

PERSONAL INFORMATION

Cristian MORARI



 National Institute for R&D in Electrical Engineering ICPE-CA Bucharest, Laboratory of Electromagnetic Compatibility

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 cristian.morari@icpe-ca.ro

Sex Male | Date of birth 09/05/1978 | Nationality Romanian

POSITION WITHIN THE GRANT/PROJECT

Member

WORK EXPERIENCE

2015-present **Senior researcher III**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research- EMC Laboratory, Splaiul Unirii 313, 030138 Bucharest, Romania

- Studies and tests in the field of electromagnetic compatibility.

**Business or sector** Scientific Research

2008-2015 **Junior researcher**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research- Laboratory for Electrical Materials and Products Characterization, 313, Splaiul Unirii, 030138 Bucharest, Romania

- Studies and tests on micro- and nano-structured magnetic materials and in the field of electromagnetic compatibility.
- Thin films deposition by magnetron sputtering and e-beam evaporation in ultra-high vacuum.
- Materials study by high resolution transmission electron microscopy (HRTEM).

**Business or sector** Scientific Research

2006-2008 **Assistant researcher**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research- Laboratory for Electrical Materials and Products Characterization, 313, Splaiul Unirii, 030138 Bucharest, Romania

- Studies and tests on micro- and nano-structured magnetic materials and in the field of electromagnetic compatibility.

**Business or sector** Scientific Research

1996-1998 **Electrician**

E. M. Barbateni, Lupeni, Romania

- Maintenance and repair of electrical equipments on belt conveyors.

**Business or sector** Coal Exploitation

**EDUCATION  
AND TRAINING**

2012-2015	<b>PhD in Electrical Engineering</b> "Politehnica" University of Bucharest, Faculty of Electrical Engineering <ul style="list-style-type: none"> <li>▪ Researches on determining the insertion attenuation of materials to electromagnetic radiations</li> </ul>	EQF Level 8
2005-2007	<b>Diploma of master in electronic physics, metrology, and non-destructive testing (NDT)</b> University of Bucharest, Faculty of Physics <ul style="list-style-type: none"> <li>▪ Microelectronics, microwaves, special electronic devices</li> <li>▪ NDT and metrology regarding the materials characterization field</li> </ul>	EQF Level 7
1999-2005	<b>Bachelor of Science - Engineer in Physics</b> University of Bucharest, Faculty of Physics <ul style="list-style-type: none"> <li>▪ Technological Physics</li> </ul>	EQF Level 6

**PERSONAL  
SKILLS**

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING	SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production
English	B1	B1	B1	B1

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

Communication skills

- Experience of working in team
- Good communication skills gained through my work experience in the scientific research domain which involves collaboration on various topics with different people and dissemination activities by participation in conferences and workshops.

Organisational / managerial skills

Job-related skills

- Ability to operate equipments for electromagnetic compatibility (spectrum analyzers, power meters, signal generators and others) and for characterization of materials (spectrometers, impedance analyzers, ultra-high vacuum thin film deposition system by magnetron sputtering and e-beam, transmission electron microscope HRTEM, and others), areas that I cover now.
- Easy to accommodate with new equipments.

Digital competence

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Basic user	Independent user

Levels: Basic user - Independent user - Proficient user

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

- A good familiarity with instruments Microsoft Office (Word, Excel, Power Point),
- Elementary knowledge of application Origin.
- Basic operation of some CAD software instruments.

#### Other skills

#### Internships and training courses:

- Summer school JINR – ROMANIA 2007, "The 2nd joint seminar JINR – ROMANIA on neutron physics for investigations of nuclei, condensed matter and life sciences". Baia Mare, Romania.
- Summer school NANOMA 2008, "Physics and Chemistry of NANO Materials Preparation, Analytics, Theory, and Applications". Cluj-Napoca, Romania.
- Summer school JINR – ROMANIA 2011, "The 3rd joint seminar JINR – ROMANIA on neutron physics for investigations of nuclei, condensed matter and life sciences". Targoviste, Romania.

#### ADDITIONAL INFORMATION

##### Programs/Projects (selection)

1. PCCE ID\_76/2010, "Science of surfaces and interfaces: Physics, Chemistry, Biology, Applications", 2010-2013;
2. POCT Romania-Bulgaria, MIS ETC CO DE 144-2011 (4273/2011), "REACT – Integrated system of dynamic monitoring and warning for technological risks in crossborder area Romania-Bulgaria", 2011-2013;
3. MNT ERA NET 7-053 / 2012 (4282/2012) „Mini-supercapacitors technology, based on hybrid CNT/CNF - electroactive polymer networks" (CarPolCap), 2012-2015;
4. Space Technology and Advanced Research – STAR Programme, "ADvanced COmposite Structure for SPacecraft Applications (ADCOSSPA)", 2012-2015;
5. PNCDI II 204/2012 (4284/2012), "Inflamable and toxic gases detector based on MOS sensors on silicon carbide (SiC GAS)", 2012-2015;
6. PNCDI II 21/2012 (7088/2012), "Intelligent high temperatures sensor with silicon carbide (SiC) diodes for industrial applications in hostile environments (SiC SET)", 2012-2015;
7. PNCDI II 179/2012 (7089/2012), "ESD clothes made of fibers with conductive core knitted in bilayer", 2012-2015;
8. STAR ROSA CDI, contract no. 99/2013(4301/2013), „Magnetic nanocomposite materials for electric motors with high speed", 2013-2015;
9. Direct contract no. 1089/2014, "Technical knowledge: Technical documentation on methods and schemes for achieving electromagnetic shields in configuration Salisbury and Jaumann", 2014;
10. PN-II-PT-PCCA-2013-4 -1100, "Installation and technology for waste recycling through high voltage electric impulses", 2014-now;
11. POC–G contract no. 112/2016, "Modular integrated system and technology for electromagnetic shielding of enclosures in the range 100 kHz - 18 GHz (SITEM)", 2016-now;
12. Direct contract no. 1112/2016, "Services for testing surge arresters", 2016-now;
13. PN-III-P2-2.1-PED-2016-0915, "Spintronic structures with Anisotropic Magneto-Resistance (AMR) si and Giant Magneto-Resistance (GMR) for applications on robust sensors", 2017-now.

Publications  
(selection)

1. Mihai Bădic, **Cristian Morari**, "Isotropic sensor for electromagnetic pollution assesment at industrial frequency of 50/60 Hz", *Electrotehnică, Electronică, Automatică (EEA)*, vol. 65 (2017), nr. 4, pp. 37-45, 2017.
2. Mihai Bădic, **Cristian Morari**, Jana Pinte, "High voltage sources for special applications", *Electrotehnică, Electronică, Automatică (EEA)*, vol. 65 (2017), nr. 3, pp. 55-62, 2017;
3. G. Telipan, **C. Morari**, B. Moaşa, "Electromagnetic Shielding Characterization of Several Conductive Textiles", *Bulletin of the Transilvania University of Braşov, Series I: Engineering Sciences*, vol. 10 (59), no. 1, 2017;
4. Rădulescu Ion Răzvan, Surdu Lilioara, Bădic Mihai, **Morari Cristian**, "Mathematical Modelling of the Shielding Effectiveness for Pes/Stainless Steel Fabrics", *International Scientific Conference "Innovative solutions for sustainable development of textiles and leather industry"*, 26th-27th of May 2017, Oradea, Romania, *Annals of the University of Oradea, Fascicle of Textiles, Leatherwork*, vol. XVIII, no. 1, 2017, Editura Universităţii din Oradea, ISSN 1843 – 813X;
5. Mihai Bădic, **Cristian Morari**, "Incongruities occurring in the theoretical models vs. experiment which implies equations of electromagnetic field propagation", *10<sup>th</sup> International Workshop of Electromagnetic Compatibility, CEM 2016*, Craiova, Romania, 14-16 Sept. 2016.
6. Ionut Balan, **Cristian Morari**, Alexandru Eros Patroi, "Composite materials for electromagnetic shielding", *U.P.B. Science Bulletin, Series B*, Vol. 78, Issue 2, 2016.
7. M. Badulescu, A. Anghel, C.C. Surdu-Bob, M. Badic, **C. Morari**, I. Balan, "Preliminary results on the electromagnetic shielding effectiveness of organic fabrics silver coated by high voltage anodic plasma", *OAM-RC* vol. 9, nr. 9-10, pp. 1230-1233, 2015.
8. **C. Morari**, I. Balan, "Methods for determining shielding effectiveness of materials", *Electrotehnică, Electronică, Automatică*, vol. 63 (2015), nr. 2, pp. 126-136, 2015.
9. Radulescu Florina, Patroi Eros Alexandru, **Morari Cristian**, "New Composite Textile Structure used in Electromagnetic Field Shielding", *Metalurgia*, Vol. 66, No. 1, pp. 5-9, 2014.
10. Pinteana Jana, **Morari Cristian**, Balan Ionut, Stoian Elena, Chitanu Elena, "Composite Materials Based on Silicone Rubber used for Electromagnetic Shielding", *Electromagnetic Compatibility/Electromagnetic Field. Research and Development in Romania*, Editura AGIR, Seria Electrotehnica - Electroenergetica, pp. 86-88, 2014.
11. W. Kappel, M. M. Codescu, E. Manta, E. A. Patroi, **C. Morari**, R. Erdei, "New Composite Materials, Obtained from Ashes Wastes with Potential Applications for Electromagnetic Shielding", *Trans. Tech. Periodicals, Trans. Tech. Periodicals Ltd., Zürich, Switzerland, Materials Science Forum*, vol. 672/(2011) 245 – 250.
12. **C. Morari**, I. Balan, J. Pinte, E. Chitanu, I. Iordache, "Electrical conductivity and electromagnetic shielding effectiveness of silicone rubber filled with ferrite and graphite powders", *Progress In Electromagnetics Research M*, Vol. 21, 93–104, 2011;
13. **C. Morari**, J. Pinte, J. Neamtu, I. Balan - "Electromagnetic Shields Attenuation", *Revue Roumaine des Sciences Techniques* Vol. 53, 2008, pp. 123-128.
14. Malaeru T., Neamtu J., **Morari C.**, Sbarcea G., "Structural and Magnetic Properties of Nanocrystalline Powders of Ni-Doped ZnO Diluted Magnetic Semiconductors Synthesized by Sol-Gel Method", *Rev. Roum. Chim.*, 2012, 57(9-10), 857-862.

## Patents/patent requests

1. Mihai Bădic, **Cristian Morari**, "Isotropic sensor for determining electromagnetic pollution at low frequency", Application number: A/00995/28.11.2017.
2. Bădic Mihai, **Morari Cristian**, Cherecheş Tudor, Lixandru Paul, Dragnea Daniel, "Installation for waste recycling by means of high voltage electrical impulses", Application number: A/00597/28.08.2017.
3. Mihai Bădic, **Cristian Morari**, Dragoş Ovezza, "Grid-type optically transparent electromagnetic shield obtained by tridimensional printing", Application number: A/00323/29.05.2017;
4. Mirela Maria Codescu, Elena Cănu, Wilhelm Kappel, Eugen Manta, Delia Patroi, Jana Pinte, Eros Alexandru Patroi, **Cristian Morari**, "Nanopulberi FeCo izolate electric", Application number: A/01039/22.12.2016;
5. Eros Alexandru Patroi, Remus Erdei, Mirela-Maria Codescu, Eugen Manta, Delia Patroi, Alexandru Iorga, **Cristian Morari**, Loghin Carmen, "Metallic micro-wires for electromagnetic shielding weaves", patent no.: 126211 B1/2015;
6. Georgescu Gabriela, Mălăeru Teodora, **Morari Cristian**, "Method for obtaining a fluorescent magnetic nanocomposite", Application number: A00635/03.09.2015.

National prizes/awards  
received through a selection  
process  
(selection)

1. Excellence diploma and gold medal, *Metalic microwires for electromagnetic shielding fabric*, A.E. Patroi, R. Erdei, M.M. Codescu, E. Manta, D. Patroi, A. Iorga, **C. Morari**, C. Loghin, The International Exhibition of Research, Innovation and Inventions PRO INVENT, ed. XIII, 2015, Cluj Napoca, Romania.
2. Excellence diploma and silver medal, *Metalic microwires for electromagnetic shielding fabric*, The Exhibition of Inventions and Innovation INVENTIKA, 2014, TIB, Bucharest Romania.

Member of professional  
associations

December 2017

