



Dr. Habil. Cristina-Elena CIOMAGA (before married FEDOR)

Scientific Researcher II

Department of Exact Sciences and Natural Sciences, RAMTECH Center

Interdisciplinary Research Institute - ICI UAIC

"Alexandru Ioan Cuza" University from Iasi

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Date of birth 17/05/1978 | Nationality Romanian

WORK EXPERIENCE

05.2025-11.2025

- **Expert researcher program**

- CNFIS-FDI-2025-F-0318, project title: *Developing the institutional research capacity of the "Alexandru Ioan Cuza" University of Iași by promoting researcher-teaching staff synergy to increase international excellence* (EXCELENT-UAIC), Alexandru Ioan Cuza University of Iasi, Iasi, Romania.

03.2023- 11.2023

- **Expert providing advanced research programs**

- POCU 993/6/13/153322 project, My-SMIS 2014:153322 "Educational and training support for PhD students and young researchers in preparation for insertion into the work market", Alexandru Ioan Cuza University of Iasi, Iasi, Romania.

▪ Teaching and Research activity for Ph.D. students and young researchers

10.2020- present

- **Scientific Researcher II**

- RAMTECH Center, Department of Exact and Natural Sciences, Institute of Interdisciplinary Research (ICI) „Alexandru Ioan Cuza” University of Iasi, 700506, Iasi, Romania.

Fundamental research in the field of ferroelectric and multiferroic materials
Research activities: preparation-structural-microstructural investigations-functional properties (dielectric, ferroelectric, piezoelectric

2021- 2023

- **Project Manager grant PN-III-P4-ID-PCE-2020-1988**

- Department of Exact and Natural Sciences, Institute of Interdisciplinary Research (ICI) „Alexandru Ioan Cuza” University of Iasi, 700506, Iasi, Romania.

▪ *Management and research activities* in the field of lead-free porous ceramic materials for piezo-, pyroelectric sensors with energy harvesting applications

10.2017- 09.2020

• Scientific Researcher II

- Research Department, Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, 700506, Iasi, Romania
- *Fundamental research* in the field of ferroelectric and multiferroic materials;
Research activities: preparation, structural, microstructural investigations, functional properties (dielectric, ferroelectric, piezoelectric).

10.2012 - present

• Associate professor

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania
- *Didactic and research activities:* Master Course: *Introduction to Physics and Technology of Nanocomposite Materials* (2017).
- Member of the committees for guidance and evaluation of Doctoral Papers/Projects, Doctoral School of Physics.

08.2010-12.2013

• Project Manager grant PN-II-RU-TE 187

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania
- *Management and research activities* in the field of multifunctional composite materials - Investigation of volume, interface, and percolation effects in multifunctional composite materials and metamaterials with controlled geometry.

10.2010-03.2013

• Postdoctoral researcher POSDRU/89/1.5/S/63663

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania
- *Fundamental research* in magnetoelectric composite materials - Study of ceramic nanocomposites with emerging electromagnetic properties: towards metamaterials. Scientific research and communication. Popularizing Science: Negative Refractive Index and Electromagnetic Invisibility.

02.2009-10.2017

• Scientific Researcher III

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania
- *Fundamental research* in the field of composite magnetoelectric materials.
- *Research activity:* preparation-structural-microstructural investigations-functional properties (dielectric, ferroelectric, piezoelectric, magnetic).

2006-2009

• Assistant researcher

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania
- *Fundamental research* in the field of ferroelectric, relaxor, and multiferroic materials
- *Research activity* and administrative support within research grants.

2006-2007

• Teaching Assistant Substitution

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania

- Didactic activity *Electricity and Magnetism, Physics and Technology of polarized media, Information Technologies* (Seminars and laboratories undergraduate course).

2003-2006

• Project Director BD CNCSIS Grant Code 108

- Faculty of Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania
- *Fundamental research* – Contributions to the study of relaxor ferroelectric materials.
- *Research activity*: preparation-structural-microstructural investigations-functional properties (dielectric, ferroelectric).

EDUCATION AND TRAINING

Since May 2025	Habilitation Certificate in the Doctoral Field of Physics, OM no. 4097/20.05.2025 Alexandru Ioan Cuza University of Iasi, Romania. Title of thesis: <i>Optimization and Functional Characterization of Ferroelectric-Based Materials and Composites: From Solid Solutions to Porous Systems for Advanced Applications</i>
2002-2006	Ph.D in Physics, OMEC no. 632/21.03.2007 Alexandru Ioan Cuza University of Iasi, Romania. Title of thesis: <i>Contributions to the study of ferroelectric relaxors</i> (coordinator prof. dr. A. Stancu and prof. dr. Liliana Mitoseriu) – distinction: Suma cum laudae
2001-2003	Master Degree Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania. <i>Magnetic and electric properties of thin and ultrathin structures</i>
1996-2001	Bachelor's degree in Physics, Engineering diploma Faculty of Physics, Specialization Technological Physics, „Alexandru Ioan Cuza” University of Iasi, Iasi, Romania.
1992-1996	Baccalaureate degree N.V. Karpen High school Bacau, Romania.

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Italian

C1

C1

C1

C2

C2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- **International and national experience:** Developed communication skills through activities as a researcher in national and international laboratories, and as a teacher at the Faculty of Physics.
- **Organization and coordination:** Demonstrated organizational skills as a research project manager, coordinating teams that achieved "Excellent" ratings.
- **Effective collaboration:** Ability to establish and maintain productive collaborative relationships with diverse research teams nationally and internationally.
- **Active participation:** Active and constructive involvement in research projects, contributing to their success.

• Organisational/managerial skills:

Director in national projects:

1. **Project director PN-III-P4-ID-PCE-2020-1988 (2021-2023)**, val. project 1.198.032,00lei (246.048,00 Euro);
2. **Project director PN II-RU TE 187, nr. contract 35/5.08.2010 (2010-2013)** – val. project 502.542,7lei (118.692,00 Euro);
3. **PostDoctoral grant POSDRU/89/1.5/S/63663 (2010-2013)** val. 32.875,6 Euro;
4. **Project director CNCIS type BD cod 108 (2003-2006)** - 8.000RON;

Member in national research projects:

1. 2025-2028, Project no. 716/04.06.2025, code SMIS 337821, PR/NE/2024/P1/RSO1.1/1/2 – RDI INFRASTRUCTURES 1 (Manager de proiect: Prof. univ. dr. Costică MIHAI);
2. 2025, CNFIS-FDI-2025-F-0318 (Project manager: prof. univ. dr. Tudor Luchian);
3. 2025-2027, PN-IV-P1-PCE-2023-0995 (Project manager: Prof. univ. dr. Liliana Mitoşeriu);
4. 2025-2027, PN-IV-P1-PCE-2023-1758 (Project dir: Lect. dr. Leontin Pădurariu);
5. 2025-2026, PN-IV-P2-2.1-TE-2023-1488 (Project dir: CSIII dr. Nadejda Horchidan);
6. 2023, POCU 993/6/13/153322 project, My-SMIS 2014:153322 (Project manager: Conf. univ. dr. Florin Branza);
7. 2018-2022, PN-III-P4-ID-PCCF-2016-0175 (Project manager: Prof. univ. dr. Liliana Mitoşeriu);
8. 2017-2019, PN-III-P4-ID-PCE-2016-0817 (Project dir.: Prof. univ. dr. Liliana Mitoşeriu);
9. 2018-2020, PN-III-P1-1.1-TE-2016-1951 (Project dir dr. L. Curecheriu);
10. 2014-2017, PN-II-PT-PCCA-2013-4-1119 (Project dir: Prof. univ. dr. Liliana Mitoşeriu);
11. 2015-2017, PNII-RU-TE-2014-4-1494 (Project dir: dr. Leontin Pădurariu);
12. 2011-2016, PN-II-ID-PCE-2011-3-0745 (Project dir: Prof. univ. dr. Liliana Mitoşeriu);
13. 2012-2016, PNII-ID-PCCE-2011-2-0006 (Responsabil proiect: Prof. univ. dr. Liliana Mitoşeriu);
14. 2013-2016, PNII-RU-TE-2012-3-0150 (Project dir: dr. Lavinia Curecheriu);
15. 2006-2008, CEEX-FEROCER (Project dir: prof.dr. A. Ianculescu);

16. 2006-2008, CNCSIS - CONSMEMF 196/5.06.2006 (Project dir: Prof. univ. dr. Liliana Mitoşeriu);
17. 2005-2007, RELSWITCH (Project dir: prof. dr. Al. Stancu).

Member in international research projects:

1. **Member in COST Action CA22123 European Materials Acceleration Center for Energy (EU-MACE)** (2023-2027)
2. **Member in COST Action CA20126 Network for research, innovation and product development on porous semiconductors and oxides (NETPORE)** (2021-2025)
3. **Membru substitute in the scientific management committee of COST Action IC1208 „Integrating devices and materials: a challenge for new instrumentation in ICT”** (2013-2017) (http://www.cost.eu/COST_Actions/ict/Actions/IC1208?management);
4. **Membru substitute in the scientific management committee of COST Action IC1304 “Autonomous Control for a Reliable Internet of Services (ACROSS)”** (2013-2017) (http://www.cost.eu/COST_Actions/ict/Actions/IC1304?management);
5. **COST MP0904 Single- and multiphase ferroics and multiferroics with restricted geometries (SIMUFER)** (2009-2014)
6. **COST 539 Electroceramics from Nanopowders Produced by Innovative Methods (ELENA)** (2005-2009)
7. **Proiect bilateral Romania - Frace PN-III-P3-3.1-PM-RO-FR-2019-0069** (Project dir.: Prof. univ. dr. Liliana Mitoşeriu) (2019-2020)
8. **Proiect bilateral Romania - Italy 643/1.01.2013 (MULTIFER)** (Project dir.: Prof. univ. dr. Liliana Mitoşeriu) (2013-2014)
9. **Proiect bilateral Romania-Slovenia nr. 536/2012** (Project dir.: Prof. univ. dr. Liliana Mitoşeriu) (2012).

National and international collaborations:

- **Industrial partnership:**
 - **S.C. Gradient SRL, Iaşi România** (Dir. Conf. Dr. Florin M. Tufescu);
 - **Lithoz GmbH, Viena, Austria** (3D printer manufacturing company, 3D piezoelectric materials industry research center, etc.);
- **Research Institutes and Universities:**
 - **National Research and Development Institute for Technical Physics - IFT Iasi** (dir. CSI dr. Nicoleta Lupu; dr. George Stoian);
 - **Institutul de Chimie Macromoleculară Petru Poni, Iaşi** (dr. Mihai Asandulesei);
 - **Universitatea „Ştefan cel Mare” din Suceava, Suceava** (Prof. dr. Aurelian Rotaru);
 - **National Institute for Materials Physics (INFIM), Bucuresti-Magurele, Romania** (CSIII dr. Roxana Stanculescu);
 - **Institute of Condens Matter Chemistry and Technologies foe Energy ICMATE-CNR** (dr. Vincenzo Buscaglia, dr. Maria-Teresa Buscaglia, dr. Donatella Giuranno);
 - **Faculté des Sciences Jean Perrin, Université d’Artois, Lens, France** (prof. dr. Marie-Helene Chambrier);
 - **Institute of Science and Technology of Ceramics ISTEC-CNR, Faenza, Italy** (dr. Carmen Galassi);
 - **Polytechnic University of Madrid, Spania** (Prof. Jose de Frutos);

- **Project member POCU/993/6/13 /153322** "Educational and training support for doctoral students and young researchers in preparation for insertion in the labor market" (1.06.2022-30.11.2023, total project value 5,683,624.49 lei; val. 5,302,810.81 lei UAIC) – *Expert for providing programs in advanced research, teaching and research activities for doctoral and postdoctoral researchers* – 01.03.2023-30.11.2023, Project financed by the European Social Fund, Human Capital Operational Program 2014- 2020 through the MINISTRY OF EUROPEAN INVESTMENTS AND PROJECTS.

- **Member of the socio-cultural project FP7-SCIENCE-IN-SOCIETY 2011-1, STAGES (2010-2015);**

- **2012 – present: Member of the doctoral committee for guidance and evaluation of Doctoral Papers/Projects** within the Department of Physics, University "Al.I. Cuza" from Iasi.
Experience in the administrative/organizational activities:

- **President of the Ethics Commission within the Interdisciplinary Research Institute (from 2021).**
- **Member of the Faculty Council at the Faculty of Physics (2020);**
- **Substitute Member of Al. I. Cuza University Senate from part of the Faculty of Physics (2020).**

- **Member of the scientific committee for evaluation of "Young researchers in engineering and science" Rada Mihalcea prize.**
- **Member of the competition commissions for research positions in UAIC;**
- **Member of SRF (Romanian Physics Society);**
- **Member of the CNCSIS-CARPATH Center of Excellence;**
- **Member CEROM (Romanian Society of Ceramics);**
- **Member of the International Association of Advanced Materials (IAAM);**
- **Evaluator for UEFISCDI national projects.**

- **Member in the organizing committee for International and National events:**

1. 2014 - Closing COST MP0904 SIMUFER Conference „Single-and multiphase ferroics and multiferroics with restricted geometries”, January 30th - February 1st, Genova, Italy, 2014;
2. 2014 - International Conference Electroceramics XIV București, România, 16-20 iunie 2014.
3. 2012 - Joint Conference COST MPO904 Action „Single-and multiphase ferroics and multiferroics with restricted geometries” & IEEE-ROMSC 2012, 24-26th September 2012, Universitatea Alexandru Ioan Cuza din Iași, România.
4. 2012 - First COST MP0904 Training School “Nanostructured oxides: from laboratory research to industrial applications” joined with the POSDRU 63663 Training modules Institute of Energetics & Interphases IENI - CNR, Genoa (IT) 12 - 13 th March 2012
5. 2011 –Conference COST MP0904 Action „On the processing and properties of nanostructured single and multiphase ferroics and multiferroics: Strengths, needs and joint initiatives”, Bordeaux, France, June 30th July 1st, 2011.

Job-related skills • **Professional expertise:** Scientific and technical expertise; Critical and analytical thinking; Mentoring and leadership skills; project manager skills; communication and

collaboration skills.

- **Laboratory skills:** measurements in low, medium and high frequencies, structural and microstructural analyses; chemistry laboratories in the preparation of ceramic materials by the method of solid-state reaction and co-precipitation.
- **Software skills:** advanced use (Word, Excel, PowerPoint); Origin; XRD_X'Pert High Score, Vision software laboratory, etc.
- **Academic and professional achievements:** Publication of articles in Q1 and/or top1 journals, patents, research projects;
- **Contributions to professional development:** Attracting and creating research positions for researchers, and young graduates.

OTHER SPECIALIZATIONS/DIPLOMAS:

- **2024** – Training course on **E-nformation - Academic Writing and Publishing MasterClass**, ANELIS Plus and Alexandru Ioan Cuza University in Iasi, Romania;
- **2024** - Diploma and exam at a training course for **Moodle eLearning Developer**, Framework project for the sustainable development of the digital component of the university - eUAIC 127544578, UAIC, Iasi, Romania;
- **2022** – Specialization course in the field of **Ethics of academic deontology**, project "Ethics and university deontology at UAIC - integrity in academic activity through continuous training of teaching staff (UniEthic)", code CNFIS-FDI-2022-0543;
- **2019** – Specialization course "**How to write a successful Horizon 2020 project**" organized by UAIC within the project Developing innovation capacity and increasing the impact of excellent research at UAIC, UAIC, Iasi, Romania;
- **2019** – Specialization course "**Advances in Atomic Force Microscopy-Nanomechanical Characterization by using PinPoint™ AFM**" organized by Schaefer SouthEast Europe srl and Park Systems, Iasi, Romania;
- **2015** - Specialization course on accessing Horizon 2020 programs: "**Gender budgeting training**", within the European project FP7-SCIENCE-IN-SOCIETY 2011-1, STAGES, "Structural Transformation to Achieve Gender Equality in Science" SiS. 2011.2.1.1.-1.
- **2015** - Specialization course "**Gender Academy - A global event on gender, work and employment**" at the ITC-ILO International Center, Turin Italy, course financed by the European project FP7-SCIENCE-IN-SOCIETY 2011-1, STAGES "Structural Transformation to Achieve Gender Equality in Science" SiS.2011.2.1.1.-1.
- **2015** - Specialization course "**Gender and Science: Mainstreaming gender equality in science and research performing organizations**" organized by the Center for Gender Equality in Science and the International Training Center - International Labor Organization (ITC-ILO), Turin Italy, funded course by the European project FP7-SCIENCE-IN-SOCIETY 2011-1, STAGES "Structural Transformation to Achieve Gender Equality in Science" SiS.2011.2.1.1.-1.
- **2014** - Specialization course on accessing Horizon 2020 programs: "**Scientific excellence in Horizon 2020 projects: gender in project's life cycle**", within the European project FP7-SCIENCE-IN-SOCIETY 2011-1, STAGES, "Structural Transformation to Achieve Gender Equality in Science" SiS.2011.2.1.1.-1;
- **2013** - Advanced course at the European Studies Center Iași - post-university training and continuous professional development studies - **Project Manager**, Iași, Romania;
- **2012** - Specialization course: "**Nanostructured oxides: from laboratory research to industrial**

- applications**", Institute of Energetics & Interphases IENI – CNR Genoa, Italy;
- 2009 - Specialization in **Electron Microscopy**, "**School and Workshop on the Electron Microscopy of Ceramic Materials**", Anadolu University, Eskisehir, Turkey;
- 2008 Post-graduate courses: "**Advanced preparation methods and complex characterization of oxide structures with reduced dimensionality: The relationship between composition-nano/microstructure-functional properties. Applications.**", UAIC (within CEEEX-FEROCER, CARPATH Center of Excellence);
- 2005 Participation in the Training School: "**Grain-boundary related phenomena in ceramic materials from micro- to nano-scale dimensions**", Action COST 525, Genoa, Italy.

RESEARCH and TEACHING INTERNSHIPS:

- **June 2025** - Invited researcher - research stage within PN-IV-P1-PCE-2023-0995 project at *ICMATE-CNR Institute, Genoa, Italy*;
- **September 2024** – Teaching mobility within the ERASMUS+ project at *Akdeniz University, Antalya, Turkey*;
- **June 2024** - Invited researcher - research internship within the ERASMUS+ project at *ICMATE-CNR Institute, Genoa, Italy*;
- **2021** – Invited researcher - research internship within the Bilateral Ro-France project at *Unité de Catalyse et de Chimie du Solide, Faculté des Sciences Jean Perrin, Université d'Artois, Lens, France*;
- **2019** – Invited researcher - research internship within the Bilateral Ro-France project at *Unité de Catalyse et de Chimie du Solide, Faculté des Sciences Jean Perrin, Université d'Artois, Lens, France*;
- **2015** – Invited researcher - research internship (STSM) within the COST Action IC1208 at the *Polytechnic University of Madrid, Spain* (coordinator Prof. Jose de Frutos);
- **2012** - Postdoctoral research internship - *Institute of Ceramic Science and Technology, National Research Council ISTEC-CNR, Faenza, Italy* (coordinator Dr. Carmen Galassi);
- **2012** – Invited researcher - research internship at the *Electronic Department Josef Stefan Institute, Ljubljana, Slovenia* (prof. Marija Kosec);
- **2006** – Research internship for doctoral studies - *Short-Term Scientific Missions under Action COST 539 at the Institute of Ceramic Science and Technology, ISTEC-CNR, Faenza, Italy* (coordinator Dr. Carmen Galassi);
- November-December **2005** - Scholarship for research internship for doctoral studies, offered by *INSTM Italy (FISR 2002, University of Genoa, Italy)*;
- May **2005** – August **2005** - Scholarship for postgraduate studies, offered by the Ministry of Education, Research and Youth, at the *University of Genoa, Faculty of Engineering, DICheP, Italy, in collaboration with the IENI-CNR Institute Genoa, Italy*;
- October **2004** – March **2005** - Socrates scholarship for a doctoral internship at the *University of Genoa, Faculty of Engineering, DICheP, Italy, in collaboration with the IENI-CNR Institute Genoa, Italy*.

ADDITIONAL INFORMATION (Scientific activity):

Publications,
Citations,
Patents,
Books,
Editor,
Presentations,
Reviewer

- **93 scientific publications: 77 ISI articles** and 8 articles published in international journals without impact factor, and 8 articles published in conference volumes;
- ISI score of 250; Individual ISI=32.9; **83.1% articles in the Q1/Q2 area** (48 papers in Q1 journals, 16 in Q2 and 13 in Q3);
- **Hirsh-factor h=25 (WOS), 25 (Scopus), 27 (Google Scholar).**
- **CNATDCU coefficients: A=5.38, I=7.43, P=20.51, C=261.19; T=37.4** (according to minimum CNATDCU criteria for teacher/CSI: A>2, I>4, P>4, C>40, h>10, T>12)

(see Appendix)

- **Over 1500 citations in ISI journals without self-citations;**
- **3 invention patents and 1 national CBI, OSIM;**
- **1 book chapter**, Elsevier International Publishing House.
- **Guest editor for Materials** (IF=3,748, Q1 journal)
- **More than 150 presentations at international and national conferences, >15 invited presentations and >50 oral presentations;**
- **Reviewer for more than 10 international ISI journals:** J. Alloys Compd., Ceram. Intl., J. Eur. I was praying. Soc., J. Mater. Sci., J. Phys. D and Nanotechnology etc., Sci. Tech. Adv. Matter; Additive Manufacturing, Langmuir, etc.

National awards:

- **2022-2026– Grade of Merit** obtained through competition at ICI, Al. I. Cuza University of Iasi, ICI;
- **2016 - 2021– Grade of Merit** obtained through competition at the Faculty of Physics, Al. I. Cuza University of Iasi;
- **2013 - Women's Annual Science and Technology Distinction for Young Researcher** award by "Al. I. Cuza" Univ. of Iasi, STAGES program and Center for Gender Equality in Science.
- **2010 - the prize of excellence research center CARPATH** for the paper „Magnetoelectric ceramic composites with double-resonant permittivity and permeability in GHz range: A route towards isotropic metamaterials”, Ciomaga, CE; Dumitru, I; Mitoseriu, L.; Galassi, C; Iordan, AR; Airimioaei, M; Palamaru, MN, published in Scripta Materialia 68 (2010).
- **1st prize in 2007 for the best PhD Thesis in Physics** at "Al. I. Cuza" Univ. of Iasi, Romania for the 2006 year.
- **2007 - IInd prize** for the paper - "Investigation of the LCR circuit response containing ferroelectric capacitor", R.C. Frunza, C.E. Ciomaga, L.P. Curecheriu, L. Mitoseriu, "Physics and Modern Educational Technologies" National Conference, "Student Scientific Circles" section, Iași, granted by Univ. "Al. I. Cuza", Faculty of Physics.
- **2003 – IInd prize** for the papers: "PTCR Effect in n-Doped BaTiO₃" and "Analysis of the transition relaxor-to-ferroelectric in PbFe₂/3W₁/3O₃ -PbTiO₃ solid solution" presented in the XXXI edition of the "Physics and Modern Educational Technologies" National Conference, "Student Scientific Circles" section, Iași, awarded by Univ. "Al. I. Cuza", Faculty of Physics.

Date,
December 2025

Signature,
CSII dr. habil. Cristina-Elena Ciomaga

