



## Europass Curriculum Vitae

### Personal information

First name / Surname **Claudiu COSTIN**

Address "Alexandru Ioan Cuza" University, Faculty of Physics, Bd. Carol I nr. 11, 700506 Iasi, ROMANIA

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Nationality Romanian

Year of birth 1974

Gender Male

**Present employment / position** "Alexandru Ioan Cuza" University, Faculty of Physics / Associate professor

### Work experience

Dates / Position held February 2016 - present / Associate professor

October 2008 - February 2016 / Lecturer

October 2006 - September 2008 / Post-doctoral researcher

October 1999 - September 2006 / Assistant Professor

Name and address of employer "Alexandru Ioan Cuza" University, Faculty of Physics, Iasi, ROMANIA

Type of business or sector Education and Scientific research

Dates / Position held March 1998 - September 1999 / Teaching assistant

Name and address of employer University of Medicine and Pharmacy "Gr. T. Popa", Faculty of Medical Bioengineering, Iasi, ROMANIA

Type of business or sector Education and Scientific research

### Education and training

Dates 1999-2005 (RO) / 2001-2005 (FR)

Title of qualification awarded PhD in Physics (joint PhD programme RO & FR)

Principal subjects Thesis title: "Numerical modelling of a dc magnetron discharge in argon and argon-oxygen mixture, by the fluid model"

Name and type of organisation providing education and training "Alexandru Ioan Cuza" University, Faculty of Physics, Iasi, ROMANIA /  
Université Paris-Sud XI, LPGP, Orsay, FRANCE

Dates 1997-1999 (3 semesters)

Title of qualification awarded Master of Science in Plasma Physics

Principal subjects Numerical modelling (Monte Carlo Flux method) of electron kinetics in electrical discharges, electron distribution function  
Plasma diagnostic by electrical probes

Name and type of organisation providing education and training "Alexandru Ioan Cuza" University, Faculty of Physics, Iasi, ROMANIA

Dates 1992-1997

Title of qualification awarded Bachelor of Science in Physics

Principal subjects Learning Physics  
Initiation in scientific research

Name and type of organisation providing education and training "Alexandru Ioan Cuza" University, Faculty of Physics, Iasi, ROMANIA

## Scientific stages and collaborations

Dates	November 2018 (1 week)
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Electrical diagnostic of Magnum-PSI plasma beam using a 2D multi-probe system
Name and address of host institution	DIFFER - Dutch Institute for Fundamental Energy Research, Eindhoven, the Netherlands
Dates	June 2016 (2 weeks)
Occupation or position held	Invited Researcher
Main activities and responsibilities	Numerical modelling of pulsed magnetron discharges (HiPIMS)
Name and address of host institution	Laboratoire de Physique des Gaz et des Plasmas, UMR 8578 CNRS-Université Paris-Sud XI, Orsay, France
Dates	December 2013 (1 week)
Occupation or position held	Invited professor
Main activities and responsibilities	Teaching courses of plasma physics and applications, numerical modelling in plasma physics
Name and address of host institution	Masaryk University, Brno, Czech Republic
Dates	November 2013 (1 week)
Occupation or position held	Invited professor
Main activities and responsibilities	Teaching courses of plasma physics and applications, numerical modelling in plasma physics
Name and address of host institution	F. Skorina Gomel State University, Gomel, Belarus Republic
Dates	August 2013 (2 weeks)
Occupation or position held	Scientific researcher
Main activities and responsibilities	Electrical diagnosis (multi-probe system) for fusion related plasmas
Name and address of host institution	Leopold-Franzens University of Innsbruck, Innsbruck, Austria
Dates	July-August 2008, April-May 2009, April-May 2010 // June 2012
Occupation or position held	CNRS Scientific Researcher (CDD) // Post-doc researcher
Main activities and responsibilities	Numerical modelling of magnetron discharges (dc and pulsed) by fluid model and PIC-MCC
Name and address of host institution	Laboratoire de Physique des Gaz et des Plasmas, UMR 8578 CNRS-Université Paris-Sud XI, Orsay, France
Dates	October 2006, May 2007, October 2008, November 2012, September 2013
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Electrical diagnostic of Pilot-PSI and Magnum-PSI plasma beam using Langmuir probes, Katsumata probes, multi-probe system
Name and address of host institution	FOM Institute for Plasma Physics Rijnhuizen, Association EURATOM-FOM, Trilateral Euregio Cluster, Nieuwegein, The Netherlands
Dates	November 2005, May 2006, August-September 2010, November 2017
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Probe measurements in the Scrape-Off-Layer of CASTOR Tokamak and in the divertor region of COMPASS Tokamak (ball-pen, Katsumata and Langmuir probe)
Name and address of host institution	Institute of Plasma Physics, Association EURATOM-IPP.CR, Prague, Czech Republic

## Personal skills and competences

Mother tongue(s) **Romanian**

*Self-assessment  
European level*

**English**

**French**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent user	C2	Proficient user	B2	Independent user	C1	Proficient user	C1	Proficient user
B2	Independent user	C1	Proficient user	B2	Independent user	B2	Independent user	B2	Independent user

## Professional skills and competences

### Organisational skills and competences

- creating and keeping deadlines, team work, team management, project management, coordinating events, problem solving, communication, public speaking, conflict resolution, reviewing, reporting, research

I acquired my experience working as team member or director of different research grants, by contributing to the organisation of different scientific events:

- Secretary of the Local Organizing Committee of ICPIG 2015 and CPPA 2019
- Member of the Management Committee and leader of WG3 - 'Simulation of HIPP processes' of the COST Action MP0804 *Highly Ionised Pulse Plasma Processes*, 2009 - 2013
- Co-chair of IWEF 2011
- Co-organizer of the "EURATOM-MEdC Association Days" Meeting, 2005 and 2010
- Member of the Local Organizing Committee of several conferences: CPPA 2003, CPPA 2005, InterAcademia 2006, CPPA 2010, CPPA2013, InterAcademia 2017, CPPA 2021
- Member of the Organizing Committee of Ecole d'été "*Plasmas non thermiques et applications*", August 25-29, 2003, Iasi, Romania

### Teaching activity

*Courses:* Electrical discharges in gases, Actual problems in plasma physics, Low temperature plasmas and applications, Materials technology, Plasma physics, Biomechanics, Transfer phenomena, Plasma sources and applications

*Seminaries and practical works:* General physics, Mechanics, Biomechanics, Plasma physics, Plasma diagnostics, Electrical discharges in gases, Actual problems in plasma physics, Low temperature plasmas and applications, Materials technology, Ecosystem and the interaction of matter with living organisms, Elements of matter structure, Transfer phenomena

### Scientific research activity

a) Fields of expertise:

- **numerical modelling in plasma physics:** fluid model for dc magnetron discharge and dielectric barrier discharge, PIC-MCC simulations for dc and pulsed (HiPIMS) magnetron discharge, Monte Carlo Flux method for electron distribution function, collisional-radiative model, Monte Carlo simulations for thin film deposition

- **plasma diagnostics** for both low-temperature and thermonuclear interest plasmas: electrostatic probes (simple, double and triple Langmuir probe, Katsumata probe, ball-pen probe), electrostatic analyzers, multi-probe systems, optical emission spectroscopy

- data acquisition systems

b) ISI papers: **32**

c) Scientific grants: **director of 5 grants** and member of more than 15 grants

d) ISI citations: **400** (excluding self-citations)

e) Conferences: more than **75** contributions to international conferences

f) Hirsch index: **11**

g) book chapter: T. Minea, T. Kozak, C. Costin, J. T. Gudmundsson, D. Lundin, chapter "Modeling the high power impulse magnetron sputtering discharge", in book *High Power Impulse Magnetron Sputtering*, 1st Edition, Fundamentals, Technologies, Challenges and Applications, Editors: D. Lundin, J. T. Gudmundsson, T. Minea, Elsevier, 2020

h) Co-Editor of different publications:

1. Editors: D. Luca, L. Sirghi, C. Costin, Recent advances in technology research and education, Proceedings of the 16th International Conference on Global Research and Education Inter-Academia 2017, in the series: *Advances in Intelligent Systems and Computing*, Vol. 660, Springer (2018), ISBN 978-3-319-67458-2

2. Guest Editors: C. Costin, G. Popa, Contributions to Plasma Physics, Volume 53, Number 1, 2013, ISSN 0863-1042, Special Issue: 9th International Workshop on Electrical Probes in Magnetized Plasmas, September 21-23, 2011, Romania

3. Editors: G. Popa, C. Costin, course Ecole d'été "*Plasmas non thermiques et applications*", Ed. Universitatii "Alexandru Ioan Cuza" Iasi, 2003, Vol I + II, ISSN 1221-9363

**Additional information**

i) Web of Science ResearcherID: C-3674-2011

ORCID: 0000-0003-3879-3555

Scopus Author ID: 9274825700

Member of the International Scientific Committee of PLATHINIUM (Plasma Thin film International Union Meeting) since 2019

Director of the Research Department, Faculty of Physics, "Alexandru Ioan Cuza" University of Iasi (Oct. 2016 - Dec. 2017)

Scientific award: "Constantin Miculescu" Prize of the Romanian Academy, 2016

Syndicate leader of the Faculty of Physics, "Alexandru Ioan Cuza" University of Iasi (Jan. 2010 - Jan. 2014)

Member of the Association EURATOM/MEdC Romania (2005-2014)

Competent with most Microsoft Office programmes, Origin, Fortran programming

25/01/2022

Associate professor Claudiu COSTIN