Perturbative Approach on Hoffmann Space-time**
G. Murariu, C. Dariescu and M. A. Dariescu
Bul. Institut Politehnic Iași, **LII (LVI)** (Matematica, mecanica teoretica, fizica), fasc. 3-4, p. 53-61 (2006).
- 36) **On the Maxwell equations’ system on curved manifolds**
G. Murariu, M. A. Dariescu, C. Dariescu,
Analele Univ. Dunarea de Jos, Galați, Matematica, Fizica, Mecanica Teoretica, Fasc. II, Year **I (XXX)** p. 31-37 (2007).
- 37) **MAPLE Software Application for Electromagnetic Field Tensor Computation on Curved Manifolds**
G. Murariu, C. Dariescu, M. A. Dariescu,
Analele Univ. Dunarea de Jos, Galați, Matematica, Fizica, Mecanica Teoretica, Fasc. II, Year **II (XXXI)**, p. 88-93 (2008).
- 38) **Field Thermodynamics in Quantum Hall Effect**
A. C. Lohan, M. A. Dariescu and C. Dariescu
Bul. Institut Politehnic Iași, **LIV(LVIII)** (Matematica, mecanica, fizica teoretica), fasc. 1, p. 83-90 (2008).
- 39) **Various Electrostatic Field Configurations on a Globally Pathologic Metric**
A. C. Pirghie, C. Dariescu and M. A. Dariescu
Analele Stiintifice ale Universitatii “Al.I. Cuza”, Iași, **LIII-LIV**, (Fizica Starii Condensate), p. 93-104 (2007-2008).
- 40) **Applied geometry of gauge-invariance to some physically important metrics**
A. C. Pirghie and C. Dariescu
Analele Stiintifice ale Universitatii “Al.I. Cuza”, Iași, **LIII-LIV**, (Fizica Starii Condensate), p. 42-50 (2007-2008).
- 41) **First order solutions for boson fields system equations**
G. Murariu, M. A. Dariescu and C. Dariescu
Bul. Univ. “Politehnica” din Timișoara, Seria MATEMATICA - FIZICA,
Transactions on MATHEMATICS & PHYSICS, **54** (68), fasc. 2, p. 75-78 (2009).
- 42) **Fermions on 5D Warp of Einstein Universe,**
M. A. Dariescu, C. Dariescu, A. C. Pirghie,
Bul. Institut Politehnic Iași, Tom**LV(LIX)** (Matematica, mecanica, fizica teoretica), fasc. 1, p. 45-52 (2009).
- 43) **5D Warped Minkowski Spacetime and the Excitations Mass Spectrum from Scalar in the Bulk with Spontaneous Z2-Violation**
M. A. Dariescu, C. Dariescu, C. Romero
JARP, Vol. **1**, No. 1:011001 (2010).
- 44) **Quantum Tunneling of Bosons in Electro-Magnetic Static Fields**
M. A. Dariescu, C. Dariescu, O. Buhucianu
Bul. Institut Politehnic Iasi, **LVI(LX)** (Matematica, mecanica teoretica, fizica), fasc. 4, p. 105-112 (2010).
- 45) **Bosons generation in strong electric fields via WKB formalism**
M. A. Dariescu, C. Dariescu and O. Buhucianu
Analele Universității de Vest din Timișoara, Seria Fizică, **LV**, p. 6-12 (2011).
- 46) **Graphene-like Fermions in Uniform Magnetic Fields**
O. Buhucianu, M. A. Dariescu, C. Dariescu
Bul. Institut Politehnic Iași, **LVII(LXI)** (Matematica, mecanica teoretica, fizica), fasc. 3, p. 97-106 (2011).
- 47) **An Analytical Approach to the Kompaneets Equation in Highly Magnetized Neutron Stars Magnetosphere**
D. A. Mihu, M. A. Dariescu, C. Dariescu
Bul. Institut Politehnic Iași, **LIX(LXIII)** (Matematica, mecanica teoretica, fizica), fasc. 3, p. 61-66 (2013).

IV. Articole publicate în Volumele unor conferințe internaționale

- 1) **The Analysis of Schwarzschild’s Metric with a Time Dependent Central Mass**
C. Dariescu
GR12 International Conference on General Relativity and Gravitation, Boulder, Colorado, USA, 1989,
Abstract of Contributed Papers, A5:04, p. 267.
- 2) **The System of Einstein-Klein-Gordon Equations**
C. Dariescu
GR12 International Conference on General Relativity and Gravitation, Boulder, Colorado, USA, 1989,
Abstract of Contributed Papers, D4:21, p. 682.
- 3) **The Use of Six-Vectors Formalism in Relativistic Magnetofluid Dynamics**
I. Merches and C. Dariescu
International Conference on Phenomena in Ionized Gases, ICPIG-XX, Pisa, Italy, 1991,
Abstracts of Contributed Papers, C, C/29.
- 4) **Ultrarelativistic Quantum Oscillator with Applications to Confinement**
C. Dariescu
V-th regional Conference on Mathematical Physics, Edirne, Turkey, 1991, Proceedings of Contributed Papers.

- 5) **The $SO(3,1)$ Gauge Formulation of the Invariance Properties and Conservation Laws in U4 - Field Theory**
C. Dariescu
 Colloquium on Differential Geometry, Debrecen, Hungary, 1994, Abstracts of Contributed Papers, p. 9.
- 6) **Lie Algebras Method in Unified Theories**
M.A. Dariescu, C. Dariescu and I. Gottlieb
 International Workshop on Global Analysis, Differential Geometry and Lie Algebras, Thessaloniki, Greece, 1994, Proceedings of the Conference
- 7) **Particular Solutions to Maxwell Equations in $S^3 \times R$ Topology. I. Non-Radiating Transversal Modes**
M.A. Dariescu, C. Dariescu and I. Gottlieb
 GR14 International Conference on General Relativity and Gravitation, Florence, Italy, 1996, Abstracts of Contributed Papers, A.99
- 8) **Particular Solutions to Maxwell Equations in $S^3 \times R$ Topology. II. Complementar Rotationally Symmetric Radiating Modes**
C. Dariescu, M.A. Dariescu and I. Gottlieb
 GR14 International Conference on General Relativity and Gravitation, Florence, Italy, 1996, Abstracts of Contributed Papers, A.100
- 9) **Dirac Fermions in Almost Uniformly Accelerated Frames**
C. Dariescu and M. A. Dariescu
 The Eight Marcel Grossmann Meeting in General Relativity, Jerusalem, Israel, 1997.
Proceedings of the Conference, p. 410-411. Eds. T. Piran and R. Ruffini, World Scientific, Singapore. ISBN 981-02-3793-6.
- 10) **Zero Energy Modes of Massless Fermions in $S^3 \times R$ Spacetime**
M. A. Dariescu and C. Dariescu
 The Eight Marcel Grossmann Meeting in General Relativity, Jerusalem, Israel, 1997.
Proceedings of the Conference, p. 1327-1329. Eds. T. Piran and R. Ruffini, World Scientific, Singapore. ISBN 981-02-3793-6.
- 11) **Supersymmetric Models on $S^3 \times R$ Spacetime**
M.A. Dariescu and C. Dariescu
 International Conference on Theoretical Physics, Paris, France, 2002, Abstracts of Contributed Papers, p. 160.
- 12) **Bosons in Spatially Closed Robertson-Walker Universes**
C. Dariescu and M.A. Dariescu
 International Conference on Theoretical Physics, Paris, France, 2002, Abstracts of Contributed Papers, p. 192.
- 13) **Maximally Symmetric Spacetimes from Z_2 -Violation at Electroweak Scale,**
C. Dariescu
 International Conference on Relativity, ICR-2005, Amravati, India, 2005, Abstracts of Contributed Papers, p. 2.
- 14) **Quantum Transitions among Radially Excited States in Charged Boson Stars**
C. Dariescu, M.A. Dariescu and G. Murariu
 Third International Conference of Young Scientists, Chisinau, Moldova, 2005. Abstracts of Contributed Papers, p. 154.
- 15) **Electromagnetic Radiating Modes in Einstein's Universe**
C. Dariescu, M. A. Dariescu and G. Murariu
 International Symposium "Mathematical Methods in Engineering" , MME06, Cankaya University, Ankara, Turkey, April 2006, CD-Rom Proceedings of the Conference. **ISBN 975-6734-04-3 (8 pgs).**
- 16) **Quantum Hall-type behavior of charged bosons**
M. A. Dariescu, C. Dariescu and G. Murariu
 International Symposium "Mathematical Methods in Engineering" , MME06, Cankaya University, Ankara, Turkey, April 2006, CD-Rom Proceedings of the Conference. **ISBN 975-6734-04-3 (9 pgs).**
- 17) **B Radiative Decay within MSSM.**
C. Dariescu and M. A. Dariescu
 International Conference on Hadron Physics, TROYA07, Middle East Technical University, Canakkale, August 2007.
 CD-Rom Proceedings of the Conference.
- 18) **Improved Factorization Method in Studying B Decays**
M.A. Dariescu and C. Dariescu
 International Conference on Hadron Physics, TROYA07, Middle East Technical University, Canakkale, August 2007,
 CD-Rom Proceedings of the Conference.
- 19) **The Quantum Dynamics of Boson Nebulae Formation**
C. Dariescu and M. A. Dariescu
 4th Aegean Summer School: Black Holes, 17-22 Sept. 2007, Mytilene, Lesvos, Greece.
 CD-Rom Proceedings of the Conference.
- 20) **Vertical Dipole Radiation in Milne Universe**
C. Dariescu and M. A. Dariescu
 International Journal of Modern Physics A, **24**, No. 8-9, **p. 1533-1536** (2009).
 Special Issue: Proceedings of the Seventh Alexander Friedmann International Seminar on Gravitation and Cosmology and Satellite Symposium "60 Years of the Casimir Effect" João Pessoa, Brazil, 30 June-4 July 2008;
 Editors: V. B. Bezerra, V. M. Mostepanenko and C. Romero
- 21) **Quantum Thermodynamics of Massless Bosons in Universes with VII₀ x VIII Isometries**
M.A. Dariescu, C. Dariescu and A. C. Pirghie
 International Journal of Modern Physics A, **24**, No. 8-9, **p. 1574-1577** (2009).
 Special Issue: Proceedings of the Seventh Alexander Friedmann International Seminar on Gravitation and Cosmology and Satellite Symposium "60 Years of the Casimir Effect" João Pessoa, Brazil, 30 June-4 July 2008;
 Editors: V. B. Bezerra, V. M. Mostepanenko and C. Romero
- 22) **Applied geometry of gauge-invariance to some physically important metrics**
A. C. Lohan and C. Dariescu
 International Conference "FUNDAMENTAL AND APPLIED RESEARCH IN PHYSICS" FARPhys – 2007, *Al. I. Cuza* University, Iași, October 2007 (publicata in Anale).
- 23) **5-Dim. Toy Model for Particle Confinement in Spatially-Warped Einstein Universe**

C. Dariescu and M. A. Dariescu

The 5-th Australasian Conference on General Relativity and Gravitation, 16-18 Dec. 2009, University of Canterbury, Christchurch, New Zealand. Abstracts of Contributed Papers.

24) **Analytic Study of Fermions in Graphene; Heun Functions and Beyond**

M. A. Dariescu, O. Buhucianu, C. Dariescu

9th International Conference on Physics of Advanced Materials ICPAM-9, Alexandru Ioan Cuza University of Iasi, Romania, 20-23 September 2012 (<http://home.uaic.ro/~icpam>) Abstracts of Contributed Papers, pg. 95, Oral communication.

25) **The Schrödinger-Poisson heuristic limit of the Klein-Gordon-Maxwell-System and its S-Eigenmode solution for a spherically trapped particle**

C. Dariescu, M. A. Dariescu, C. Crețu

9th International Conference on Physics of Advanced Materials ICPAM-9, Alexandru Ioan Cuza University of Iasi, Romania, 20-23 September 2012. Abstracts of Contributed Papers, pg. 146, Oral communication.

26) **Black Holes on the Taub-Bolt Instanton in 5 Dimensions**

C. Stelea, C. Dariescu and M. A. Dariescu

TIM 12 International Physics Conference, Universitatea de Vest, Timisoara, Nov. 2012 Abstracts of Contributed Papers. Oral communication.

27) **On the Isometry Group for a Class of Planary Symmetric Metrics in Null-coordinate Formulation**

C. Crețu and C. Dariescu

TIM 14 International Physics Conference, Universitatea de Vest, Timisoara, Nov. 2014 Abstracts of Contributed Papers. Oral communication.

28) **Parametric induced instabilities of bosons in magnetar's crust**

M. A. Dariescu, D. A. Mihu and C. Dariescu

International Scientific Conference Mathematical Modeling. Processes and systems. MATHMODEL 2017, 13-16 Dec. 20-17, Borovets, Bulgaria (oral communication). Conf. Proceedings, ISSN 2535-0978, Publisher: SCIENTIFIC TECHNICAL UNION OF MECHANICAL ENGINEERING "INDUSTRY-4.0", pgs. 16-20. International scientific journal "Mathematical Modeling" (Print ISSN 2535-0986, Web ISSN 2603-2929), Issue 3/2017.

29) **Generalized Models Of Anisotropic Magnetars**

C. Stelea, M. A. Dariescu, C. Dariescu

Invited plenary talk in TIM18 Physics Conference, Universitatea de Vest, Timisoara, May 2018 AIP Conference Proceedings **2071 No. 1**, 020002 (2019) (ISBN: 978-0-7354-1799-1) DOI: <https://doi.org/10.1063/1.5090049>

V. **Articole publicate în Volumele conferințelor naționale**

1) **Newman-Penrose Formalism for a Special Reissner-Nordstrom Metric**

C. Dariescu and Gh. Maftei

National Conference Progresses in Physics, Iași, Romania, 1985, Proceedings of Contributed Papers, p. 298.

2) **A Kerr-Newman Metric Analysed in Newman-Penrose Formalism**

C. Dariescu

Conferinta Nationala 175 de Ani de Invatamant Tehnic Superior in Limba Romana, Iași, Romania, 1988, Proceedings of Contributed Papers, p. 42.

3) **On a Metric with Spatial Anisotropy in the g_{44} Component**

C. Dariescu

Conferinta Nationala 175 de Ani de Invatamant Tehnic Superior in Limba Romana, Iași, Romania, 1988, Proceedings of Contributed Papers, p. 48.

4) **The Derivation of Small Perturbation Equations for a General Metric using the Newman-Penrose Formalism**

C. Dariescu and Gh. Maftei

Conferinta Nationala 175 de Ani de Invatamant Tehnic Superior in Limba Romana, Iași, Romania, 1988, Proceedings of Contributed Papers, p. 50.

5) **Exact Solutions of Einsteins Equationson $R \times S^3$ Spacetime**

G. Zet, C. Dariescu and M.A. Dariescu

Einstein 111 Symposium, Bucuresti, Romania, 1990, Abstracts of Contributed Papers, p. 13.

6) **Scalar Field Confinement in Low Dimensions**

C. Dariescu and M.A. Dariescu

The III-rd Conference on Theoretical Physics, General Relativity and Gravitation, Bistrita, Romania, 1993, Proceedings of Contributed Papers, p. 227.

7) **On a Globally Pathologic Class of Exact Solutions with G_6 - Group of Motions**

C. Dariescu, M.A. Dariescu and I. Gottlieb

The VI-th Conference on Theoretical Physics, General Relativity and Gravitation, Bistrita, Romania, 1996, Proceedings of Contributed Papers, p. 322.

8) **Spacetime Bubbles from Z_2 -Violation at Electroweak Scale**

C. Dariescu and M.A. Dariescu

Conferinta Nationala de Fizica, CNF2005, Magurele, Sept. 2005, Abstracts of Contributed Papers (1), p. 9.

9) **Improved Factorization Method in Studying B-meson Decays**

M.A. Dariescu and C. Dariescu

Conferinta Nationala de Fizica, CNF2005, Magurele, Sept. 2005, Abstracts of Contributed Papers (1), p. 9.

10) **System of Interacting Fields. A Complet Analitical Solution in a Lewis-Papapetrou Space-Time**

M.A. Dariescu, C. Dariescu and G. Murariu

Conferinta Nationala de Fizica, CNF2005, Magurele, Sept. 2005, Abstracts of Contributed Papers (2), p. 54.9.

11) **Fermions on 5D Warp of Einstein Universe,**

M. A. Dariescu, C. Dariescu, A. C. Pirghie,

Conferinta Nationala de Fizica Aplicata , NCAP2008, Univ. Tehnica Ghe. Asachi, Iași, Nov. 2008

Abstracts of Contributed Papers.

- 12) **Chiral Electrons in Magnetostatic Fields at Finite Temperature**
M. A. Dariescu, C. Dariescu and I. Aștefănoaei
Conferinta Nationala de Fizica Teoretica, NCTP2010, Iași, Iunie 2010
Abstracts of Contributed Papers O8.
- 13) **Quantum Hall Behavior of Relativistic Bosons**
M. A. Dariescu, O. Buhucianu and C. Dariescu
Conferinta Nationala de Fizica Teoretica, NCTP2010, Iași, Iunie 2010
Abstracts of Contributed Papers P1.
- 14) **Perturbative approaching for boson fields' system in a Lewis-Papapetrou spacetime.**
G. Murariu, M. A. Dariescu, C. Dariescu
AIP Conf. Proc.1262:71-79, 2010.
- 15) **On multi-black hole systems in five dimensional Einstein-Maxwell-dilaton theory**
C. Stelea, C. Dariescu, M. A. Dariescu
Conferinta Nationala de Fizica , CNF2010, Iași, sept. 2010
Abstracts of Contributed Papers.
- 16) **Quantum Tunneling of Bosons in Electro-Magnetic Static Fields**
M. A. Dariescu, C. Dariescu, O. Buhucianu
Conferinta Nationala de Fizica Aplicata , NCAP2010, Univ. Tehnica Ghe. Asachi, Iași, Nov. 2010
Abstracts of Contributed Papers, p.27.
- 17) **Bosons Generation in Strong Electric Fields via WKB Formalism**
M. A. Dariescu, C. Dariescu, O. Buhucianu
Conferinta Nationala de Fizica TIM-10, West University of Timisoara , 25-27 Nov. 2010
Abstracts of Contributed Papers.
- 18) **An analytical approach to the Kompaneets equation in highly magnetized neutron stars magnetosphere**
D. A. Mihu, M. A. Dariescu, C. Dariescu
Conferinta Nationala de Fizica Aplicata , NCAP2013, Univ. Tehnica Ghe. Asachi, Iași, Mai 2013
Abstracts of Contributed Papers, p. 21.

Data: Septembrie 2024

Prof. univ. dr. Ciprian Dariescu