

## INFORMAȚII PERSONALE

## CIPRIAN DARIESCU



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Sexul M | Data nașterii 26/10/1962 | Naționalitatea Romana

## EXPERIENȚA PROFESIONALĂ

**Locul de muncă actual / functia**

Universitatea Alexandru Ioan Cuza din Iasi/ Profesor universitar

**Conducator de Doctorat, specializarea Fizica teoretica**

**Pozitii didactice in invatamant/ Institutia si perioada**

- Profesor de fizică/ Liceele Nr. 2 si 5, Bacau/ 1985-1988,
- Cercetator la Unitatea de Cercetare Tip C, Universitatea Alexandru Ioan Cuza din Iași/1988-1990;
- Asistent universitar/ Universitatea Alexandru Ioan Cuza din Iași/1990-1993;
- Lector universitar/ Universitatea Alexandru Ioan Cuza din Iași /1993--1997;
- Conferențiar universitar/ Universitatea Alexandru Ioan Cuza din Iași /1997-2000,
- Profesor universitar/ Universitatea Alexandru Ioan Cuza din Iași/1999-pana in prezent.
- Conducator de Doctorat, Universitatea Alexandru Ioan Cuza din Iași/ din 2005-pana in prezent.

## EDUCAȚIE ȘI FORMARE

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

Sef de promotie; Bursa de Merit, Media de absolvire 10.

**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;

## COMPETENTE PERSONALE

Limba(i) maternă(e) Romana

Alte limbi străine cunoscute

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
Engleza	F. Bine	F. Bine	F. Bine	F. Bine	F. Bine
Franceza	Bine	Bine	Bine	Bine	Bine

Niveluri: A1/2: Utilizator elementar - B1/2: Utilizator independent - C1/2: Utilizator experimentat  
 Cadrul european comun de referință pentru limbi străine

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

Competențe de comunicare

- Foarte bune competențe de comunicare dobândite ca profesor de fizica în învățământul liceal și universitar,
- organizator de manifestări științifice,
- director de grant de cercetare,
- stagii de Visiting Researcher în universități din străinătate .

Competențe organizaționale/manageriale

**In the Organizer Committee și Scientific Committee la Conferințe internaționale și naționale (selectie)**

First Tah Poe School on Cosmology, Tailanda, aprilie, 2002.  
*International Conference on Relativity, ICR-2005*, Amravati University, Amravati, India, ianuarie, 2005.  
 Conferința națională de Fizică Teoretică, Universitatea Alexandru Ioan Cuza, Iași, Iunie 2010.

Competențe dobândite la locul de muncă

30 de ani de experiență în predare și cercetare.

Competențe informatice

O bună cunoaștere a softurilor utilizate în activitatea de cercetare (Mathematica, Maple etc).

Permis de conducere

Categoria B

## INFORMATII SUPLIMENTARE

**Diploma de onoare** *Știința pentru oameni*, Gala premiilor de excelență *Sunt Iesean, deci European*, Ediția a-II-a, Ianuarie 2008.

Premiul **Constantin Miculescu**, acordat de *Academia Romana*, pentru lucrările publicate în 2011 (în colaborare cu Marina-Aura Dariescu), asupra *Teoriei câmpului gravitațional în modele cu extra-dimensiuni și Moduri cuantice exacte în câmpuri extreme*, Decembrie 2013.

### Domenii de competență:

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

### ACTIVITATE DIDACTICĂ UNIVERSITARĂ:

*Ore de laborator și/sau seminar la disciplinele:*

Mecanica analitică și a mediilor deformabile (Fizică II), Mecanica cuantică (Fizică III), Metode matematice ale fizicii teoretice (Fizică III), Metoda integralei funcționale (Fizică III), Statistica cuantică (Fizică Tehnologică III), Teorii gauge generalizate ale gravitației (Master II), Probleme filosofice în fizică modernă (Filosofie, I), Teoria fenomenelor neliniare (Master I), Metode matematice moderne ale fizicii teoretice (Fizică, III).

*Ore de curs la disciplinele:*

Probleme filosofice moderne în fizică teoretică (Filosofie, I), Metode matematice moderne ale fizicii teoretice (Fizică, III), Mecanica cuantică și fizică statistică (Fizică Tehnologică III), Capitole speciale de fizică teoretică (Fizică Tehnologică III), Mecanica cuantică (Fizică III), Evoluția ideilor fundamentale în fizică (III, curs credit), Utilizarea integralei funcționale în cuantificarea câmpurilor (Fizică III), Teorii gauge generalizate ale gravitației (Master II), Teoria fenomenelor neliniare (Master I),

### Cursuri universitare predate la Masterat:

Capitole Speciale de Mecanica Cuantică (Master I),  
Teorii gauge generalizate ale gravitației (Master II),  
Teoria fenomenelor neliniare (Master I),  
Fundamentele Fizicii Matematice (începând cu anul școlar 2008-2009).  
Modele în astronomie și astrofizică (Master Modelare și Simulare, II)

**Curs predat la Școala Doctorală:** Fizică Teoretică, Capitole speciale de teoria câmpului.

În 1990, am pus bazele laboratorului de mecanică cuantică, F și FT III;

În 2006 am pus bazele laboratorului de astronomie.

### Participări la Manifestări științifice internaționale

1. International Conference on Phenomena in Ionized Gases ICPIG-XX, Pisa, Italia, iulie 1991;
2. Summer School in High Energy Physics and Cosmology, Trieste, Italia, iulie 1991;
3. Visiting la Institutul de Fizică Teoretică al Univ. Fr. Schiller, Jena, Germania, oct. 1991;
4. Fifth Regional Conference on Mathematical Physics, Edirne, Turcia, decembrie 1991;
5. Summer School in High Energy Physics and Cosmology, Trieste, Italia, iulie 1992;
6. International Conference on Differential Geometry and Its Applications. 90-th Anniversary of Akitsugu Kawaguchi's Birth, Tensor Society și Academia Romana, București, august 1992;
7. Colloquium on Differential Geometry, Debrecen, Ungaria, iulie 1994;
8. Visiting la Institutul de Cosmologie al Universității Egee, Izmir, Turcia, august 1994;
9. Workshop on Global Analysis, Differential Geometry and Lie Algebras, Thessaloniki, Grecia, dec. 1994;
10. Hokuriku Domain Particle Physics Group Meeting, Myoko, Japonia, mai 1995;
11. Yukawa International Seminar 1995 "From the Standard Model to Grand Unified Theories", Kyoto, Japonia, august 1995;
12. Finsler Symposium, Nagasaki, Japonia, noiembrie 1995.
13. Visiting la Institutul de Fizică Teoretică al Univ. Fr. Schiller, Jena, Germania, oct. 1996;
14. The Eight Marcel Grossmann Meeting, Jerusalem, Israel, iunie, 1997.

15. Visiting la Institutul de Cosmologie al Universitatii Egee, Izmir, Turcia, sept. 2001.
16. First Aegean Summer School on Cosmology, Karlovassi, Grecia, septembrie, 2001.
17. First Tah Poe School on Cosmology, Pitsanulok, Tailanda, aprilie, 2002.
18. International Conference on Theoretical Physics, Paris, France, iulie, 2002.
19. Sixth Friedmann Seminar on Gravitation and Cosmology, Cargese, France, iulie, 2004.
20. International Conference on Relativity, ICR-2005, Amravati University, India, ianuarie, 2005.
21. Third International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics, Koc Univ. Istanbul, iunie 2005.
22. Third International Conference of Young Scientists, Chisinau, Moldova, noiembrie 2005.
23. International Symposium "Mathematical Methods in Engineering", MME06, Cankaya University, Ankara, Turkey, aprilie 2006.
24. Visiting la Physics Department, La Plata National University, Argentina, 18 iulie – 12 august 2006.
25. Visiting la IAFE Institute, Buenos Aires University, Argentina, 12 mai – 8 iulie 2007.
26. XXVI International Encuentro de la red strings, IAFE Institute of Space Sciences, Buenos Aires, Argentina, mai 2007.
27. International Conference on Hadron Physics, TROYA07, Middle East Technical University, Canakkale, Turkey, august-sept. 2007.
28. 4th Aegean Summer School: Black Holes, Mytilene, Lesbos, Greece, sept. 2007;
29. 1st Annual School Of EU Network 'UniverseNet': The Origin Of The Universe: Seeking Links Between Fundamental Physics And Cosmology, Mytilene, Lesbos, Greece, sept. 2007.
30. International Conference "FUNDAMENTAL AND APPLIED RESEARCH IN PHYSICS" FARPhys – 2007, Al. I. Cuza University, Iași, octombrie 2007.
31. Seventh Friedmann International Seminar on Gravitation and Cosmology, Joao Pessoa, Brazil, iunie-iulie 2008.
32. Visiting la Federal University of Paraiba, Brazil, 9 iunie- 8 august 2008.
33. 5<sup>th</sup> Australasian Conference on General Relativity and Gravitation, University of Canterbury, Christchurch, New Zealand, 15-18 Dec. 2009.
34. Visiting la University of Canterbury, Christchurch, New Zealand, 11 Dec. 2009- 10 ian. 2010.
35. Visiting la Federal University of Paraiba, Brazil, 6 iulie- 9 sept. august 2010.
36. Visiting la University of Helsinki, Finlanda, 5-20 dec. 2010.
37. Visiting la Space Research Center (CINESPA), University of Costa Rica, San Jose, 21 Iulie--21 August 2011.
38. Visiting la University of Canterbury, Christchurch, New Zealand, 9 Iulie-2 Sept. 2012.
39. 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>)
40. Visiting la Federal University of Paraiba, Brazil, 10 iulie- 5 sept. 2013.
41. Visiting la Federal University of Paraiba, Brazil, 7 iulie- 8 sept. 2013.

Am mai participat cu lucrari la:

GR12 International Conference on General Relativity and Gravitation, Boulder, Colorado, USA, iulie 1989;  
 GR14 International Conference on General Relativity and Gravitation, Florence, Italia, august 1995;

Un numar de 12 ore de curs, pe tema *Basic General Relativity*, ca **Invited Lecturer** la First Tah Poe School on Cosmology, Pithanulok, Tailanda, aprilie 2002.

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.

**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,  
 Costa Rica University,  
 UFPB, Brazilia.

**Convenție de colaborare bilaterală** cu *Canakkale Onsekiz Mart University*, programul ERASMUS.  
**Convenție de colaborare bilaterală** cu *Helsinki University*, programul ERASMUS.

International Scientific Contract with the Institute of Theoretical Physics,  
*Friedrich-Schiller University*, Jena, Germany, on **Exakte Losungen fur Axialsymmetrisch Stationare Felder im Rahmen der Allgemeinen Relativitatstheorie und der Riemann-Cartan Theorie**, November 1991 - November 1996.

#### Referent la revistele

Foundations of Physics  
Foundations of Physics Letters  
Central European Journal of Physics  
Physics Letters A (Elsevier, Holland)  
Modern Physics Letter A  
European Physical Journal C  
Romanian Journal of Physics  
Romanian Physical Reports  
Annals of Physics (Al. I. Cuza University, Iași, Romania)  
JARP (Al. I. Cuza University, Iași, Romania)

**Recenzent** la revistele: American Mathematical Review, Zentrall Blatt

#### Membru al Societatilor Stiintifice:

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

#### Capitole in carti:

- **Gravitatia. O noua teorie a spatiu-timpului**  
M. Agop (Editor), Editura Graphics, Iasi, Romania, 1992.
- **Gravity, Theoretical Physics and Computers**  
D. Vulcanov and I. Cotaescu (Editori), Editura Mirton, Timisoara, Romania, 1997.
- **New theoretical results in gravity and general relativity**  
D. Vulcanov and I. Cotaescu (Editori), Editura Mirton, Timisoara, Romania, 1998.

- 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 Tetradic Null-Complex fara Torsiune  
Contract 90/1989 (Faza 2.1, 1989) cu Inst. deGravitatie si Stiinte Spatiale, Bucuresti;
- 2) Studiul campului gravitacional utilizand Formalismul Tetradic 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 grant: 1, Tip proiect: 5D, Cod CNCSU: 39/1998.
- 9) Simulator cuantic pentru dispozitive semiconductoare nanometrice,  
  
Proiect CEEX – 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 CEEX – SINERMAT (2005-2008).

## ANEXE

### 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. Țațomir*  
 Il Nuovo Cimento, **110B**, No. 4, p. 371-375 (1995).
7. **Perturbative QCD Estimation of the  $B \rightarrow K^* + \pi$  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  $B \rightarrow K^* \pi$  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  $S^2 \times R$  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  $V_{II_0} \times VIII$  Isometries**  
*C. Dariescu and M. A. Dariescu.*  
 Foundations of Physics Letters, **13**, No.4, p. 147-166, (2000).
18. **Magnetic Fields in Spaces with  $V_{II_0} \times VIII$  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  $V_{II_0} \times VIII$  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. Merches*

- 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  $B \rightarrow \pi \pi^0 K^0$  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  
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