



Curriculum vitae Europass

Informații personale

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Naționalitate(-tăți) **Română**
Data nașterii **10.01.1972**
Sex **Masculin**

Experiența profesională

Perioada	2008-prezent
Funcția sau postul ocupat	Conferențiar universitar
Numele și adresa angajatorului	Universitatea „Alexandru Ioan Cuza” din Iași, Bd. Carol I nr. 11, Iași, 700506
Tipul activității sau sectorul de activitate	Educație și cercetare, învățământ superior
Perioada	2003-2008
Funcția sau postul ocupat	Lector universitar
Numele și adresa angajatorului	Universitatea „Alexandru Ioan Cuza” din Iași, Bd. Carol I nr. 11, Iași, 700506
Tipul activității sau sectorul de activitate	Educație și cercetare, învățământ superior
Perioada	2002-2003
Funcția sau postul ocupat	Lector universitar asociat
Numele și adresa angajatorului	Universitatea „Alexandru Ioan Cuza” din Iași, Bd. Carol I nr. 11, Iași, 700506
Tipul activității sau sectorul de activitate	Educație și cercetare, învățământ superior

Educație și formare

Perioada	2020
Calificarea / diploma obținută	Atestat de abilitare
Disciplinele principale studiate / competențe profesionale dobândite	Fizică
Numele și tipul instituției de învățământ / furnizorului de formare	Ministerul Educației și Cercetării, OM 6287/22.12.2020
Perioada	2013
Calificarea / diploma obținută	Manager proiect
Disciplinele principale studiate / competențe profesionale dobândite	Managementul proiectelor
Numele și tipul instituției de învățământ / furnizorului de formare	S. C. Expert Aktiv Group S.R.L. Onești, acreditată de Ministerul Educației Naționale și de Ministerul Muncii, Familiei, Protecției Sociale și Persoanelor Vârstrnice
Perioada	1998-2002
Calificarea / diploma obținută	Master în „Neliniaritate și Autoorganizare în Sisteme Complexe”



Disciplinele principale studiate / competențe profesionale dobândite Fizica sistemelor complexe, Autoorganizare, Haos
 Numele și tipul instituției de învățământ / furnizorului de formare Universitatea „Alexandru Ioan Cuza” din Iași, Facultatea de Fizică

Perioada 1996-2002

Calificarea / diploma obținută Doctor în Fizică, distincția „Magna cum Laudae”

Disciplinele principale studiate / competențe profesionale dobândite Fizica plasmei
 Numele și tipul instituției de învățământ / furnizorului de formare Universitatea „Alexandru Ioan Cuza” din Iași, Facultatea de Fizică

Perioada 1995-1996

Calificarea / diploma obținută Master în „Fizica plasmei și spectroscopie”

Disciplinele principale studiate / competențe profesionale dobândite Fizica plasmei, Spectroscopie
 Numele și tipul instituției de învățământ / furnizorului de formare Universitatea „Alexandru Ioan Cuza” din Iași, Facultatea de Fizică

Perioada 1990-1995

Calificarea / diploma obținută Licență în Fizică tehnologică

Disciplinele principale studiate / competențe profesionale dobândite Fizică
 Numele și tipul instituției de învățământ / furnizorului de formare Universitatea „Alexandru Ioan Cuza” din Iași, Facultatea de Fizică

Aptitudini și competențe personale

Limba(i) maternă(e) Româna

Limba(i) străină(e) cunoscută(e) Engleza, Franceza

Autoevaluare

Nivel european (*)

Engleza

Franceza

Înțelegere				Vorbire				Scriere	
Ascultare		Citire		Participare la conversație		Discurs oral		Exprimare scrisă	
C1		C1		C1		C1		C1	
B2		B2		B1		B1		B1	

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

Competențe și aptitudini organizatorice

Managementul granturilor de cercetare (director de proiect a 2 granturi internaționale și 6 granturi naționale), organizator manifestări științifice (membru în Comitetul de organizare a 2 conferințe naționale și în Comitetul Științific a 2 conferințe naționale), membru al Senatului Universității „Alexandru Ioan Cuza” din Iași, membru al Comisiei de Etică a Universității „Alexandru Ioan Cuza” din Iași, membru al Consiliului Facultății de Fizică a Universității „Alexandru Ioan Cuza” din Iași, membru al Consiliului Departamentului de Fizică al Facultății de Fizică a Universității „Alexandru Ioan Cuza” din Iași, șef de laborator (Laboratorul de Autoorganizare, Laboratorul de Fizica sistemelor parțial ordonate), expert-evaluator proiecte de cercetare naționale și internaționale (INTAS/SEE-ERA.NET, CNCSIS, ANCS, UEFISCDI), membru în Comitetul Editorial (Editorial Board) al jurnalului „Chaos Theory and Applications” (<http://dergipark.org.tr/en/pub/chaos/board>), referent la jurnale științifice de specialitate (Scientific Reports, Plasma Sources Science and Technology, Plasma Physics and Controlled Fusion, Physics of Plasmas, Nonlinear Dynamics, New Journal of Physics, Physics Letters A, Europhysics Letters, Physica Scripta, Vacuum, IEEE Transactions on Plasma Science, IEEE Access, Chaos Solitons and Fractals, Entropy, Optics Express, Spectrochimica Acta A, Journal of Molecular Structure, Applied Sciences, Meteorology and Atmospheric Physics, Physica A, Polymer Engineering and Science, Measurement Science and Technology, Photochem, Czechoslovak Journal of Physics, Revista de Chimie).

Activități de cercetare	<ol style="list-style-type: none"> 1. Fenomene neliniare în plasma de temperatură joasă <ul style="list-style-type: none"> - structuri autoorganizate în plasmă - instabilități ale plasmei - fenomene haotice în plasmă - interacțiuni colective în plasmă - surse de plasmă 2. Structuri parțial ordonate în lichide <ul style="list-style-type: none"> - solvatocromism - interacțiuni intermoleculare în lichide - spectroscopie moleculară - modele de lichid - scări empirice de solvent
Activități de predare	<p>Fenomene haotice și metode de control (curs și laborator, în limba engleză și în limba română), Rezonanța magnetică nucleară în medicină și biologie (curs și laborator, în limba engleză și în limba română), Imagistica medical de rezonanță magnetică (curs și laborator), Haos și autoorganizare (curs și laborator), Fizica fenomenelor neliniare (curs și laborator, în limba engleză), Fizica sistemelor parțial ordonate (curs și laborator), Fizica lichidului (curs și laborator), Metode de investigare a sistemelor complexe (curs și laborator), Fenomene neliniare în plasma (curs și laborator), Metode de investigare a fenomenelor neliniare în plasma (curs și laborator), Achiziția și analiza semnalelor haotice. Aplicații (curs și laborator), Introducere în fizica sistemelor autoorganizate (curs și laborator), Probleme actuale ale fizicii sistemelor autoorganizate (curs și laborator), Bazele experimentale ale fizicii sistemelor autoorganizate (curs și laborator), Mecanică și acustică (seminar și laborator), Oscilații și unde (seminar și laborator), Fizică nucleară (laborator), Dozimetrie și radioprotecție (laborator).</p> <p>În calitate de profesor invitat, respectiv în cadrul programului Erasmus, am predate la Universitatea din Innsbruck, Austria, următoarele cursuri în limba engleză: Chaos and self-organization in plasma, Complex structures in low-temperature plasma, Nonlinear potential structures in plasma, Labcourse in plasma diagnosis, Complex space charge structures in plasma, Nonlinear dynamics techniques for time series analysis.</p>
Rezultatele activității științifice	Anexa 1 – Lista rezultatelor activității științifice
Informații suplimentare	<p>Stagii de cercetare la Universitatea din Innsbruck, Austria, în cadrul unor granturi de cercetare sau a unor programe internaționale (ERASMUS, CEEPUS) (2017, 2014, 2013, 2012, 2010, 2009, 2007, 2006, 2005, 2004, 2002, 2001, 2000, 1999);</p> <p>Profesor invitat la Universitatea din Innsbruck, Austria (2011)</p> <p>Stagii de cercetare la Universitatea de Științe și Tehnologii Lille 2, Franța, în cadrul unor granturi de cercetare (2010, 2009, 2008);</p> <p>Stagii de cercetare la Universitatea Politehnică din Madrid, Spania, în cadrul unor granturi de cercetare (2006, 2009);</p> <p>Stagiu de cercetare la Universitatea Paris-Sud XI Orsay, Franța, în cadrul programului TEMPUS (1995);</p> <p>Specializare prin participarea la școli internaționale: Workshop and School „Physics and Chemistry of Atmospheres: From Laboratory Experiments to Field Campaigns”, Iași (2006); International Workshop and School „Towards Fusion Energy – Plasma Physics, Diagnostics, Spin-offs”, Kudowa Zdroj, Polonia (2005); Autumn College on Plasma Physics, „Abdus Salam” International Centre for Theoretical Physics, Trieste, Italia (2005); International Workshop and School „Towards Fusion Energy – Plasma Physics, Diagnostics, Applications”, Kudowa Zdroj, Polonia (2004); Autumn College on Plasma Physics „Long-Lived Structures and Self Organization in Plasmas”, „Abdus Salam” International Centre for Theoretical Physics, Trieste, Italia (2003); Summer School on Plasma Physics and Applications, Iași (2003); Romanian-French Summer School on Plasma Physics and Applications, Iași (1995).</p> <p>Participare cu lucrări invitate, orale sau poster la numeroase conferințe naționale și internaționale.</p> <p>Referent științific pentru: Scientific Reports, Physics of Plasmas, Plasma Sources Science and Technology, Plasma Physics and Controlled Fusion, Optics Express, New Journal of Physics, Europhysics Letters, Nonlinear Dynamics, Physics Letters A, Physica Scripta, Chaos Solitons & Fractals, Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy, Journal of Molecular Structure, Entropy, Physica A: Statistical Mechanics and Its Applications, IEEE Transactions on Plasma Science, IEEE Access, Polymer Engineering & Science, Measurement Science and</p>

Technology, Meteorology and Atmospheric Physics

Afilieri: Societatea Română de Fizică (din 2002), European Physical Society (din 2002), American Physical Society (din 2007), IEEE Nuclear and Plasma Science Society (din 2007), Complex Systems Society (fostă European Complex Systems Society) (din 2007), The New York Academy of Sciences (din 2011), Chaotic Modeling and Simulation International Society (din 2017).

Anexa 2 – Lista granturilor de cercetare coordonate in calitate de director de proiect

Anexe

ANEXA 1 – Lista rezultatelor activității științifice

I. Cărți și capitole de cărți apărute la edituri internaționale și naționale

1. M. Agop, A. Zala, D. Dimitriu, S. Irimiciuc, A. Gavrilut, C. M. Rusu, G. Crumpei, L. Eva – Statistical Methods and Nonlinear Dynamics for Analyzing Brain Activity. Theoretical and Experimental Aspects, in *13th Chaotic modeling and Simulation International Conference*, Eds. C. H. Skiadas, Y. Dimotikalis, Springer Nature Switzerland AG, Cham, 2021, ISBN 978-3-030-70794-1;
2. D. G. Dimitriu, M. Agop – Analysis of Low-Frequency Instabilities in Low-Temperature Magnetized Plasma, Chapter 5 in *Fractional Dynamics, Anomalous Transport and Plasma Science*, Ed. C. H. Skiadas, Springer Nature Switzerland AG, Cham, 2018, ISBN 978-3-030-04482-4;
3. S. Irimiciuc, D. G. Dimitriu, M. Agop – Theoretical Modeling of the Interaction Between Two Complex Space Charge Structures in Low-Temperature Plasma, Chapter 6 in *Fractional Dynamics, Anomalous Transport and Plasma Science*, Ed. C. H. Skiadas, Springer Nature Switzerland AG, Cham, 2018, ISBN 978-3-030-04482-4;
4. D. O. Dorohoi, D. G. Dimitriu – Spectral Insights on Intermolecular Interactions in Solutions of Some Zwitterionic Compounds, Chapter 3 in *Electromagnetic Radiation in Analysis and Design of Organic Materials – Electronic and Biotechnology*, Eds. D. O. Dorohoi, A. I. Barzic and M. Aflori, CRC Press, Taylor & Francis Group, 2017, ISBN 978-1-4987-7580-9;
5. D. G. Dimitriu, M. Agop – Chaos in Plasma Physics, Chapter 19 in *Handbook of Applications in Chaos Theory*, Eds. C. H. Skiadas and C. Skiadas, CRC Press, Taylor & Francis Group, 2016, ISBN 978-1-4665-9043-4;
6. D. G. Dimitriu, S. Chiriac – Intermittency scenario of transition to chaos in plasma in connection with the nonlinear dynamics of a double layer structure, in *Chaos, Complexity and Transport – Theory and Applications*, Eds. C. Chandre, X. Leoncini and G. Zaslavsky, World Scientific, 2008, ISBN 978-981-281-879-9;
7. D. G. Dimitriu – Rezonanța magnetică nucleară în medicină și biologie – Note de curs, Editura PIM, Iași, 2008, ISBN 9789737168860;
8. G. Strat, M. Strat, S. Gurlui, C. Focsa, D. G. Dimitriu – Self-organization phenomena in polymer and plasma structures, in *Self-organization in nanomaterials*, Eds. P. Boolchand and G. Lucovsky, INOE Publishing House, București, 2008, ISBN 9789738810907;
9. M. Aflori, D. G. Dimitriu – Analiza semnalelor utilizând metode ale dinamicii neliniare, în *Complemente de fizică pentru studenții școlilor doctorale, vol. I*, Eds. L. Dumitrascu, I. Dumitrascu, D. O. Dorohoi, D. G. Dimitriu, G. Apreotesei and M. Aflori, Editura Tehnopress, Iași, 2006, ISBN 9789737023896;
10. D. G. Dimitriu – Instabilități electrostatice în plasma mașinii Q, Editura Demiurg, Iași, 2006, ISBN 9737603273;
11. S. Gurlui, D. G. Dimitriu – Straturi duble în plasmă, Editura Tehnopress, Iași, 2005, ISBN 973702155X;

II. Articole indexate ISI

1. C. Popovici, C. M. Pavel, V. Sunel, C. Cheptea, D. G. Dimitriu, D. O. Dorohoi, D. David, V. Closca, M. Popa – Optimized synthesis of new thiosemicarbazide derivatives with tuberculostatic activity, *International Journal of Molecular Sciences* **22** (2021) 12139;
2. D. O. Dorohoi, D. G. Dimitriu, A. C. Morosanu, N. Puica-Melniciuc, I. Hurjui, M. Miron, G. G. Mariciuc, V. Closca, C. Cheptea – Some aryl-1,2,4-triazol-1-ium phenacylids in binary hydroxyl solvent mixtures. Computational and spectral study, *Symmetry* **13** (2021) 1656;
3. D. O. Dorohoi, D. G. Dimitriu, M. M. Dulcescu-Oprea, A. C. Morosanu, N. Puica-Melniciuc, E. Ardelean, A. Gritco-Todirascu, C. Cheptea – Solvatochromic study of two carbanion monosubstituted 4-tolyl-1,2,4-triazol-1-ium phenacylids in binary hydroxylsolvent mixtures, *Molecules* **26** (2021) 3910;
4. C. T. Konrad-Soare, F. Enescu, D. G. Dimitriu, M. Dobromir, E. G. Teodorescu-Soare, F. Mazzanti, S. A. Irimiciuc, C. Ionita, R. Schrittwieser – Concentric double hollow grid cathode discharges. Spectral investigation and phenomenological approach, *Plasma Sources Science and Technology* **30** (2021) 085006;
5. S. A. Irimiciuc, A. Zala, D. Dimitriu, L. M. Himiniuc, M. Agop, B. F. Toma, L. G. Gavril, D. Vasincu, L. Eva – Novel approach for EEG signal analysis in a multifractal paradigm of motions. Epileptic and eclamptic seizures as scale transitions, *Symmetry* **13** (2021) 1024;
6. A. Zala, D. Dimitriu, M. Agop, D. N. Tesloianu, M. L. Cobzeanu, B. M. Cobzeanu, M. C. Rusu, V. Ghizdovat – Evaluating atrial fibrillation through strange attractors, *General Physiology and Biophysics* **40** (2021) 377-386;
7. C. Cheptea, V. Sunel, A. C. Morosanu, D. G. Dimitriu, M. M. Dulcescu-Oprea, M. D. Angheluta, M. Miron, C. D. Nechifor, D. O. Dorohoi, R. N. Malancus – Optimized synthesis of new N-mustards based on 2-mercaptobenzoxazole derivatives with antitumor activity, *Biomedicines* **9** (5) (2021) 476;
8. M. Agop, S. Irimiciuc, D. Dimitriu, C. M. Rusu, A. Zala, L. Dobreci, A. V. Cotirlut, T. C. Petrescu, V. Ghizdovat, L. Eva, D. Vasincu – Novel approach for EKG signals analysis based on Markovian and non-Markovian fractalization type in scale relativity theory, *Symmetry* **13** (2021) 456;
9. M. M. Dulcescu-Oprea, A. C. Morosanu, D. G. Dimitriu, A. Gritco-Todirascu, D. O. Dorohoi, C. Cheptea – Solvatochromic study of pyridinium-acetyl-benzoyl methylid (PABM) in ternary protic solutions, *Journal of Molecular Structure* **1227** (2021) 129539;
10. D. O. Dorohoi, D. E. Creanga, D. G. Dimitriu, A. C. Morosanu, A. Gritco-Todirascu, G. G. Mariciuc, N. Puica Melniciuc, E. Ardelean, C. Cheptea – Computational and spectral means for characterizing the intermolecular interactions in solutions and for estimating excited state dipole moment of solute, *Symmetry* **12** (2020) 1299;
11. D. Babusca, A. C. Morosanu, D. G. Dimitriu, D. O. Dorohoi, C. Cheptea – Spectroscopic and quantum-chemical study of molecular interactions of iso-quinolinium ylids in polar solutions, *Molecular Crystals and Liquid Crystals* **698** (2020) 87-97;
12. M. Postolache, L. M. Ivan, N. Puica-Melniciuc, G. G. Mariciuc, D. G. Dimitriu, D. O. Dorohoi – Birefringence of binary liquid crystalline mixtures of MBBA and PMAECOB in TCM, interferometric assessment, *Molecular Crystals and Liquid Crystals* **698** (2020) 78-86;

13. L. M. Ivan, D. G. Dimitriu, A. Gritco-Todirascu, A. C. Morosanu, D. O. Dorohoi, C. Cheptea – Excited state dipole moment of two pyridinium-p-nitro-phenylids estimated from solvatochromic study, *Spectroscopy Letters* **53** (1) (2020) 1-11;
14. A. C. Luca, A. C. Morosanu, I. Macovei, D. G. Dimitriu, D. O. Dorohoi, I. S. Stratulat – Variational method for estimating the dipole moment in the second excited state of fluorescein molecule from its electronic UV absorption spectra, *Revista de Chimie* **70** (10) (2019) 3538-3544;
15. I. S. Stratulat, A. Scripa (Tudose), A. I. Barzic, D. G. Dimitriu, D. O. Dorohoi, A. C. Luca – Dispersion of nicotine circular birefringence, *Revista de Chimie* **70** (9) (2019) 3281-3283;
16. C. T. Teodorescu-Soare, S. A. Irimiciuc, C. Ionita, D. G. Dimitriu, B. Hodoroaba, T. O'Hara, O. Vasilovicu, L. Amarandi, R. W. Schrittwieser – Concentric double hollow grid cathode discharges, *International Journal of Mass Spectrometry* **436** (2019) 83-90;
17. A. C. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Excited state dipole moment of the fluorescein molecule estimated from electronic absorption spectra, *Journal of Molecular Structure* **1180** (2019) 723-732;
18. D. Babusca, A. C. Morosanu, A. C. Benchea, D. G. Dimitriu, D. O. Dorohoi – Spectral and quantum mechanical study of some azo-derivatives, *Journal of Molecular Liquids* **269** (2018) 940-946;
19. D. A. M. Androne, D. O. Dorohoi, D. G. Dimitriu, H. U. Kasper – Optical and chemical study of quartz from granitic pegmatites, *Revista de Chimie* **69** (2018) 1846-1850;
20. V. B. Rusyn, L. Pribylova, D. G. Dimitriu – Control of the modified chaotic Chua's circuit using threshold method, *Visnik NTU KPI Serii A – Radiotekhnika Radioaparaturbuduvannia (Bulletin of National Technical University of Ukraine "Kyiv Polytechnic Institute" Seria Radiotechnique. Radioapparatus Building)* **75** (2018) 61-65;
21. A. C. Benchea, D. Babusca, A. C. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Spectral study of Rhodamine dyes in binary solutions, *Journal of Molecular Structure* **1140** (2017) 71-76;
22. A. E. Scripa (Tudose), D. G. Dimitriu, D. O. Dorohoi – Linear birefringence of polymer foils determined by optical means, *Journal of Molecular Structure* **1140** (2017) 67-70;
23. A. C. Morosanu, A. C. Benchea, D. Babusca, D. G. Dimitriu, D. O. Dorohoi – Quantum mechanical and solvatochromic characterization of quercetin, *Analytical Letters* **50** (2017) 2725-2739;
24. A. C. Benchea, D. Babusca, C. Podlipnik, D. G. Dimitriu – Solvatochromic and quantum-mechanical characterization of Methyl Red, *Analytical Letters* **50** (2017) 2711-2724;
25. D. Babusca, A. C. Benchea, D. G. Dimitriu, D. O. Dorohoi – Spectral and quantum mechanical characterization of 3-(2-Benzothiazolyl)-7-(Diethylamino) Coumarin (Coumarin 6) in binary solutions, *Analytical Letters* **50** (2017) 2740-2754;
26. R. W. Schrittwieser, C. Ionita, C. T. Teodorescu-Soare, O. Vasilovici, S. Gurlui, S. A. Irimiciuc, D. G. Dimitriu – Spectral and electrical diagnosis of complex space-charge structures excited by a spherical grid with orifice, *Physica Scripta* **92** (2017) 044001;
27. A. C. Benchea, D. Babusca, D. G. Dimitriu, D. O. Dorohoi – Quantum-mechanical study and spectral analysis of some derivatives of Rhodamine in solutions, *Spectrochimica Acta A* **172** (2017) 91-99;
28. M. Strat, E. Buruiana, D. Dumitriu, A. V. Sandu, S. Gurlui – Photophysical and photochemical properties of polyurethane coumarin studied by means of electronic spectra, *Revista de Chimie* **68** (2017) 1568-1572;
29. A. E. Scripa (Tudose), D. G. Dimitriu, D. O. Dorohoi – Dispersion of the visible rotatory power for aqueous glucose solutions, *University Politehnica of Bucharest Scientific Bulletin Series A – Applied Mathematics and Physics* **79** (2017) 307-313;
30. M. Gaina, A. C. Benchea, C. Podlipnik, D. G. Dimitriu – Quantum-mechanical characterization and spectral study of curcumin, *University Politehnica of Bucharest Scientific Bulletin Series B – Chemistry and Materials Science* **79** (2017) 133-142;
31. D. Babusca, A. C. Benchea, D. G. Dimitriu, D. O. Dorohoi – Solvatochromic characterization of Sudan derivatives in binary and ternary solutions, *Analytical Letters* **49** (16) (2016) 2615-2626;
32. A. C. Benchea, D. Babusca, D. G. Dimitriu, D. O. Dorohoi – Quantum mechanical and absorption spectral characterization of Rhodamine B in ternary solution, *Analytical Letters* **49** (16) (2016) 2606-2614;
33. C. T. Teodorescu-Soare, D. G. Dimitriu, C. Ionita, R. W. Schrittwieser – Experimental investigations of the nonlinear dynamics of a complex space-charge configuration inside and around a grid cathode with hole, *Physica Scripta* **91** (2016) 034002;
34. D. G. Dimitriu, S. A. Irimiciuc, S. Popescu, M. Agop, C. Ionita, R. W. Schrittwieser – On the interaction between two fireballs in low-temperature plasma, *Physics of Plasmas* **22** (2015) 113511;
35. D. O. Dorohoi, D. G. Dimitriu, I. Dumitrascu, C. B. Zelinschi, I. Breaban – Interferential method to determine the optical rotatory dispersion of crystalline layers, *U.P.B. Scientific Bulletin A* **77** (2015) 253-260;
36. V. Nedeff, G. Lazar, M. Agop, L. Eva, L. Ochiuz, D. Dimitriu, L. Vrajitoriu, C. Popa – Solid components separation from heterogeneous mixtures through turbulence control, *Powder Technology* **284** (2015) 170-186;
37. A. I. Barzic, D. G. Dimitriu, D. O. Dorohoi – Optical rotatory dispersion of Poly(propylene oxide) in Benzene solution determined from channelled spectra, *International Journal of Polymer Analysis and Characterization* **20** (2015) 565-571;
38. A. Barzic, D. Dimitriu, D. Dorohoi – New method for determining the optical rotatory dispersion of hydroxypropyl cellulose polymer solutions in water, *Polymer Engineering & Science* **55** (2015) 1077-1081;
39. S. A. Irimiciuc, O. Vasilovici, D. G. Dimitriu – Chua's circuit: control and synchronization, *International Journal of Bifurcation and Chaos* **25** (2015) 1550050;
40. I. A. Cosutchi, D. G. Dimitriu, C. B. Zelinschi, I. Breaban, D. O. Dorohoi – Optical activity of transparent polymer layers characterized by spectral means, *Journal of Molecular Structure* **1090** (2015) 39-43;
41. D. G. Dimitriu, D. O. Dorohoi – New method to determine the optical rotatory dispersion of inorganic crystals applied to some samples of Carpathian Quartz, *Spectrochimica Acta A* **131** (2014) 674-677;
42. M. Agop, D. G. Dimitriu, L. Vrajitoriu, M. Boicu – Order to chaos transition in plasma via non-differentiability. Experimental and theoretical investigations, *Journal of the Physical Society of Japan* **83** (2014) 054501 1-11;
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V. Lucrări prezentate la conferințe internaționale (invitate, orale, poster)

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2. I. D. C. Vizitiu, D. G. Dimitriu, D. O. Dorohoi – Estimation of the molecule-molecule interaction energy by using the statistical cell model of ternary solutions, *TIM 20-21 Physics Conference*, Timisoara, Romania, 11-13 November 2021;
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5. D. Babusca, C. A. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Combined solvatochromism and quantum mechanical computations in study regarding the solute-solvent interactions in some azo-derivatives solutions, *XXVth „Galyna Puchkovska” International School-Seminar „Spectroscopy of Molecules and Crystals” (ISSSMC)*, Kyiv, Ukraine, 21-24 September 2021 (conferință orală, 23 September 10.00-10.20);
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8. C. Popovici, V. Sunel, D. G. Dimitriu, D. O. Dorohoi, M. Popa, C. Cheptea – Synthesis of 1-(5-nitro-benzimidazol-2`-yl-sulfonyl-acetyl)-4-aryl-thiosemicarbazide with biological potential, *XXVth „Galyna Puchkovska” International School-Seminar „Spectroscopy of Molecules and Crystals” (ISSSMC)*, Kyiv, Ukraine, 21-24 September 2021;
9. C. B. Zelinski, E. A. Angheluta, L. Dumitrascu, D. O. Dorohoi, D. G. Dimitriu – Spectral methods for estimating the excited state dipole moments of the spectrally active molecules, *XXVth „Galyna Puchkovska” International School-Seminar „Spectroscopy of Molecules and Crystals” (ISSSMC)*, Kyiv, Ukraine, 21-24 September 2021;
10. M. Dimitriu, V. Closca, D. Babusca, G. Mariciuc, D. O. Dorohoi, D. G. Dimitriu – Spectral methods to estimate the strength of intermolecular interactions in liquids, *XXVth „Galyna Puchkovska” International School-Seminar „Spectroscopy of Molecules and Crystals” (ISSSMC)*, Kyiv, Ukraine, 21-24 September 2021;
11. F. Enescu, C. T. Konrad-Soare, D. G. Dimitriu, C. Ionita, R. W. Schrittwieser – Spectral investigations on coaxial double transparent cathode discharges, *Joint Annual Meeting of the Austrian Physical Society and Swiss Physical Society*, Innsbruck, Austria, 30 August – 3 September 2021 (conferință orală, 2 September 18.45-19.00);
12. R. Schrittwieser, C. T. Konrad-Soare, D. G. Dimitriu, F. Enescu, C. Ionita-Schrittwieser, S. Irimiciuc – Interaction between three fireballs in low temperature plasma, *Joint Annual Meeting of the Austrian Physical Society and Swiss Physical Society*, Innsbruck, Austria, 30 August – 3 September 2021;
13. C. T. Konrad-Soare, C. Ionita, D. G. Dimitriu, F. Enescu, R. Schrittwieser – Nonlinear dynamics of a concentric double-grid cathode discharge, *Joint Meeting: International Conference on Electromagnetics in Advanced Applications, IEEE-APS Topical Conference on*

Antennas and Propagation in Wireless Communications, USNC-URSI Radio Science Meeting, hybrid format, Honolulu, Hawaii, USA, 9-13 august 2021;

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15. V. Ghizdovat, C. Stefanescu, I. C. Grierosu, D. Dimitriu, A. I. Saviuc, M. Frasila, S. A. Irimiciuc, R. Iacob, M. Agop – A statistical interpretation of the classical action with implications in the dynamics of non-linear growth biostructures, *8th International Conference on e-Health and Bioengineering*, Iași, 29-30 octombrie 2020 (conferință orală);
16. D. G. Dimitriu, S. Popescu, M. Agop – Chaotic states of plasma triggered by the nonlinear dynamics of simple and multiple double layers, *13th Chaotic Modeling and Simulation International Conference (CHAOS 2020)*, Florence, Italy, 9-12 June 2020 (conferință orală);
17. D. G. Dimitriu, S. Popescu, M. Agop – Double layer in plasma as an interface generated through the interaction of two fractal fluids, *13th Chaotic Modeling and Simulation International Conference (CHAOS 2020)*, Florence, Italy, 9-12 June 2020 (conferință orală);
18. M. Agop, A. Zala, D. Dimitriu, S. Irimiciuc, A. Gavrilut, G. Crumpei, L. Eva – Statistical methods and nonlinear dynamics for analyzing brain activity. Theoretical and experimental aspects, *13th Chaotic Modeling and Simulation International Conference (CHAOS 2020)*, Florence, Italy, 9-12 June 2020 (conferință orală);
19. R. Schrittwieser, C. T. Teodorescu-Soare, F. Enescu, C. Ionita, D. G. Dimitriu, S. Gurlui, F. Mazzanti, S. A. Irimiciuc, B. Hodoroaba, T. O'Hara, O. Vasilovici, L. Amarandi – Oscillatory behavior of hollow grid cathode discharge, *21st International Conference on Electromagnetics in Advanced Applications & 9th IEEE-APS Technical Conference on Antennas and Propagation in Wireless Communications*, Granada, Spain, 9-13 September 2019 (conferință invitată);
20. R. Schrittwieser, C. T. Teodorescu-Soare, C. Ionita, D. G. Dimitriu, O. Vasilovici, S. Gurlui, S. A. Irimiciuc, B. Hodoroaba, T. O'Hara, L. Amarandi, F. Enescu, F. Mazzanti, R. Stenzel, J. Gruenwald – Inverted fireballs, *18th International Conference on Plasma Physics and Applications (CPPA)*, Iași, România, 20-22 June 2019 (conferință invitată);
21. D. G. Dimitriu, S. A. Irimiciuc, M. Agop – Nonlinear dynamics of non-concentric multiple double layers as a source of low-temperature plasma instabilities, *18th International Conference on Plasma Physics and Applications*, Iași, România, 20-22 June 2019;
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25. S. Popescu, D. G. Dimitriu – Nonlinear dynamics of complex space charge structures at the origin of low-frequency plasma instabilities, *12th CHAOS International Conference on Non Linear Analysis and Modeling: Theory and Applications*, Chania, Greece, 18-21 June 2019 (conferință orală);
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28. C. T. Teodorescu-Soare, F. Enescu, C. Ionita, D. G. Dimitriu, S. Gurlui, F. Mazzanti, R. W. Schrittwieser – Spectral investigations of concentric double hollow grid cathode discharges, *46th EPS Conference on Plasma Physics*, Milan, Italy, 8-12 July 2019;
29. D. G. Dimitriu – On the instabilities of complex space charge structures in low-temperature plasma, *2nd EPS Conference on Statistical and Nonlinear Physics*, Stockholm, Sweden, 7-11 May 2019;
30. D. Babusca, A. C. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Aminoacid derivatives containing rest of 1,2,4-Triazole-3,4-Disubstituted with potential antitumoral activity, *XXIV Galyna Puchkovska International School-Seminar "Spectroscopy of Molecules and Crystals"*, Odesa, Ukraine, 25-30 August 2019;
31. D. Babusca, A. C. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Spectral study of intermolecular interactions in polar solutions, *XXIV Galyna Puchkovska International School-Seminar "Spectroscopy of Molecules and Crystals"*, Odesa, Ukraine, 25-30 August 2019;
32. V. Rusyn, L. Pribylova, D. Dimitriu, M. Guzan – Security information system based on chaotic system, *3rd International Scientific and Practical Conference "Information Security and Computer Technology"*, Kirovohrad, Ukraine, 19-20 April 2018;
33. S. A. Irimiciuc, G. Bulai, D. G. Dimitriu, S. Gurlui – Role of molecule formation and multiple – structure scenarios in dynamics of laser produced plasma, *Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG 2018)*, Glasgow, UK, 17-21 July 2018;
34. D. G. Dimitriu, S. A. Irimiciuc – Transition to chaos by intermittency of multiple fireball dynamics in low-temperature discharge plasma, *Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG 2018)*, Glasgow, UK, 17-21 July 2018;
35. S. A. Irimiciuc, D. G. Dimitriu, M. Agop – Experimental and theoretical investigations of the interaction between two complex space charge structures in hollow grid cathode discharge plasma, *Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG 2018)*, Glasgow, UK, 17-21 July 2018;
36. C. T. Teodorescu-Soare, D. G. Dimitriu, O. Vasilovici, C. Ionita, S. Irimiciuc, R. Schrittwieser – Experimental investigation of a discharge between two spherical concentric grids with axisymmetric holes, *19th International Congress on Plasma Physics*, Vancouver, Canada, 4-8 June 2018;
37. S. Popescu, D. G. Dimitriu – On energy transformation and entropy production in a DC gas discharge, *Entropy 2018 – From Physics to Information Sciences and Geometry*, Barcelona, Spain, 14-16 May 2018;
38. S. A. Irimiciuc, D. G. Dimitriu, M. Agop – Appearance and instability of non-concentric multiple double layers in low-temperature discharge plasma, *11th Chaotic Modeling and Simulation International Conference*, Rome, Italy, 5-8 June 2018 (conferință orală);

39. S. A. Irimiciuc, D. G. Dimitriu, M. Agop – A compact non-differential approach for modelling laser ablation plasma dynamics, *11th Chaotic Modeling and Simulation International Conference*, Rome, Italy, 5-8 June 2018 (conferință orală);
40. D. G. Dimitriu, S. A. Irimiciuc, M. Agop – Self-modulated oscillation in the dynamics of a hollow grid cathode discharge plasma, *11th Chaotic Modeling and Simulation International Conference*, Rome, Italy, 5-8 June 2018 (conferință orală);
41. M. Agop, S. A. Irimiciuc, D. G. Dimitriu – Transition to chaos through intermittency related to the nonlinear dynamics of non-concentric multiple double layers in low-temperature plasma, *11th Chaotic Modeling and Simulation International Conference*, Rome, Italy, 5-8 June 2018 (conferință orală);
42. D. G. Dimitriu, S. A. Irimiciuc, M. Agop – On the appearance and dynamics of multiple complex space charge structures in low-temperature discharge plasma, *Conference on Complex Systems (CCS 2018)*, Thessaloniki, Greece, 23-28 September 2018;
43. D. G. Dimitriu, S. A. Irimiciuc, M. Agop – Investigation of the interaction between two complex space charge structures in low-temperature plasma, *Conference on Complex Systems (CCS 2018)*, Thessaloniki, Greece, 23-28 September 2018;
44. A. C. Morosanu, A. Gritco (Todirascu), D. G. Dimitriu, D. O. Dorohoi, C. Cheptea – Quantum mechanical and spectral study of fluorescein, *6th IEEE International Conference on E-Health and Bioengineering (EHB 2017)*, Sinaia, România, 22-24 June 2017;
45. S. A. Irimiciuc, D. G. Dimitriu, M. Agop – Self-modulation of the discharge current oscillations in the presence of a complex space charge configuration in low-temperature plasma, *17th International Conference on Plasma Physics and Applications*, Măgurele, București, România, 15-20 June 2017;
46. D. G. Dimitriu, M. Agop – Spontaneous symmetry breaking related to the onset of instabilities in low-temperature plasma, *1st International Conference on Symmetry*, Barcelona, Spain, 16-18 October 2017;
47. D. G. Dimitriu, M. Agop – Theoretical and experimental analysis of low-frequency instabilities in low-temperature magnetized plasma, *10th Chaotic Modeling and Simulation International Conference (CHAOS 2017)*, Barcelona, Spain, 30 May – 2 June 2017;
48. D. G. Dimitriu, S. A. Irimiciuc, M. Agop – Theoretical modeling of the interaction between two complex space charge structures in low-temperature plasma – Self-modulated oscillations, *10th Chaotic Modeling and Simulation International Conference (CHAOS 2017)*, Barcelona, Spain, 30 May – 2 June 2017;
49. S. Gurlui, M. M. Cazacu, A. Timofte, G. Bulai, D. G. Dimitriu – Space- and time-resolved RAMN and breakdown spectroscopy: advanced LIDAR techniques, *28th International Laser Radar Conference (ILRC)*, București, România, 25-30 June 2017;
50. R. Schrittwieser, C. T. Teodorescu-Soare, D. G. Dimitriu, S. Gurlui, C. Ionita, O. Vasilovici – Complex space charge structures excited by a spherical grid cathode, *16th International Balkan Workshop on Applied Physics (IBWAP)*, Constanța, România, 7-9 July 2016 (conferință invitată);
51. A. E. Scripa (Tudose), D. G. Dimitriu, D. O. Dorohoi – Optical activity of glucose solutions, *5th International Colloquium "Physics of Materials" (PM5)*, București, România, 10-11 November 2016;
52. A. C. Benchea, M. Gaina, D. G. Dimitriu, D. O. Dorohoi – Spectral study on ternary solutions consisting of Rhodamines, Ethylene glycol and DMSO, *5th International Colloquium "Physics of Materials" (PM5)*, București, România, 10-11 November 2016;
53. C. A. Morosanu, V. Closca, D. G. Dimitriu, D. O. Dorohoi – Electric dipole moments in the excited states of some zwitterionic compounds estimated from a solvatochromic study, *5th International Colloquium "Physics of Materials" (PM5)*, București, România, 10-11 November 2016;
54. M. Gaina, A. C. Benchea, C. Podlipnik, D. G. Dimitriu – Quantum-mechanical characterization and spectral study of Curcumin, *5th International Colloquium "Physics of Materials" (PM5)*, București, România, 10-11 November 2016;
55. A. E. Tudose, D. G. Dimitriu, D. O. Dorohoi – Linear birefringence dispersion of PET (poly ethyleneterephthalate) foils determined from visible channelled spectra, *33rd European Congress on Molecular Spectroscopy (EUCMOS)*, Szeged, Hungary, 30 July – 4 August 2016;
56. A. C. Benchea, D. Babusca, C. A. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Spectral study of Rhodamine dyes in binary and ternary solutions, *33rd European Congress on Molecular Spectroscopy (EUCMOS)*, Szeged, Hungary, 30 July – 4 August 2016;
57. A. C. Benchea, D. Babusca, C. A. Morosanu, D. G. Dimitriu, D. O. Dorohoi – Spectral and quantum mechanical study of some azo derivatives, *33rd European Congress on Molecular Spectroscopy (EUCMOS)*, Szeged, Hungary, 30 July – 4 August 2016;
58. S. Gurlui, C. T. Teodorescu-Soare, D. G. Dimitriu, R. Schrittwieser, C. Ionita – Optical and electrical investigations of a complex space charge structure excited by a spherical grid cathode with a hole, *27th Symposium on Plasma Physics and Technology (SPPT)*, Prague, Czech Republic, 20-23 June 2016;
59. D. Babusca, A. C. Benchea, D. G. Dimitriu, D. O. Dorohoi – Spectral and quantum mechanical study of 3-(2-benzothiazolyl)-7-(diethylamino)-coumarin in binary solutions, *4th International Conferences on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences (IC-ANMBES 2016)*, Brașov, România, 29 June – 1 July 2016;
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ANEXA 2 – Lista granturilor de cercetare coordonate în calitate de director de proiect

1. Instabilități electrostatice în plasmă magnetizată și nemagnetizată de temperatură joasă (acronim INSTAPLAS), grant PNCDI III – IDEI, nr. 193/2017, 2017-2019, valoare 775700 RON;
2. Structuri autoorganizate în plasmă, grant PNCDI II – CAPACITĂȚI, bilateral România – Austria, nr. 747/2014, 2014-2015, valoare 28400 RON;
3. Studiul interacțiunii plasmei cu sisteme complexe, grant PNCDI II – CAPACITĂȚI, bilateral România – Austria, nr. 557/2012, 2012-2013, valoare 44000 RON;
4. Identificarea mecanismelor fizice aflate la originea apariției structurilor spațiale și spațio-temporale în plasmă. Aplicații, grant PNCDI II – IDEI, nr. 56/2007, 2007-2010, valoare 1000000 RON;
5. Instabilități electrostatice în plasmă. Metode de control, grant CEEEX modulul II tip ET, nr. 5912/2006, 2006-2008, valoare 140000 RON;
6. Structuri complexe de sarcini spațiale în plasmă. Modele fizice. Aplicații, grant CEEEX modulul II tip ET, nr. 1499/2006, 2006-2008, valoare 140000 RON;
7. Dezvoltarea unui model fizic pentru straturile duble multiple din plasmă, grant CNCSIS tip AT, nr. 60GR/2006, 2006-2007, valoare 69000 RON;
8. Dezvoltarea unor metode experimentale de control a haosului în dispozitive cu plasmă, grant CNCSIS tip AT, nr. 33373/2004, 2004-2005, 25000 RON;

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