

Curriculum Vitae

Personal information

First name(s) / Surname(s) Dan-Gheorghe DIMITRIU
Telephone(s) +40-232-201183 Mobile: +40-757-039815
Fax +40-232-201150
E-mail dimitriu@uaic.ro
Nationality Romanian
Date of birth 10.01.1972
Gender Male
Marital status Married (2 children)

Work experience

Dates 2008-present
Occupation or position held Associated Professor
Main activities and responsibilities Education and Research
Name and address of employer Alexandru Ioan Cuza University of Iasi, 11 Carol I Blvd., RO-700506, Iasi, Romania
Type of business or sector High Education

Dates 2003-2008
Occupation or position held Lecturer
Main activities and responsibilities Education and Research
Name and address of employer Alexandru Ioan Cuza University of Iasi, 11 Carol I Blvd., RO-700506, Iasi, Romania
Type of business or sector High Education

Dates 2002-2003
Occupation or position held Associated Lecturer
Main activities and responsibilities Education and Research
Name and address of employer Alexandru Ioan Cuza University of Iasi, 11 Carol I Blvd., RO-700506, Iasi, Romania
Type of business or sector High Education

Education and training

Dates July 2008
Title of qualification awarded Diploma of participation
Principal subjects/occupational skills covered Workshop "Physics and Chemistry of the Atmosphere: From Laboratory Experiments to Field Campaigns"
Name and type of organisation providing education and training "Ovidius" University, Constanta, Romania

Dates August-September 2006
Title of qualification awarded Diploma of participation and completion
Principal subjects/occupational skills covered International Workshop on Frontiers of Plasma Science
Name and type of organisation providing education and training "Abdus Salam" International Centre for Theoretical Physics, Miramare, Trieste, Italy

Dates July 2006
Title of qualification awarded Diploma of participation
Principal subjects/occupational skills covered Workshop "Physics and Chemistry of the Atmosphere: From Laboratory Experiments to Field Campaigns"
Name and type of organisation providing education and training Alexandru Ioan Cuza University, Iasi, Romania

Dates	June 2005
Title of qualification awarded	Diploma of participation
Principal subjects/occupational skills covered	International Workshop and School "Towards Fusion Energy – Plasma Physics, Diagnostics, Spin-offs", Kudowa Zdroj
Name and type of organisation providing education and training	Institute of Plasma Physics and Laser Microfusion, Warsaw, Poland
Dates	September 2005
Title of qualification awarded	Diploma of participation and completion
Principal subjects/occupational skills covered	Autumn College on Plasma Physics
Name and type of organisation providing education and training	"Abdus Salam" International Centre for Theoretical Physics, Miramare, Trieste, Italy
Dates	June 2004
Title of qualification awarded	Diploma of participation
Principal subjects/occupational skills covered	International Workshop and School "Towards Fusion Energy – Plasma Physics, Diagnostics, Applications", Kudowa Zdroj
Name and type of organisation providing education and training	Institute of Plasma Physics and Laser Microfusion, Warsaw, Poland
Dates	July 2004
Title of qualification awarded	Diploma of participation and completion
Principal subjects/occupational skills covered	Workshop on Theoretical Plasma Physics
Name and type of organisation providing education and training	"Abdus Salam" International Centre for Theoretical Physics, Miramare, Trieste, Italy
Dates	October-November 2003
Title of qualification awarded	Diploma of participation and completion
Principal subjects/occupational skills covered	Autumn College on Plasma Physics "Long-Lived Structures and Self Organization in Plasmas"
Name and type of organisation providing education and training	"Abdus Salam" International Centre for Theoretical Physics, Miramare, Trieste, Italy
Dates	October-November 2003
Title of qualification awarded	Attendance certificate
Principal subjects/occupational skills covered	Minicourse on Turbulence
Name and type of organisation providing education and training	"Abdus Salam" International Centre for Theoretical Physics, Miramare, Trieste, Italy
Dates	June 2003
Title of qualification awarded	Diploma of participation
Principal subjects/occupational skills covered	Summer School on Plasma Physics and Applications
Name and type of organisation providing education and training	Alexandru Ioan Cuza University of Iasi, Romania
Dates	1998-2002
Title of qualification awarded	MSc.
Principal subjects/occupational skills covered	Nonlinearity and Self-organization in Complex Systems
Name and type of organisation providing education and training	Alexandru Ioan Cuza University
Dates	1996-2002
Title of qualification awarded	PhD. with MAGNA CUM LAUDAE

Principal subjects/occupational skills covered
Physics

Name and type of organisation providing education and training
Alexandru Ioan Cuza University

Dates
1995-1996

Title of qualification awarded
MSc.

Principal subjects/occupational skills covered
Plasma Physics and Spectroscopy

Name and type of organisation providing education and training
Alexandru Ioan Cuza University

Dates
1990-1995

Title of qualification awarded
Bachelor

Principal subjects/occupational skills covered
Technological Physics

Name and type of organisation providing education and training
Alexandru Ioan Cuza University

Personal skills and competences

Mother tongue(s) **Romanian**

English

Self-assessment
European level ()*

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user

(*) [Common European Framework of Reference for Languages](#)

The grid consists of three broad levels as follows:

- Basic user (levels A1 and A2);
- Independent user (levels B1 and B2);
- Proficient user (levels C1 and C2).

Please replace the above example with the appropriate level you scale yourself. For example, level 1 (A, B, C) is lower than level 2 (A, B, C)

Professional skills and competences

Organisational skills and competences

- Expert-evaluator (INTAS/SEE-ERA.NET, Romanian University Research Council, Romanian Authority for Scientific Research)
- Referee (New Journal of Physics, Physics of Plasmas, Plasma Physics and Controlled Fusion, Physics Letters A, IEEE Transactions on Plasma Science, Physica Scripta, Fizika A, Czechoslovak Journal of Physics)
- Member in the Scientific Committee of two national conferences (National Conference on Applied Physics, Iasi, 2006 and Workshop of the Students Scientific Groups from University Centre Iasi, 2007)
- Member in the Organizing Committee of two national conferences (12th Conference on Plasma Physics and Applications, Iasi, 2003 and 13th Conference on Plasma Physics and Applications, Iasi, 2005)
- Director of 5 national research grants

Scientific research activity

a) fields of expertise: environmental science, plasma physics, chaos and self-organization, spectroscopy, nuclear magnetic resonance. Author and co-author of 36 articles in ISI-quoted journals, 6 books and books chapters, 57 articles in international and national journals (non-ISI-quoted), 156 contributions to international conferences (from which 10 invited talks), 74 contributions to national conferences.

b) Director of 5 national scientific grants and member in the teams of 3 international scientific grants and 11 national scientific grants.

c) 141 ISI citations, H-index = 7

Computer skills and competences Office, LaTeX, Corel, Origin, Maple, Santis, NDT

Additional information

- Guest professor at the Leopold-Franzens University of Innsbruck, Austria, in 2011, Delivered course: Chaos and Self-Organization in Plasma;
- Invited professor at the Leopold-Franzens University of Innsbruck, Austria, in 2006, in the frame of Erasmus-Socrates program. Delivered courses: Labcourse in Plasma Diagnosis, Complex Space Charge Structures in Plasma, Nonlinear Dynamics Techniques for Time Series Analysis;
- 16 stages in international universities, institutes and laboratories, 33 months totally: Institute of Ion Physics and Applied Physics, Leopold-Franzens University of Innsbruck, Austria; Paris-Sud XI Orsay University, Paris, France; "Abdus Salam" International Centre for Theoretical Physics, Trieste, Italy; Polytechnic University of Madrid, Spain; University Lille 1, France.
- Member of the European Physical Society (from 2002), Romanian Physical Society (from 2002), American Physical Society (from 2007), IEEE (from 2007) and European Complex System Society (from 2007).

PARTICIPATION IN FUNDED PROJECTS

- "The study of polymer-laser radiation interactions in controlled atmosphere. Laser ablation nanostructured thin films layers. Applications.", PN-II-ID-PCE-2011-3-0650, 2011-2014;
- "Romanian Atmospheric Research 3D Observatory (RADO)", funded by Innovation Norway, STVES 115266/2008; 2008-2010;
- "Join Physicist in Festival (My Physics, My World)", FP7-PEOPLE, 244978/2009, 2009;
- "Romanian Network of LIDAR systems", PN II Cooperation, 31-002/2007, 2007-2010;
- "Identification of the physical mechanisms being at the origin of the appearance of spatial and spatio-temporal structures in plasma. Applications", PN II ID_409, 2007-2010 – **as grant director**;
- "Electrostatic instabilities in plasma. Control methods", CEEX type II – Excellence research projects for young researchers, 5912/2006, ET 71, 2006-2008 – **as grant director**;
- "Complex space charge structures in plasma. Physical models. Applications", CEEX type II – Excellence research projects for young researchers, 1499/2006, ET 69, 2006-2008 – **as grant director**;
- "New methods and technologies to investigate complex plasma nanostructures obtained through laser ablation. Technological applications", CEEX type II – Excellence research projects for young researchers, 5879/2006, ET 70, 2006-2008;
- "Development of a physical model for multiple double layers in plasma", grant CNCSIS, 60GR/2006, AT 188, 2006-2007 – **as grant director**;
- "Studies on the matter self-organization for nano-science and nano-technologies", grant CNCSIS, 33373/2006, A 620, 2004-2006;
- "Development of some experimental methods to control the chaos in plasma devices", grant CNCSIS, 33373/2004, AT 70, 2004-2005 – **as grant director**;
- "Study of the physical processes and phenomena from plasma double layers and biological cell membranes. Analogies and applications", grant CNCSIS, 33373/2004, AT 71, 2004-2005;
- "Study of the self-organized structures of Turing type in plasma devices", grant CNCSIS, 33373/2004, AT 74, 2004-2005;
- "Role of the collective effects in the genesis of self-organized systems", grant CNCSIS, 35252/2001, A 292, 2001-2003;
- "Study of the processes and phenomena from electrical discharges (unhomogeneous) in atomic and molecular gases. Theoretical models and applications", grant CNCSIS, 33531/2002, AT 284, 2002-2003;
- "Study of the spatio-temporal behaviour and the evolution control of an RF plasmoid", grant CNCSIS, 35252/2001, AT 151, 2001-2002;
- "Study of the fundamental processes being at the origin of some self-organized complex systems", funded by World Bank, 28199/2000, 2000-2002;
- "Study of the elucidation of the processes being at the origin of the nonlinear behaviour of some self-organized structures in physics, chemistry and biology. Application: environment sensors", grant CNCSIS, 15/1998, A 169, 1998-2000;
- "Study of the nonlinear behaviour of some instabilities generated in devices in which plasma is considered as collisionless", funded by Romanian Academy, 4087/1999, 1999.

LIST OF ISI INDEXED PAPERS

1. D. G. Dimitriu, V. Ignatescu, C. Ionita, E. Lozneanu, M. Sanduloviciu, R. Schrittwieser – The influence of electron impact ionizations on low frequency instabilities in a magnetized plasma, *International Journal of Mass Spectrometry* **223-224** (2003) 141-158, ISSN 1387-3806;
2. E. Lozneanu, D. G. Dimitriu, C. Gaman, C. Furtuna, E. Filep, M. Sanduloviciu – Self-organization at the origin of different states of plasma produced in dc and hf electric fields, *Acta Physica Slovaca* **54** (1) (2004) 1-6, ISSN 0323-0465;
3. D. G. Dimitriu, C. Gaman, M. Mihai-Plugaru, G. Amarandei, C. Ionita, E. Lozneanu, M. Sanduloviciu, R. Schrittwieser – Simple experimental methods to control the chaos in DP machine plasma, *Acta Physica Slovaca* **54** (2) (2004) 89-96, ISSN 0323-0465;
4. D. G. Dimitriu – Physical processes related to the onset of low-frequency instabilities in magnetized plasma, *Czechoslovak Journal of Physics* **54** (Suppl. C) (2004) C468-C474, ISSN 0011-4626;
5. C. Ionita, D. G. Dimitriu, R. Schrittwieser – Elementary processes at the origin of the generation and dynamics of multiple double layers in DP machine plasma, *International Journal of Mass Spectrometry* **233** (1-3) (2004) 343-354, ISSN 1387-3806;
6. M. Sanduloviciu, D. G. Dimitriu, L. M. Ivan, M. Aflori, C. Furtuna, S. Popescu, E. Lozneanu – Self-organization scenario relevant for nanoscale science and technology, *Journal of Optoelectronics and Advanced Materials* **7** (2) (2005) 845-851, ISSN 1454-4164;

7. M. Aflori, G. Amarandei, L. M. Ivan, M. Mihai-Plugaru, D. G. Dimitriu, C. Ionita, R. Schrittwieser – Experimental control of the generation and dynamics of a complex space charge structure in a double plasma machine, *Acta Physica Slovaca* **55** (5) (2005) 423-427, ISSN 0323-0465;
8. M. Aflori, G. Amarandei, L. M. Ivan, D. G. Dimitriu, D. Dorohoi – Estimating particle temperature for an argon-oxygen discharge by using Langmuir probe and optical emission spectroscopy, *Acta Physica Slovaca* **55** (6) (2005) 491-499, ISSN 0323-0465;
9. L. M. Ivan, G. Amarandei, M. Aflori, M. Mihai-Plugaru, D. G. Dimitriu, C. Ionita, R. Schrittwieser – Physical processes at the origin of the appearance and dynamics of multiple double layers, *Acta Physica Slovaca* **55** (6) (2005) 501-506, ISSN 0323-0465;
10. M. Aflori, G. Amarandei, L. M. Ivan, D. G. Dimitriu, M. Sanduloviciu – Experimental observation of multiple double layers structures in plasma. Part I: Concentric multiple double layers, *IEEE Transactions on Plasma Science* **33** (2) (2005) 542-543, ISSN 0093-3813;
11. L. M. Ivan, G. Amarandei, M. Aflori, M. Mihai-Plugaru, C. Gaman, D. G. Dimitriu, M. Sanduloviciu – Experimental observation of multiple double layers structures in plasma. Part II: Non-concentric multiple double layers, *IEEE Transactions on Plasma Science* **33** (2) (2005) 544-545, ISSN 0093-3813;
12. D. G. Dimitriu – Plasma fusion torus as a complex space charge structure, *Journal of Optoelectronics and Advanced Materials* **8** (1) (2006) 128-131, ISSN 1454-4164;
13. S. Chiriac, M. Aflori, D. G. Dimitriu – Investigation of the bistable behaviour of multiple anodic structures in dc discharge plasma, *Journal of Optoelectronics and Advanced Materials* **8** (1) (2006) 135-138, ISSN 1454-4164;
14. M. Mihai-Plugaru, L. M. Ivan, D. G. Dimitriu – Space charge configuration formed in weakly magnetized diffusion plasma, *Journal of Optoelectronics and Advanced Materials* **8** (1) (2006) 156-159, ISSN 1454-4164;
15. D. G. Dimitriu, E. Lozneau, M. Sanduloviciu – Plasma experiments with relevance for nano-science, *Journal of Optoelectronics and Advanced Materials* **8** (3) (2006) 967-970, ISSN 1454-4164;
16. C. Ionita, D. G. Dimitriu, R. W. Schrittwieser – Complex space charge structures in laboratory and natural plasmas, *Journal of Optoelectronics and Advanced Materials* **9** (9) (2007) 2954-2959, ISSN 1454-4164;
17. D. G. Dimitriu, M. Aflori, L. M. Ivan, C. Ionita, R. Schrittwieser – Common physical mechanism for concentric and non-concentric multiple double layers in plasma, *Plasma Physics and Controlled Fusion* **49** (3) (2007) 237-248, ISSN 0741-3335;
18. S. A. Chiriac, D. G. Dimitriu, M. Sanduloviciu – Type I intermittency related to the spatio-temporal dynamics of double layers and ion-acoustic instabilities in plasma, *Physics of Plasmas* **14** (7) (2007) 072309 1-5, ISSN 1070-664X;
19. S. Chiriac, L. M. Ivan, D. G. Dimitriu – Intermittency scenario of transition to chaos in plasma related to the non-concentric multiple double layers, *Romanian Journal of Physics* **53** (1-2) (2008) 303-309, ISSN 1221-146X;
20. G. Amarandei, D. G. Dimitriu, A. K. Sarma, P. C. Balan, T. Klinger, O. Grulke, C. Ionita, R. Schrittwieser – Studies on the suitable materials for a laser-heated electron-emissive plasma probe, *Romanian Journal of Physics* **53** (1-2) (2008) 311-316, ISSN 1221-146X;
21. L. M. Ivan, S. A. Chiriac, G. Amarandei, D. G. Dimitriu – Experimental basis of a common physical mechanism for the concentric and non-concentric multiple double layers in plasma, *Romanian Journal of Physics* **53** (1-2) (2008) 317-324, ISSN 1221-146X;
22. M. Mihai-Plugaru, L. M. Ivan, D. G. Dimitriu – Experimental investigation of a firerod in weakly magnetized diffusion plasma, *Romanian Journal of Physics* **53** (1-2) (2008) 325-329, ISSN 1221-146X;
23. L. M. Ivan, M. Aflori, G. Amarandei, D. G. Dimitriu – Simultaneous excitation of concentric and nonconcentric multiple double layers in plasma, *IEEE Transactions on Plasma Science* **36**(4) (2008) 1396-1397, ISSN 0093-3813;
24. L. M. Ivan, D. G. Dimitriu, M. Sanduloviciu, O. Niculescu – On the complex self-organized systems created in laboratory, *Journal of Optoelectronics and Advanced Materials* **10**(8) (2008) 1950-1953, ISSN 1454-4164;
25. M. Aflori, D. O. Dorohoi, D. G. Dimitriu – Spectrophotometric measurements in an rf capacitively-coupled oxygen discharge, *Optoelectronics and Advanced Materials – Rapid Communications* **2**(8) (2008) 478-481, ISSN 1842-6573;
26. M. Dimitriu, D. G. Dimitriu, D. O. Dorohoi – Supply of the spectral shifts of each type of intermolecular interactions in binary solutions, *Optoelectronics and Advanced Materials – Rapid Communications* **2**(12) (2008) 867-870, ISSN 1842-6573;
27. O. Niculescu, D. G. Dimitriu – On the generation of stable complex oscillations in low-temperature plasma, *Romanian Journal of Physics* **54**(5-6) (2009) 577-584, ISSN 1221-146X;
28. C. Stan, C. P. Cristescu, S. Chiriac, D. G. Dimitriu – Noise induced change in the dynamics of anodic double layers, *Romanian Journal of Physics* **54**(7-8) (2009) 699-704, ISSN 1221-146X;
29. S. Gurlui, D. G. Dimitriu, C. Ionita, R. W. Schrittwieser – Spectral investigation of a complex space charge structure in plasma, *Romanian Journal of Physics* **54**(7-8) (2009) 705-710, ISSN 1221-146X;
30. O. Niculescu, D. G. Dimitriu, V. P. Paun, P. D. Matasaru, D. Scurtu, M. Agop – Experimental and theoretical investigations of a plasma fireball dynamics, *Physics of Plasmas* **17**(4) (2010) 042305 1-10, ISSN 1070-664X;
31. C. Stan, C. P. Cristescu, D. G. Dimitriu – Analysis of the intermittent behaviour in a low-temperature discharge plasma by recurrence plot quantification, *Physics of Plasmas* **17**(4) (2010) 042115 1-6, ISSN 1070-664X;
32. D. G. Dimitriu, C. Ionita, R. Schrittwieser – Nonlinear effects related to the simultaneous excitation of three instabilities in magnetized plasma, *Contributions to Plasma Physics* **51**(6) (2011) 554-559, ISSN 0863-1052;
33. C. Stan, C. P. Cristescu, D. G. Dimitriu – Multifractal analysis of intermittency in a discharge plasma, *Romanian Journal of Physics* **56** (Suppl.) (2011) 79-82; ISSN 1221-146X;
34. M. M. Cazacu, A. Timofte, I. Balin, D. G. Dimitriu, S. Gurlui – Complementary atmospheric urban pollution studies in the north-east region of Romania, Iasi county, *Environmental Engineering and Management Journal* **10**(1) (2011) 139-145, ISSN 1582-9596;
35. A. Timofte, M. M. Cazacu, R. Radulescu, L. Belegante, D. G. Dimitriu, S. Gurlui – Romanian LIDAR investigation of the Eyjafjallajokull volcanic ash, *Environmental Engineering and Management Journal* **10**(1) (2011) 91-97, ISSN 1582-9596;
36. D. G. Dimitriu, M. Aflori, L. M. Ivan, M. Agop – Experimental and modeling results on multiple double layers in low-temperature discharge plasma, *IEEE Transactions on Plasma Science* (2011), accepted, in print, doi: 10.1109/TPS.2011.2136389, ISSN 0093-3813.