



Europass Curriculum Vitae

Personal information

First name / Surname **Claudiu COSTIN**
Nationality Romanian
Year of birth 1974
Gender Male

Present employment

"Alexandru Ioan Cuza" University of Iași, Faculty of Physics
Position Associate professor
Address Bd. Carol I nr. 11, 700506 Iași, Romania
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Academic degree / Date / Institution

Habilitation in Physics / defence - December 2021 / Ministerial Order - May 2022 / "Alexandru Ioan Cuza" University of Iași

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 of Iași, Faculty of Physics, Iași, 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: " <i>Numerical modelling of a dc magnetron discharge in argon and argon-oxygen mixture, by the fluid model</i> "
Name and type of organisation providing education and training	"Alexandru Ioan Cuza" University of Iași, Faculty of Physics, Iași, 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 of Iași, Faculty of Physics, Iași, 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 of Iași, Faculty of Physics, Iași, 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*

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	

English	B2	Independent user	C2	Proficient user	B2	Independent user	C1	Proficient user	C1	Proficient user
French	B2	Independent user	C1	Proficient user	B2	Independent user	B2	Independent user	B2	Independent user

Professional skills and competences

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, Numerical algorithms, Scientific research methodology

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, Numerical algorithms

Coordination of bachelor and master theses: - over 20 bachelor theses
- over 25 master theses

Member in PhD coordination commissions: - 8

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, Monte Carlo simulations for thin film deposition, a *posteriori* Monte Carlo method for electron transport coefficients, collisional–radiative model

- **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

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

c) 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

d) 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

e) ISI papers: **36**

f) ISI citations (excluding self-citations): more than **560**

g) Conferences: more than **80** contributions to international conferences

h) Hirsch index: **12**

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

j) ORCID ID: 0000-0003-3879-3555

k) Scopus Author ID: 9274825700

Managerial skills and competences

Managerial positions	<ul style="list-style-type: none"> - Director of 5 research grants (total funds 534.000 EUR) - Director of the Research Department, Faculty of Physics, "Alexandru Ioan Cuza" University of Iași (Oct 2016 - Dec 2017) - Syndicate leader of the Faculty of Physics, "Alexandru Ioan Cuza" University (Jan. 2010 - Jan. 2014) - 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
Representative positions	<ul style="list-style-type: none"> - Member of the UAIC Senate (2012-2016) - Member of the UAIC Ethics Commission (2015-2016) - Member of the Faculty of Physics Council (2008-today) - Member of the Faculty of Physics Ethics Commission (2020-today) - Member of the Physics Doctoral School Council (2022-today)
Additional information	
International recognition	<ul style="list-style-type: none"> - Member of the Scientific Committee of PLATHINIUM (Plasma Thin film International Union Meeting) since 2019 - Member of the Scientific Committee of ESCAMPIG (Europhysics Conference on Atomic and Molecular Physics of Ionized Gases) since 2023 - scientific reviewer of ISI raked international journals: Contributions to Plasma Physics, Plasma Physics and Controlled Fusion, Coatings, Surface and Coatings Technology, Review of Scientific Instruments, Journal of Applied Physics, Scientific Reports, Physica Scripta
Prizes	"Constantin Miculescu" Prize of the Romanian Academy, 2016
Member of organizing committees	<ul style="list-style-type: none"> - Secretary of the Local Organizing Committee of ICPIG 2015 and CPPA 2019 - Member of the Local Organizing Committee of several conferences: CPPA 2003, CPPA 2005, InterAcademia 2006, CPPA 2010, CPPA2013, InterAcademia 2017, CPPA2019, CPPA2021, CPPA2023 - Co-chair of the 9-th International Workshop on Electrical Probes in Magnetized Plasmas, IWEP 2011 - Co-organizer of the "EURATOM-MEdC Association Days" Meeting, 2005 and 2010 - Member of the Organizing Committee of Ecole d'été "<i>Plasmas non thermiques et applications</i>", August 25-29, 2003, Iași, Romania
Member of professional associations	<ul style="list-style-type: none"> - Member of the Association EURATOM/MEdC Romania (2005-2014) - Member of the Association „Societatea absolvenților Facultății de Fizică din Iași – SOPHYS”
IT competences	- Competent with most Microsoft Office programmes, Origin, Fortran and C++ programming, Microsoft Teams, Cisco Webex, Zoom, Moodle
Research directions within the Doctoral School of Physics	<ul style="list-style-type: none"> - Electrical diagnosis of low temperature plasmas - Electrical diagnosis of thermonuclear related plasmas - Numerical simulations plasma physics