

PERSONAL INFORMATION

CIPRIAN DARIESCU



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Sex: Male | Nationality: Romanian

WORK EXPERIENCE

Replace with dates (from - to)

Current position: Professor, since 1999, Faculty of Physics, *Alexandru Ioan Cuza University*, Iasi, Romania; **Ph. D. Supervisor**, Domain: *Theoretical Physics*, since 2005.

Employment experience:

- Teacher in Physics, 1985-1988, High Schools no. 2 and 5, Bacau, Romania;
- Resercher, 1988-1990, Type C Special Unit, *Alexandru Ioan Cuza University*, Iasi
- Assistant, 1990-1993, Dept. of Theoretical Physics, *Alexandru Ioan Cuza University*, Iasi
- Lecturer, 1993-1997, Dept. of Theoretical Physics, *Alexandru Ioan Cuza University*, Iasi
- Associated Professor, 1997-1999, Dept. of Theoretical Physics, *Alexandru Ioan Cuza University*, Iasi

EDUCATION AND TRAINING

1969-1973: Elementary School

1973-1977: Gymnazium, M. Eminescu, Iasi,

1977-1981: Liceum M. Eminescu and C. Negruzzi, Mathematics-Physics Profile, Iasi,

1981-1985: Faculty of Physics, *Al. I. Cuza University*, Iasi, Romania

Replace with EQF
(or other) level if
relevant

Special remarks:

State Grant for Distinguished Student Laureate

Head of 1985 Promotion, Mark of graduation 10 (ten)

Granted with Honours and Distinguished Diploma

Ph.D. Activity:

Doctoral degree in Physics, from *Alexandru Ioan Cuza University* of Iasi, April 1993

Subject: *Study of the Gravitational Field using the Newman-Penrose Formalism with Torsion.*

Supervisor: Prof. Dr. Ioan Gottlieb

MONBUSHO Grant during the period October 1994-March 1996

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

Courtesy Research Professor, 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 and

4th Aegean Summer School: Black Holes, Mytilene, **Greece**, sept. 2007;

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Very Good	Very Good	Very Good	Very Good	Very Good
French	Good	Good	Good	Good	Good

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills ▪ good communication skills gained through my teaching experience and as Invited Visiting Professor at foreign Universities

Organisational / managerial skills

In the Organizer Committee and Scientific Committee of International Conferences
First Tah Poe School on Cosmology, Tailanda, aprilie, 2002.
International Conference on Relativity, ICR-2005
Amravati University, Amravati, India, ianuarie, 2005.

Job-related skills Teaching and research experience

Computer skills Good computer skills.

Driving licence Category B

ADDITIONAL INFORMATION

Awarded (together with Prof. dr. Marina-Aura Dariescu), by the Romanian Academy, with the prestigious prize in science, *Constantin Miculescu*, for the publications in 2011, on Gravitation in theories with extra-dimensions and Quantum modes in super-strong fields, December 2013.

Diploma of Honors, Stiinta pentru oameni, Gala premiilor de excelenta, Sunt Iesean, deci European, Second edition, 2008.

Fields of major interest and specialization:

General Relativity, Gravitation and Cosmology

a. The use of Newman-Penrose Formalism in the analysis of exact solutions of Einstein field equations,

b. Algebraic classification and Penrose diagrams

c. The use of Newman-Penrose Formalism with Torsion in Extended Einsteinian Theories on Riemann-Cartan Spaces

d. Large Scale Structures and Pathologies

e. Quantum Field Theory on General Spacetime Models

175 published papers in journals and Conference volumes.

80 papers published in ISI journals.

14 scientific contracts and Grants.

Director of Type A Grant, COD CNCSIS 1160/2006-2008.

Quantum fields and exact solutions of Einstein's Equations with applications in astrophysics and cosmology

International Academic Experience
Participant in:

1. *XII-th International Conference on General Relativity and Gravitation*, Boulder, Colorado, **USA**, July 1989.
2. *International Conference on Phenomena in Ionized Gases, ICPIG-XX*, Pisa, **Italy**, July, 1991.
3. *Summer School in High Energy Physics and Cosmology*, International Centre for Theoretical Physics, Trieste, **Italy**, July, 1991.
4. *Visiting at the Inst. of Theoretical Phys., Friedrich-Schiller Univ., Jena, Germany*, October-November, 1991.
5. *V-th Regional Conference on Mathematical Physics*, Edirne, **Turkye**, December, 1991.
6. *Summer School in High Energy Physics and Cosmology*, International Centre for Theoretical Physics, Trieste, **Italy**, July, 1992.
7. *International Conference on Differential Geometry and Its Applications*, 90-th Anniversary of Akitsugu Kawaguchi's Birth, Tensor Society (Japan)- Romanian Academy, Bucharest, **Romania**, August, 1992.
8. *Colloquium on Differential Geometry*, Debrecen, **Hungary**, July, 1994.
9. *Visiting at the Institute of Cosmology, Egee University*, Izmir, **Turkye**, August, 1994.
10. *Workshop on Global Analysis, Differential Geometry and Lie Algebras*, Thessaloniki, **Greece**, December, 1994.
11. *Hokuriku Domain Particle Physics Group Meeting*, Myoko, **Japan**, May, 1995.
12. *Yukawa International Seminar'95, From the Standard Model to Grand Unified Theories*, Kyoto, **Japan**, August, 1995.
13. *Finsler Symposium*, Nagasaki, **Japan**, November, 1995.
14. *Visiting at the Inst. of Theoretical Phys., Friedrich-Schiller Univ., Jena, Germany*, November, 1996.
15. *The Eight Marcel Grossmann Meeting*, Jerusalem, **Israel**, June, 1997.
16. *Visiting at the Institute of Cosmology, Egee University*, Izmir, **Turkye**, September, 2001.
17. *First Aegean Summer School on Cosmology*, Karlovassi, **Greece**, September, 2001.
18. *Fifth Hellenic Astronomical Conference*, Heraklion, **Greece**, September, 2001.
19. *First Tah Poe School on Cosmology*, Pitsanulok, **Thailand**, April, 2002.
20. *International Conference on Theoretical Physics*, Paris, **France**, July, 2002.
21. *Visiting at the Institute of Theoretical Science, Univ. of Oregon*, Eugene, **USA**, November, 2002 – May, 2003.
22. *The VI-th Friedmann International Seminar on Gravitation and Cosmology*, Cargese, **Corse**, July, 2004.
23. *International Conference on Relativity, ICR-2005*, Amravati, **India**, January, 2005.
24. *Third International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics*, Koc University, Istanbul, June, 2005.
25. *Third International Conference of Young Scientists*, Chisinau, **Moldova**, November, 2005.
26. *International Symposium "Mathematical Methods in Engineering"*, MME06, Cankaya University, Ankara, **Turkey**, April 2006.
27. *Visiting at the Physics Department, La Plata National University*, **Argentina**, July – August 2006.
28. *Visiting at IAFE Institute of Space Sciences and Buenos Aires University*, **Argentina**, May – July 2007.
29. *XXVI International Encuentro de la red strings*, IAFE Institute of Space Sciences, Buenos Aires, **Argentina**, May 2007.
30. *International Conference on Hadron Physics, TROYA07*, Middle East Technical University, Canakkale, **Turkey**, August-September 2007.
31. *4th Aegean Summer School: Black Holes*, Mytilene, Lesvos, **Greece**, Sept. 2007;
32. *1st Annual School Of EU Network 'UniverseNet': The Origin Of The Universe: Seeking Links Between Fundamental Physics and Cosmology*, Mytilene, Lesvos, **Greece**, Sept. 2007.
33. *Seventh Friedmann International Seminar on Gravitation and Cosmology*, Joao Pessoa, **Brazil**, June-July 2008.
34. *Visiting at Federal University of Paraiba*, **Brazil**, June-August 2008
35. *5-th Australasian Conference on General Relativity and Gravitation*, University of Canterbury, Christchurch, **New Zealand**, 15-18 Dec. 2009.
36. *Visiting at University of Canterbury*, Christchurch, **New Zealand**, Dec. 2009.
37. *Visiting at Federal University of Paraiba*, **Brazil**, July-August 2010.
38. *Visiting at University of Helsinki*, **Finland**, Dec. 2010
39. *Visiting at Space Research Centre (CINESPA), Univ. of Costa Rica*, San Jose, July-August 2011.
40. *Visiting at University of Canterbury*, Christchurch, **New Zealand**, July-August 2012.
41. *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>)
42. *Visiting at Federal University of Paraiba*, **Brazil**, 10 iulie- 5 sept. 2013.
43. *Visiting at Federal University of Paraiba*, **Brazil**, 7 iulie- 8 sept. 2014.
44. *Visiting and participation in 6th Bangkok Workshop on High-Energy Theory* (<http://www.thaihep.phys.sc.chula.ac.th/BKK2017HEPTH/>) Physics Department of Chulalongkorn University, Bangkok, **Thailand**, January 7-20, 2017.
45. *Visiting at University of Canterbury*, Christchurch, **New Zealand**, Nov. 2017.
46. *International Scientific Conference Mathematical Modelling. Processes and systems. MATHMODEL 2017*, Borovets, **Bulgaria**, 13-16 Dec. 2017.
47. *Visiting at Federal University of Paraiba*, **Brazil**, July-August 2018.

Extended talks given abroad:

1. *Solutions of Einstein Field Equations for Rotating Magnetic Field in the Special Seminaries with Invited Visiting Researchers*, at the Institute of Theoretical Physics, Friedrich-Schiller Univ., Jena, Germany, October 30, 1991.

2. *Exact Solutions of Einstein-Maxwell Equations in $S^1 \times S^2 \times R$ -Topology*
in the Special Seminars with Invited Visiting Researchers, at the Institute of Theoretical Physics, Friedrich-Schiller Univ., Jena, Germany, October 30, 1991.
 3. *$SO(3,1)$ Gauge Invariant Tetradic Formulation of U_4 -Theory. Part I.*
in Seminar Schedule of Quantum Theory Group, Toyama Univ. Japan, April 14, 1995.
 4. *$SO(3,1)$ Gauge Invariant Tetradic Formulation of U_4 -Theory. Part II.*
in Seminar Schedule of Quantum Theory Group, Toyama Univ., Japan, April 28, 1995.
 5. *Geometrized Gauge Invariance on $S^3 \times R$ Spacetime with Applications to $SU(2) \times U(1)$ Gauge Theory*
in Hokuriku Domain Particle Physics Group Meeting, Myoko, Japan, May 19, 1995.
 6. *Spatially Flat Robertson-Walker Cosmology with Mixed Radiation and Thermalized Massless Scalar Field Content,*
in Information Sciences Colloquium, at Institute of Information Sciences and Electronics, Tsukuba Univ., Japan, Dec. 12, 1995.
 7. *The Canonical Nonperturbative Quantization of the de Sitter Universe in the Heisenberg Picture*
in the Special Seminars with Invited Visiting Researchers, at the Institute of Theoretical Physics, Friedrich-Schiller Univ., Jena, Germany, November 8, 1996.
 8. *Higgs-anti-deSitter Bubbles and Some of their Cosmological Consequences*
in Seminar Schedule of High Energy Physics Dept., Univ. of Hawaii, Honolulu, USA, January 17, 2003.
 9. *Transition and regeneration rates in charged boson stars via perturbative calculation*
Invited Plenary Report in *The VI-th Friedmann International Seminar on Gravitation and Cosmology*, Cargese, Corse, France, July, 2004.
 10. *Maximally Symmetric Spacetimes from Z_2 – Violation at Electroweak Scale,*
Invited Plenary Report in *International Conference on Relativity, ICR-2005*, Amravati University, Amravati, India, January, 2005.
 11. *Gravitoelectromagnetically-Induced Transitions in Charged Boson Nebulae,*
Talk given in *Third International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics*, Koc University, Istanbul, Turkey, June, 2005.
 12. *Quantum Transitions among Radially Excited States in Charged Boson Stars*
Talk given in *Third International Conference of Young Scientists*, Chisinau, Moldova, November, 2005.
 13. *Electromagnetic Radiating Modes in Einstein's Universe,*
Talk given in *International Symposium "Mathematical Methods in Engineering"* MME06, Cankaya University, Ankara, Apr. 2006
 14. *Quantum Fields and Exact Solutions of Einstein Field Equations with Applications to Astrophysics and Cosmology*
in Seminar Schedule of Physics Department, La Plata National University, Argentina, 26 July 2006.
 15. *Perturbative approach to charged boson nebulae*
Invited plenary report in *XXVI International Encuentro de la red strings*, IAFE Institute of Space Sciences Buenos Aires University, Argentina, May 2007.
 16. *B Radiative Decay within MSSM.*
in *International Conference on Hadron Physics*, TROYA07, Middle East Technical University, Canakkale, Turkey, August-September 2007.
 18. *Improved Factorization Method in Studying B Decays*
In *International Conference on Hadron Physics*, TROYA07, Middle East, Technical University, Canakkale, Turkey, August-September 2007.
 19. *The Quantum Dynamics of Boson Nebulae Formation*
In *4th Aegean Summer School: Black Holes*, Mytilene, Lesbos, Greece, September 2007.
 20. *Vertical Dipole Radiation in Milne Universe,*
Invited Plenary Report in *The VII-th Friedmann International Seminar on Gravitation and Cosmology*, Joao Pessoa, Brazil, June-July 2008.
 21. *5-Dim. Toy Model for Particle Confinement in Spatially-Warped Einstein Universe*
Invited Plenary Report in *5-th Australasian Conference on General Relativity and Gravitation*
University of Canterbury, Christchurch, New Zealand, Dec. 2009.
 22. *Robertson-Walker Branes with Massless Scalars and Cosmological Term*
Invited Conference in *Coloquios 2011*, Escuela de Fisica, Universidad de Costa Rica, San Jose, August 19, 2011.
 23. *Quantum Cosmology on Spatially open FRW Universe with combined matter sources*
Oral presentation in *6th Bangkok Workshop on High-Energy Theory*
Physics Department of Chulalongkorn University, Bangkok, Thailand, January 2017.
- 12 hours on Basic General Relativity as **Invited Lecturer Professor** in
First Tah Poe School on Cosmology, Pithanulok, Thailand, April 2002.

International Collaborations

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.

International Scientific Collaboration with *Canakkale Onsekiz Mart University*, ERASMUS program, period 2008-2014,
Subject area cod 13.2 Physics, 13.7 Astrophysics. Contact person Prof. dr. Ciprian Dariescu.

International Scientific Collaboration with *Helsinki University*, ERASMUS Program.

Member of Scientific Societies:

American Mathematical Society
 Tensor Society (Japan)
 European Physical Society
 Romanian Physical Society
 Romanian Society on General Relativity and Gravitation

ANNEXES

Published books:

1. FUNDAMENTAREA MECANICII CUANTICE (English title *Foundations of Quantum Mechanics*)
Ioan Gottlieb, Ciprian Dariescu, Marina-Aura Dariescu
Editura "TEHNICA", Chişinău (1997) 568 pagini, ISBN 5-7790-01-55-3
2. GRAVITAȚIE ȘI CÂMPURI ÎN UNIVERSUL EINSTEIN (English title *Gravity and Fields in Einstein's Universe*)
Ciprian Dariescu, Marina-Aura Dariescu
Editura "VESPER", Iași (1997) 201 pagini, ISBN 973-96589-6-2
3. CÂMPURI CUANTICE LIBERE (English title *Quantum Field Theories*)
Ciprian Dariescu, Marina-Aura Dariescu, Ioan Gottlieb
Editura "BIT", Iași (1998) 582 pagini, ISBN 973-9327-29-x
4. MECANICĂ CUANTICĂ (English title *Quantum Mechanics*)
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
(English title *Special topics in Quantum Mechanics. Particles and Fields*)
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
(English title *Special Models of Universes and Space-time Pathologies*)
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
(English title *Topics of Astronomy, Astrophysics and Cosmology for beginners*)
Marina-Aura Dariescu, Ciprian Dariescu, Lucian-Mihai Cosovanu, Cristian-Ionut Stelea
Editura Ars Longa, Iasi (2015) 200 pagini, ISBN 978-973-148-200-2.

Chapters in books:
International

- 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, R. Miron, ISBN 978-90-481-4656-7, ISBN 978-94-015-8650-4 (eBook) 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.

National

- 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 (Editors), Editura Mirton, Timisoara, Romania, 1997.
- New theoretical results in gravity and general relativity
D. Vulcanov and I. Cotaescu (Editors), Editura Mirton, Timisoara, Romania, 1998.

Published Works in International and Romanian ISI Journals

- 1) **The Use of Six-Vectors in the Theory of Special Relativity**
I. Merches and C. Dariescu
Acta Physica Hungarica, **70**, No. 1-2, p. 63-70 (1991).
- 2) **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).
- 3) **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).
- 4) **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).
- 5) **U(1) Gauge Invariant in $S^3 \times R$ Geometry**
M.A. Dariescu and C. Dariescu
TENSOR, N.S., **53**, p. 162-168 (1993).
- 6) **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).
- 7) **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).
- 8) **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).
- 9) **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).
- 10) **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).
- 11) **Fermions in a Kerr-Newman Spacetime**
M.A. Dariescu, C. Dariescu and I. Gottlieb
Foundations of Physics, **25**, No. 10, p. 1523-1528 (1995).
- 12) **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).
- 13) **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).
- 14) **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).
- 15) **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).
- 16) **Planary Symmetric Static Worlds with Massless Scalar Sources**
C. Dariescu
Foundations of Physics, **26**, No.8, p. 1069-1080 (1996).
- 17) **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).
- 18) **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).
- 19) **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).
- 20) **Non-Inertial First Order Transition Amplitude for 1/2 - Spin Fermions in Almost Uniformly Accelerated Frames**
C. Dariescu and M.A. Dariescu
 Il Nuovo Cimento, **113B**, No. 2, p. 207-212 (1998).
- 21) **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).
- 22) **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).
- 23) **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)
- 24) **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)
- 25) **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)
- 26) **The Large Scale Pathology in an Exact Class of Solutions with cosh (αz)**
I. Astefanoaei, C. Dariescu and M.A. Dariescu
 Algebras, Groups and Geometries, **16**, No. 1, p. 63-72 (1999)
- 27) **Large Scale Pathology of Universes with $VII_0 \times VIII$ Isometries**
C. Dariescu and M.A. Dariescu.
 Foundations of Physics Letters, **13**, No.2, p. 147-166 (2000)
- 28) **Magnetic Fields in Spaces with $VII_0 \times VIII$ Isometries**
C. Dariescu and M.A. Dariescu
 Australian Journal of Physics, **53**, No. 3, p. 345-353 (2000)
- 29) **Large Scale Pathology and Gravitomagnetic Resonances in Static $VII_0 \times VIII$ Spacetimes with Mixed Matter-Sources**
C. Dariescu and M.A. Dariescu
 International Journal of Modern Physics A, **16**, No. 22, p. 3707-3716 (2001).
- 30) **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 (2002).
- 31) **Quantum Flux-based Resonances in Solitonic Vortices**
M.A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **13**, No. 9, p. 1851-1855 (2002).
- 32) **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).
- 33) **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).
- 34) **Transition Rates in Charged Boson Nebulae**
C. Dariescu and M.A. Dariescu
 Physics Letters B, **566**, Nos. 1-2, p. 19-26 (2003).
- 35) **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).
- 36) **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).
- 37) **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).
- 38) **Alternative Approach to $B^0 \rightarrow K^+ \gamma$ Branching Ratio Calculation**
M. A. Dariescu and C. Dariescu
 Eur. Phys. J. C, **36**, No. 2, p. 215-220 (2004).
- 39) **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).
- 40) **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).
- 41) **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).
- 42) **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).
- 43) **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).
- 44) **Photons in Einstein's Universe**
M. A. Dariescu, C. Dariescu
Journal of Dynamical Systems and Geometric Theories, **4**, No. 1, p. 47-59 (2006).
- 45) **Gravitoelectromagnetically induced transitions in charged boson nebulae**
M. A. Dariescu, C. Dariescu and G. Murariu
Europhysics Letters, **74**, No. 6, p. 978-984 (2006).
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