

PERSONAL INFORMATION

MARINA-AURA DARIESCU



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Sex: Female | Nationality: Romanian

WORK EXPERIENCE

Replace with dates (from - to)

Current position: Professor, since 2000, Faculty of Physics, *Alexandru Ioan Cuza University*, Iasi, Romania; **Ph. D. Supervisor**, Domain: *Theoretical Physics*, since 2009.

Employment experience:

- Teacher in Physics, 1985-1988, High School *V. Alecsandri* Bacau, Romania;
- Teacher in Physics, 1988-1989, High School *D. Cantemir*, Iasi,
- Assistant, 1989-1990, Department of Physics, Technical University *Ghe. Asachi*, Iasi, Romania
- 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, 1997-2000, 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:

Granted with Honours and Distinguished Diploma. Mark of graduation 9.92
 Secretary of *Romanian Society on General Relativity and Gravitation*
 Accredited Diploma Computer Operator under DOS System

Ph.D. Activity:

Doctoral degree in Physics, from Alexandru Ioan Cuza University of Iasi, March 1994
 Subject: *Gauge Theories in Elementary Particle Physics*
 Ph. D. Supervisor Prof. Dr. Gheorghe Zet

Research Professor, Institute of Theoretical Science, Toyama University, Japan, May 1995-February 1996;

FULBRIGHT FELLOWSHIP, Univ. of Oregon, Eugene, USA, September 2002--May 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, Thailand, April 2002.
International Conference on Relativity, ICR-2005
Amravati University, Amravati, India, January 2005.

Job-related skills Teaching and research experience

Computer skills Good computer skills.

Driving licence Category B

ADDITIONAL INFORMATION

Awarded (together with Prof. dr. Ciprian 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.

Fields of major interest and specialization:
High Energy Physics: Heavy Meson Decays and CP Violation
Quantum Fields, Particles and Cosmology

15 scientific contracts and Grants.

Director of Type A Grant, COD CNCSIS 1433/2007
Dinamica unitara a campurilor cuantice si de meso-scala

Director of Grant PN-III-P4-ID-PCE-2016-0131
Mathieu and Heun functions in quantum field dynamics (MHFQFD).

International Academic Experience

Participant in:

- 1) Seminar of Cosmology, Bad Honnef, Germany, Oct. 1990;
- 2) Summer School in High Energy Physics and Cosmology, Trieste, Italy, June-July 1991;
- 3) Visiting, Institute of Theoretical Physics, Univ. of Zurich, Sept. 1991;
- 4) V-th Regional Conference on Mathematical Physics, Edirne, Turcia, Dec. 1991;
- 5) International Conference on Differential Geometry and Its Applications, 90-th Anniversary of Akitsugu Kawaguchi's Birth Tensor Society (Japonia) and Romanian Academy, Aug. 1992;
- 6) Visiting, Institute of Theoretical Physics, Dortmund University, Germany, Sept. 1992;
- 7) Summer School in High Energy Physics and Cosmology, Trieste, Italy, July 1993;
- 8) Colloquim on Differential Geometry, Debrecen, Hungary, July 1994;
- 9) Visiting, Institute of Astronomy, Egee University, Izmir, Turkey, Aug. 1994;
- 10) Workshop on Global Analysis, Differential Geometry and Lie Algebras, Thessaloniki, Greece, Dec. 1994;
- 11) Hokuriku Domain Particle Physics Group Meeting, Myoko, Japan, May 1995;
- 12) Yukawa International Seminar 1995 *From the Standard Model to Grand Unified Theories*, Kyoto, Japan, Aug. 1995;
- 13) Finsler Symposium, Nagasaki, Japan, Nov. 1995;
- 14) Visiting, Institute of Theoretical Physics, Toyama University, Japan, May 1995 - March 1996;
- 15) The Eight Marcel Grossmann Meeting Jerusalem, Israel, June, 1997.
- 16) Visiting, Institute of Theoretical Physics, *Friedrich-Schiller* University, Jena, Germany, Nov. 1997.
- 17) Visiting, Institute of Astronomy, Egee University, Izmir, Turkey, Sept. 2001.
- 18) First Aegean Summer School on Cosmology, Karlovassi, Grecia, Sept. 2001.
- 19) First Tah Poe School on Cosmology, Pitsanulok, Tailanda, Apr. 2002.
- 20) International Conference on Theoretical Physics, Paris, France, July 2002.
- 21) The VI-th Friedmann International Seminar on Gravitation and Cosmology, Cargese, Corsica, July 2004.
- 22) International Conference on Relativity, ICR2005, Amravati University, India, Jan. 2005.
- 23) Third International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics, Koc University, Istanbul, June 2005.
- 24) Third International Conference of Young Scientists, Chisinau, Moldova, Nov. 2005.
- 25) International Symposium "Mathematical Methods in Engineering", MME06, Cankaya University, Ankara, Turkey, Apr. 2006.
- 26) Visiting, Physics Department, La Plata National University, Argentina, July-August 2006.
- 27) Visiting, IAFE Institute of Space Sciences, Buenos Aires University, Argentina, May-July 2007.
- 28) XXVI International Encuentro de la red strings, IAFE Institute of Space Sciences, Buenos Aires, Argentina, May 2007.
- 29) International Conference on Hadron Physics, TROYA07, Middle East Technical University, Canakkale, Turkey, Sept. 2007.
- 30) 4th Aegean Summer School: Black Holes, Mytilene, Lesvos, Greece, Sept. 2007;
- 31) 1st Annual School Of EU Network '*UniverseNet*': *The Origin Of The Universe: Seeking Links Between Fundamental Physics And Cosmology*, Mytilene, Lesvos, Greece, Sept. 2007.
- 32) International Conference "FUNDAMENTAL AND APPLIED RESEARCH IN PHYSICS" FARPhys – 2007, *Al. I. Cuza* University, Iasi, Oct. 2007.
- 33) Seventh Friedmann International Seminar on Gravitation and Cosmology, Joao Pessoa, Brazil, June-July 2008.
- 34) Visiting, Federal University of Paraiba, Brazil, June-August 2008.
- 35) The 5-th Australasian Conference on General relativity and Gravitation, University of Canterbury, Christchurch, New Zealand, 15-18 Dec. 2009.
- 36) Visiting, University of Canterbury, Christchurch, New Zealand, Dec-Jan 2010.
- 37) Visiting, Federal University of Paraiba, Brazil, July-August 2010.
- 38) Visiting, University of Helsinki, Finland, Dec. 2010 (POSDRU Program).
- 39) Visiting, Space Research Centre (CINESPA), University of Costa Rica, San Jose, July-August 2011.
- 40) Visiting, 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.
- 42) Visiting, Federal University of Paraiba, Brazil, July-August 2013.
- 43) Visiting, Federal University of Paraiba, Brazil, July-August 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, University of Canterbury, Christchurch, New Zealand, November 2017.
- 46) International Scientific Conference Mathematical Modelling. Processes and systems. MATHMODEL 2017, Borovets, Bulgaria, 13-16 Dec. 2017.
- 47) Visiting, Federal University of Paraiba, Brazil, July-August 2018.

Extended Talks given abroad

1. *Fermions on S3xR Spacetime* in Hokuriku Domain Particle Physics Group Meeting, Myoko, **Japan**, May 19, 1995.
2. *Perturbative Calculations on B-Meson Decays* in Seminar Schedule of Quantum Theory Group, Toyama University, **Japan**, June 16, 1995.
3. *Gauge Theories on S3xR Spacetime* in Information Sciences Colloquium, at The Institute of Information Sciences and

- Electronics, Tsukuba University, **Japan**, December 12, 1995.
4. *Computer Estimations on Heavy Meson Decay Branching Ratios* in Seminar Schedule of Quantum Theory Group, Toyama University, **Japan**, February 2, 1996.
 5. *Perturbative QCD Estimates of B-Meson Decays* in Seminar Schedule of Theory Department, Dortmund University, **Germany**, Nov. 21, 1997.
 6. *B -> K Radiative Transitions via Perturbative QCD* in Seminar Schedule of Theoretical Physics Institute, Fr. Schiller University, Jena, **Germany**, Nov. 25, 1997.
 - 7-10 Four Lectures on *Gauge covariant particle physics in curved spacetime*, as **Invited Lecturer** in First Tah Poe School on Cosmology, Naresuan University, Pithanulok, **Thailand**, April 2002.
 11. *Improved Factorization Method in B Meson Decays* in Seminar Schedule of High Energy Physics Department, University of Hawaii, Honolulu, **USA**, January 17, 2002.
 12. *Scalar and electromagnetic configurations in k=1 FRW Universes*, **Invited plenary report** in The VI-th Friedmann International Seminar on Gravitation and Cosmology, Cargese, **Corse**, June-July, 2004.
 13. *Lie Groups and Gauge-Invariance in Semiclassical Field Theories on S3xR Einstein Universe*, **Invited plenary report** in International Conference on Relativity, ICR2005, Amravati University, **India**, January 2005.
 14. *Topologic Quantum Dynamics of Charged Bosons* in Third International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics, Koc University, Istanbul, **Turkey**, June 2005.
 15. *Quantum Transitions among Radially Excited States in Charged Boson Stars* in Third International Conference of Young Scientists, Chisinau, **Moldova**, November 2005.
 16. *Electromagnetic Radiating Modes in Einstein's Universe* in International Symposium Mathematical Methods in Engineering, MME06, Cankaya University, Ankara, **Turkey**, April 2006.
 17. *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.
 18. *B Radiative Decay within MSSM* in International Conference on Hadron Physics, TROYA07, Canakkale, **Turkey**, August-September 2007.
 19. *Improved Factorization Method in Studying B Decays* in International Conference on Hadron Physics, TROYA07, Canakkale, **Turkey**, August-September 2007.
 20. *The Quantum Dynamics of Boson Nebulae Formation* in 4th Aegean Summer School: Black Holes, Mytilene, Lesvos, **Greece**, September 2007.
 21. *Quantum Thermodynamics of Massless Bosons in Universes with VII0xVIII Isometries* **Invited Plenary Report** in The VII-th Friedmann International Seminar on Gravitation and Cosmology, Joao Pessoa, **Brazil**, June-July 2008.
 22. *5-Dim. Toy Model for Particle Confinement in Spatially-Warped Einstein Universe*, **Invited Plenary Report** in 5th Australasian Conference on General Relativity and Gravitation, University of Canterbury, Christchurch, **New Zealand**, December 2009.
 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.
 24. *Parametric induced instabilities of bosons in magnetar's crust* Oral presentation in *International Scientific Conference Mathematical Modelling. Processes and systems. MATHMODEL 2017*, Borovets, **Bulgaria**, December 2017.

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

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

Member of Scientific Societies:

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

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. GRAVITAŢIE ŞI CĂMPURI ÎN UNIVERSUL EINSTEIN (English title *Gravity and Fields in Einstein's Universe*)
Ciprian Dariescu, Marina-Aura Dariescu
Editura "VESPER", Iaşi (1997) 201 pagini, ISBN 973-96589-6-2
3. CĂMPURI CUANTICE LIBERE (English title *Quantum Field Theories*)
Ciprian Dariescu, Marina-Aura Dariescu, Ioan Gottlieb
Editura "BIT", Iaşi (1998) 582 pagini, ISBN 973-9327-29-x
4. MECANICĂ CUANTICĂ (English title *Quantum Mechanics*)
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 CĂMPURI
(English title *Special topics in Quantum Mechanics. Particles and Fields*)
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
(English title *Special Models of Universes and Space-time Pathologies*)
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
(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.
- Gauge covariant particle physics in curved spacetime
30 pages in *Proceedings of First Tah Poe School on Cosmology*, Naresuan Univ, Pithanulok, Thailand, 2002.

National

- Gravitatia. O nouateorie 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) **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) **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).
- 4) **U(1) Gauge Invariant in $S^3 \times R$ Geometry**
 M. A. Dariescu and C. Dariescu
 TENSOR, N.S., **53**, p. 162-168 (1993).
- 5) **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).
- 6) **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).
- 7) **Fermions in a Kerr-Newman Spacetime**
 M.A. Dariescu, C. Dariescu and I. Gottlieb
 Foundations of Physics, **25**, No. 10, p. 1523-1528 (1995).
- 8) **A Special Lagrange Metric in Particle Mechanics**
 M. Agop, C. Dariescu, M. A. Dariescu and D. Țațomir
 Il Nuovo Cimento, **110 B**, No. 4, p. 371-375 (1995).
- 9) **Perturbative QCD Estimation of the B -> K gamma Branching Ratio**
 M. A. Dariescu and C. Dariescu
 Physics Letters B, **367**, No. 1-4, p. 349-352 (1996).
- 10) **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).
- 11) **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).
- 12) **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).
- 13) **The SO(3,1) - Gauge Formulation of the Invariance Properties and Conservation Laws in U_4 - Field Theory**
 C. Dariescu, M. A. Dariescu and I. Gottlieb
 TENSOR N.S., **57**, No. 2, p. 204-211 (1996).
- 14) **A Heavy-to-heavy Approach of B -> K* via Perturbative QCD**
 C. Dariescu and M. A. Dariescu
 Physics Letters B, **398**, No. 4, p. 361-364 (1997).
- 15) **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, **113 B**, No. 2, p. 207-212 (1998).
- 16) **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).
- 17) **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).
- 18) **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).
- 19) **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).
- 20) **A Maxwell Field Equations Class of Exact Solutions on Matter Dominated Spatially Closed Friedman-Robertson-Walker Universe**
 C. Dariescu and M. A. Dariescu
 Foundations of Physics Letters, **12**, No. 4, p. 383-391 (1999).
- 21) **The Large Scale Pathology in an Exact Class of Solutions with cosh (alpha z)**
 Aștefănoaei, C. Dariescu and M. A. Dariescu
 Algebras, Groups and Geometries, **16**, No. 1, p. 63-72, (1999).
- 22) **Large Scale Pathology of Universes with VII₀ x VIII Isometries**
 C. Dariescu and M. A. Dariescu
 Foundations of Physics Letters, **13**, No. 2, p. 147-166, (2000)
- 23) **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)
- 24) **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).
- 25) **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).
 - 26) **Quantum Flux-based Resonances in Solitonic Vortices**
M. A. Dariescu and C. Dariescu
Chaos, Solitons and Fractals, **13**, No. 9, p. 1851-1855 (2002).
 - 27) **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).
 - 28) **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).
 - 29) **CP-violating rate difference relations for $B \rightarrow PP$ and $B \rightarrow PV$ in broken SU(3)**
M. A. Dariescu, N. G. Deshpande, X.-G. He and G. Valencia
Physics Letters B, **557**, p. 60-68 (2003).
 - 30) **Transition Rates in Charged Boson Nebulae**
C. Dariescu and M. A. Dariescu
Physics Letters B, **566**, Nos. 1-2, p. 19-26 (2003).
 - 31) **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).
 - 32) **Alternative Approach to B to K^- Branching Ratio Calculation**
M. A. Dariescu and C. Dariescu
Eur. Phys. J. C, **36**, No. 2, p. 215-220 (2004).
Digital Object Identifier: <http://dx.doi.org/10.1140/epjc/s2004-01897-x>
 - 33) **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).
 - 34) **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).
 - 35) **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).
 - 36) **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).
 - 37) **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).
 - 38) **Photons in Einstein's Universe**
M. A. Dariescu, C. Dariescu
Journal of Dynamical Systems and Geometric Theories, **4**, No. 1, p. 47-59 (2006).
 - 39) **Gravitoelectromagnetically induced transitions in charged boson nebulae**
M. A. Dariescu, C. Dariescu and G. Murariu
Europhysics Letters, **74**, No. 6, p. 978-984 (2006).
 - 40) **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).
 - 41) **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).
 - 42) **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).
 - 43) **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).
 - 44) **Persistent currents and critical magnetic field in planar dynamics of charged bosons**
M. A. Dariescu and C. Dariescu
J. Phys.: Condensed Matter, **19**, No. 25 (2007) 256203.
 - 45) **From Nucleation to Inflation—A Better Timing**
C. Dariescu and M. A. Dariescu
International J. of Nonlinear Science and Numerical Simulation, **9**, No. 1, p. 1-8 (2008).
 - 46) **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).
- 47) **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).
- 48) **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).
- 49) **A WKB Approach to Quantum Hall States**
 M. A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **38**, No. 5, p. 1292-1297 (2008).
- 50) **Fermions on Spacetimes of Spatially Closed Hypersurfaces**
 M. A. Dariescu and C. Dariescu
 Chaos, Solitons and Fractals, **39**, No. 5, p. 2522-2529 (2009).
- 51) **Coherently Perturbed Milne Universe**
 C. Dariescu and M. A. Dariescu
 Chaos, Solitons and Fractals, **40**, No. 5, p. 2294-2304 (2009).
- 52) **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).
- 53) **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).
- 54) **Quantum Thermodynamics of Massless Bosons in Universes with VII₀ x VIII Isometries**
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February 2022

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