

PERSONAL INFORMATION



Valentina MĂRĂSCU

📍 National Institute for Laser, Plasma and Radiation Physics (INFLPR), Low-Temperature Plasma Laboratory – 409 Atomistilor Street, Po- Box Mg- 36, RO-077125 Magurele, ROMANIA

✉ valentina.marascu@inflpr.ro | **Work experience in R&D: > 10 years**

🆔 <https://orcid.org/0000-0002-5170-1398>

🔍 <https://scholar.google.ro/citations?user=lsJzsb0AAAAJ&hl=ro>

📄 [publons https://www.webofscience.com/wos/author/record/399260](https://www.webofscience.com/wos/author/record/399260)

🗺 [brainmap https://www.brainmap.ro/valentina-marascu](https://www.brainmap.ro/valentina-marascu)

📊 [Scopus https://www.scopus.com/authid/detail.uri?authorId=55980918200](https://www.scopus.com/authid/detail.uri?authorId=55980918200)

Sex: F | Nationality: Romanian | **WoS h-Index: 7**

WORK EXPERIENCE

Present
- September
2022



Scientific Researcher 3rd degree

National Institute for Laser, Plasma and Radiation Physics (INFLPR), Low-Temperature Plasma Laboratory– 409 Atomistilor Street, Po- Box Mg- 36, RO-077125 Magurele, ROMANIA.

<http://www.inflpr.ro>

- Studies/ experiments of plasma- fusion related materials interactions;
- Proposal & development of lab-scale fusion-related experiments;
- Fusion-relevant materials dust production by plasma methods;
- Numerical computation/ statistical analysis of *nano-* & *micro-* structures;
- Code source development for lab-scale plasma simulations;
- Materials characterization, deposited by various plasma and laser techniques, via AFM, FTIR, Profilometry, Contact Angle, and Optical Microscopy.
- Experimental physics laboratories/ internship/ training, etc., with undergraduate/ graduate students;
- Scientific data dissemination.

Research & Development sector

Present
- October 2021



Volunteer - Mentor for Junior Faculty and Scientists

The Michigan Institute for Plasma Science and Engineering (MIPSE)– 2236 EECS Bldg., 1301 Beal Avenue, Ann Arbor, Michigan 48109-2122, USA.

<https://mipse.umich.edu/index.php>

- provide advice and discuss their experiences in proposal development, teaching, work-life balance, service, and other areas.

Academic/ Research sector

August 2022
- July 2021



Scientific Research Assistant

National Institute for Laser, Plasma and Radiation Physics (INFLPR), Low-Temperature Plasma Laboratory– 409 Atomistilor Street, Po- Box Mg- 36, RO-077125 Magurele, ROMANIA.

<http://www.inflpr.ro>

- W particles production by using atmospheric & low-pressure plasma jets;
- Studies/ experiments of RF (13.56 MHz) plasma-W surface interactions;
- Numerical computation/ statistical analysis of particles;
- Materials characterization, deposited by various plasma and laser techniques, via AFM, FTIR, Profilometry, Contact Angle, and Optical Microscopy.
- Scientific data dissemination.

Research & Development sector

July 2021 -
January 2020



Postdoc Fellowship

Commissariat à l'énergie atomique et aux énergies alternatives (CEA), Paris-Saclay Center, DRF/ JOLIOT/ SCBM/ Tritium Labelling Laboratory, 91191 Gif-sur-Yvette Cedex, FRANCE.

<http://www.cea.fr/>

- Experiments concerning studies of Tritium loading in different materials (dust and bulk materials) via the gas phase.
- Room/High-temperature desorption analyses of tritiated materials;
- Studies/ experiments of microwave (2.45 GHz) Plasma - Material interaction;
- Numerical computation/ statistical analysis of material structures;
- Materials characterization via LSC and LVEM-TEM/ SEM techniques;
- Scientific data dissemination.

Research & Development sector

January 2020-
July 2014



Scientific Research Assistant

National Institute for Laser, Plasma and Radiation Physics (INFLPR), Low-Temperature Plasma Laboratory– 409 Atomistilor Street, Po- Box Mg- 36, RO-077125 Magurele, ROMANIA.

<http://www.inflpr.ro>

- W particles production by using atmospheric pressure plasma jet;
- Studies/ experiments of RF (13.56 MHz) plasma-W surface interactions;
- Numerical computation/ statistical analysis of particles;
- Materials characterization, deposited by various plasma and laser techniques, via AFM, FTIR, Profilometry, Contact Angle, and Optical Microscopy.
- Scientific data dissemination.

Research & Development sector

September 2017
- January 2016

Scientific Research Assistant

Polymers, Mesophases and Unconventional Methods for Environment Protection Research Center/ Faculty of Physics, University of Bucharest- 405 Atomistilor Street, Po- Box Mg- 11, RO-077125 Magurele, ROMANIA.

<http://fizica.unibuc.ro/>



July 2014 -
January 2014



- Polymer-like thin films and nanomaterials deposition by various plasma techniques;
- High-resolution optical emission spectroscopy measurements;
- Materials characterization, via AFM, FTIR, Profilometry, Contact Angle, and Optical Microscopy.
- Numerical computation and statistical analysis of nanostructures.
- Scientific data dissemination.

Research & Development sector

Trainee Scientific Research Assistant

National Institute for Laser, Plasma and Radiation Physics (INFLPR), Low-Temperature Plasma Laboratory– 409 Atomistilor Street, Po- Box Mg- 36, RO-077125 Magurele, ROMANIA.

<http://www.inflpr.ro>

- Metallic particles synthesis via RF (13.56 MHz) atmospheric pressure plasma;
- Numerical computation and statistical analysis of nanostructures;
- Materials characterization, deposited by various plasma and laser techniques, via AFM, FTIR, and Optical Microscopy.
- Scientific data dissemination.

Research & Development sector

December 2013 -
March 2012



Technician 3rd degree

National Institute for Laser, Plasma and Radiation Physics (INFLPR), Low-Temperature Plasma Laboratory– 409 Atomistilor Street, Po- Box Mg- 36, RO-077125 Magurele, ROMANIA.

<http://www.inflpr.ro>

- Measurements and interpretation of FTIR spectra of various materials deposited by plasma and laser techniques;
- Scientific data dissemination.

Research & Development sector

EDUCATION AND TRAINING

May 2019 -
October 2015



Ph.D. degree in Exact Sciences (Physics domain);

ISCED 8

- Score: *Excellent (Summa cum Laudae)*

Faculty of Physics, University of Bucharest, 405 Atomistilor Street, Po- Box Mg-11, RO-077125 Magurele, ROMANIA.

<http://www.fizica.unibuc.ro>

- Specialization: Optics, Spectroscopy, Plasma, and Lasers
- Doctoral School of Physics, University of Bucharest, Romania.
- Thesis title: “*Study of tungsten dust formation in plasma for research in fusion technology*”.

**June 2015 -
October 2013**



M.Sc. in Physics

ISCED 7

Faculty of Physics, University of Bucharest, 405 Atomistilor Street, Po- Box Mg- 11, RO-077125 Magurele, ROMANIA.

<http://www.fizica.unibuc.ro>

- Specialization: Optics, Lasers, and Applications
- Thesis title: “*Particles production for controlled fusion research by plasma methods*”.

**February
2013
- October 2009**



B.Sc. in Mathematics

ISCED 6

Faculty of Mathematics and Computer Science, University of Bucharest, 14 Academiei Street, Sector 1, RO-010014, Bucharest, ROMANIA.

<http://www.fmi.unibuc.ro>

- Specialization: Mathematics and Computer Science
- Thesis title: “*Fourier Transform in infrared spectroscopy*”.

PERSONAL SKILLS

Mother tongue(s) ROMANIAN

Other languages (s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
ENGLISH	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user
C1					
FRENCH	Independent user	Independent user	Independent user	Independent user	Independent user
B2					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user.
[Common European Framework of Reference for Languages](#)

Job-related skills

- Nano-, micro- materials and thin film depositions at low/atmospheric pressure plasma;
- Analyzes via high-resolution optical emission spectroscopy (OES);
- Statistical analysis of nano- and micro-materials from SEM images with ImageJ/ Matlab;
- Materials characterization and interpretation via Thermo-desorption, LSC, FTIR, Optical Microscopy, AFM, LVEM-TEM/ SEM, Profilometry, and Contact Angle.

Membership

- Romanian Physical Society (**RPS**)- *since 2013*;
- European Physical Society (**EPS**)- *since 2013*;
- American Physical Society (**APS**)- *since 2019*;
- IEEE Advancing Technology for Humanity (**IEEE**)- *since 2019*;
- IEEE Nuclear and Plasma Sciences Society (**IEEE NPSS**)- *since 2019*;
- American Nuclear Society (**ANS**)- *since 2020*;
- IEEE Quantum- *since 2021*.

Topic Editor

- ❖ COATINGS Journal (ISSN: 2079-6412), MDPI (Basel, Switzerland);
(*Years: 2020 - 2022*)

Guest Editor

- ❖ Special Issue Advances *in Fundamental and Applied Fusion Research domain*; COATINGS Journal (ISSN: 2079-6412), MDPI (Basel, Switzerland);
https://www.mdpi.com/journal/coatings/special_issues/fusion_research

**Supervisor/
Mentor**

- ❖ Junior peer-review training @ Web of Science Academy- *since 2021*.

Reviewer Board

- ❖ COATINGS Journal (ISSN: 2079-6412), MDPI (Basel, Switzerland);

Reviewer

1. [NUCLEAR FUSION](#) Journal-IAEA (EISSN: 1741-4326), IOP;
2. [PHYSICA SCRIPTA](#) Journal (EISSN: 1402-4896), IOP;
3. [JOURNAL OF PHYSICS B: ATOMIC, MOLECULAR and OPTICAL PHYSICS](#) Journal (EISSN: 1361-6455), IOP;
4. [SENSORS](#) Journal (EISSN: 1424-8220), MDPI (Basel, Switzerland);
5. [ANTIOXIDANTS](#) Journal (EISSN: 2076-3921), MDPI (Basel, Switzerland);
6. [MATERIALS](#) Journal (EISSN: 1996-1944), MDPI (Basel, Switzerland);
7. [MOLECULES](#) Journal (EISSN: 1420-3049), MDPI (Basel, Switzerland);
8. [MICROMACHINES](#) Journal (EISSN: 2072-666X), MDPI (Basel, Switzerland);
9. [APPLIED SCIENCES-Basel](#) Journal (EISSN: 2076-3417), MDPI (Basel, Switzerland);
10. [COATINGS](#) Journal (EISSN: 2079-6412), MDPI (Basel, Switzerland);
11. [MINERALS](#) Journal (EISSN: 2075-163X), MDPI (Basel, Switzerland);
12. [PLASMA](#) Journal (ISSN: 2571-6182), MDPI (Basel, Switzerland).
13. [IoT- Open Access Journal of Internet of Things](#) (ISSN: 2624-831X), MDPI (Basel, Switzerland).
14. [REVIEW OF SCIENTIFIC INSTRUMENTS](#) Journal, (EISSN: 1089-7623), AIP- Publisher.
15. [JOURNAL OF PHYSICS D: APPLIED PHYSICS](#) Journal, (EISSN 1361-6463), IOP;
16. [ENERGIES](#) Journal (EISSN: 1996–1073), MDPI (Basel, Switzerland);
17. [ENTROPY](#) Journal (EISSN: 1099–4300), MDPI (Basel, Switzerland);
18. [RISKS](#) Journal (EISSN: 2227–9091), MDPI (Basel, Switzerland);
19. [ELECTRONICS](#) Journal (EISSN: 2079–9292), MDPI (Basel, Switzerland);
20. [CRYSTALS](#) Journal (EISSN: 2073–4352), MDPI (Basel, Switzerland);
21. [SIGNALS](#) Journal (ISSN: 2624-6120), MDPI (Basel, Switzerland);
22. [POLYMERS](#) Journal (ISSN: 2073-4360), MDPI (Basel, Switzerland);
23. [PHOTONICS](#) Journal (ISSN: 2304-6732), MDPI (Basel, Switzerland);
24. [METALS](#) Journal (ISSN: 2075-4701), MDPI (Basel, Switzerland);
25. [Journal of Manufacturing and Materials Processing](#) (ISSN: 2504-4494), MDPI (Basel, Switzerland).

Education

- ♣ **Experimental physics laboratories/ internship/ training, etc.**, with undergraduate/ graduate students.

Chair Member

- ♣ **Chair** at “Morning Sessions”, *Virtual Plasma Hack Week*, 28th June – 2nd July 2021, United States of America.
- ♣ **Chair at Tritium Side Session** from the *Virtual FuseNet Ph.D. Event*, The European Fusion Education Network, November 23rd, 2020.

Jury member

- **International Jury Member (@ oral sessions)** at *Virtual American Nuclear Society Student Conference 2021*, April 10th, **2021**, Nord Carolina State University, United States of America.
- **National Jury Member** at *14th Edition Informatics Project Competition (INFOMATRIX)*, Lumina- The University of South-East Europe, 8th April **2016** Bucharest, Romania.

Organizing Team Member

- ✓ **Member of the Organizing Committee** of the online event *Plasma Hack Week*, 11st July – 15th July 2022, United States of America.
<https://hack.plasmapy.org/2022/about/>
- ✓ **Member of the Organizing Committee** of the online event *Plasma Hack Week*, 28th June – 2nd July 2021, United States of America.
<https://hack.plasmapy.org/2021/about/>
- ✓ **Member of the INFLPR organizing team:** the *European Researcher's Night Project* in **2018, 2015, 2014, and 2013**, Bucharest, Romania.
- ✓ **Member of the INFLPR organizing team:** *19th, 17th and 16th International Conference on Plasma Physics and Applications*, in **2021, 2017, and 2013**, Magurele city, Ilfov county, Romania.

Volunteer Team Member

- ♣ **Reviewer @ American Nuclear Society Student Conference 2022**, April 14th-16th, **2022**, the University of Illinois at Urbana-Champaign, United States of America.
- ♣ **Reviewer @ Virtual American Nuclear Society Student Conference 2021**, April 8th-10th, **2021**, Nord Carolina State University, United States of America.
- ♣ **Volunteer -Help Desk @ APS DPP Job Faire from Virtual 62nd Annual Meeting of the American Physical Society, Division of Plasma Physics**, between November 10th – 12th, **2020**, Memphis, Tennessee, United States of America.
- ♣ **Volunteer as Proctor @ IEEE Xtreme 14.0 Programming Competition**, 24th October **2020**, Romania Section.

Exhibitor (research sector)

- ❖ **Exhibitor from INFLPR** at the *Sci+Fi Fest Project* in **2016**, Bucharest, Romania.
- ❖ **Exhibitor from INFLPR** at *Bucharest International Technical Fair – TIB*, 14-17 October **2015**, Romexpo, Bucharest, Romania.

Digital competence

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user

[Digital competencies- Self-assessment grid](#)

Romanian Ministry of Education, Research and Innovation Certificate of Professional Competence- Knowledge of computer operating, august 14, 2009

- OriginLab, ImageJ, MatLab, HTML/CSS/ Javascript, SolidWorks, etc.

Licenses & Certifications

- ❖ March 23rd, 2021, IOP Publishing, Online Workshop: **First stage of Peer Review Excellence: IOP training and certification.**
- ❖ **IBM Data Science Professional Certificate**- *authorized by IBM and offered through Coursera.*
 - 1) **course 1: What is Data Science?** *Issued Dec 30, 2021- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/9PJBH72WFJZF>
- ❖ **IBM Cybersecurity Analyst Professional Certificate** - *authorized by IBM and offered through Coursera.*
<https://www.coursera.org/account/accomplishments/specialization/certificate/ECJYD8B8FB8Y>
 - 1) **course 1: Introduction to Cybersecurity Tools & Cyber Attacks.** *Issued Jan 4, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/Y6YRAS87KTPB>
 - 2) **course 2: Cybersecurity Roles, Processes & Operating System Security.** *Issued Jan 11, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/PYNDB43EBD2D>
 - 3) **course 3: Cybersecurity Compliance Framework & System Administration.** *Issued Jan 11, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/KHFJP458J5YR>
 - 4) **course 4: Network Security & Database Vulnerabilities.** *Issued Jan 11, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/4JGQEGXRECZA>
 - 5) **course 5: Penetration Testing, Incident Response, and Forensics.** *Issued Jan 11, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/2WBLV4Q52QZM>
 - 6) **course 6: Cyber Threat Intelligence.** *Issued Jan 12, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/H6Q6PBKNG9LV>
 - 7) **course 7: Cybersecurity Capstone: Breach Response Case Studies.** *Issued Jan 17, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/8FP2EYPQ558M>
 - 8) **course 8: IBM Cybersecurity Analyst Assessment.** *Issued Jan 26, 2022- no expiration date*
<https://www.coursera.org/account/accomplishments/certificate/J97AAWCQUHXN>

Awards

- ❖ **Coatings 2021 Outstanding Reviewer Award**
<https://www.mdpi.com/journal/coatings/awards/1745>

Date
October 2022

Valentina MĂRĂSCU, Ph.D.