

## Europass Curriculum Vitae



### Personal information

#### Alexandru Mihail, MOREGA, Professor

Contact data	Department of Electrical Machines, Materials and Drives, Faculty of Electrical Engineering, University POLITEHNICA of Bucharest Department of Bioengineering and Biotechnology, Faculty of Medical Engineering, University POLITEHNICA of Bucharest
Address	Splaiul Independenței no. 313, sector 1, 060042
Telephone	
E-mail	
Nationality	Romanian
Web page	
Gender	M

### Positions

Professor, Department of Electrical Machines, Materials and Drives, Faculty of Electrical Engineering, University POLITEHNICA of Bucharest (1998-)

Doctoral adviser, Engineering Sciences, Electrical Engineering (1999-)

CM – Romanian Academy, Engineering Sciences Section (2012-), member of the Section Board (2014-)

Academy of Technical Sciences of Romania (ASTR), Section of Electrotechnics, Energetics (CM 2012-2017, M 2017-), Secretary of the section (2012-)

Coordinator, Biomedical Commission, Engineering Sciences, Romanian Academy (2014-)

Associated researcher, “Gheorghe Mihoc – Caius Iacob” Institute of Statistical Mathematics and Applied Mathematics, Romanian Academy (1995-2020)

Member of the Senate, UPB (2002-2020)

Member of the Engineering Panel (2018-), Member of the Research Mathematics (STEM) (2020-) the Research Hong Kong Research Grants Committee

EU Commission, Science Advice for Policy by European Academies (SAPEA) — Scientific Advice Mechanism (2018-2020)

Honorary Member, Scientific Council of ICPE-CA (2009-)

Vice-president, National Society for Medical Engineering and Biomedical Technology (SNIMTB) (2010-2016)

Member, Commission for Electrical Engineering and Energetics – National Council for the Accreditation of Doctoral Theses and Academic Titles (CNATDCU), Ministry for Education, Research, and Innovation (2005-2016)

Member of the Scientific Council, the International Centre for Heat and Mass Transfer (ICHMT) (2010-)

Chief Editor and member of the editorial board, Revue Roumaine des Sciences Techniques: Serie Electrotechnique et Energetique – founded in 1954, INSPEC since 1954, and ISI since 2007

### Professional education and training

Dates	1980—
Occupation or position held	From Assistant Professor to Professor
Main activities and responsibilities	Professional education, research. PhD advisor.

Name and address of employer	University POLITEHNICA of Bucharest, Splaiul Independentei no. 313, sector 6, 060042, Bucharest, Romania
Type of business or sector	Professional education, research / university
Dates	1990-1993
Title of qualification awarded	PhD / Doctor of Philosophy in Mechanical Engineering
Principal subjects/occupational skills covered	Mechanical Engineering / research, design
Name and type of organization providing education and training	DUKE UNIVERSITY, DEPARTMENT OF MECHANICAL ENGINEERING AND MATERIALS SCIENCE, Durham, NC, USA / Graduate studies, engineering
Level in national or international classification	Graduate studies
Dates	1981-1987
Title of qualification awarded	Doctorate / Doctor in engineering, Electrotechnics
Principal subjects/occupational skills covered	Electrical Engineering / research, design
Name and type of organization providing education and training	THE POLYTECHNIC INSTITUTE OF BUCHAREST, FACULTY OF ELECTROTECHNICS / Graduate studies, engineering
Level in national or international classification	Graduate studies, engineering
Dates	1974-1980
Title of qualification awarded	License and Master of Sciences / Engineer, Master of Sciences in EE
Principal subjects/occupational skills covered	Electrical engineering / research, design
Name and type of organization providing education and training	THE POLYTECHNIC INSTITUTE OF BUCHAREST, FACULTY OF ELECTROTECHNICS / Undergraduate (license) and Graduate (MSc) studies, engineering
Level in national or international classification	Undergraduate and graduate studies, engineering
Dates	1970-1974
Title of qualification awarded	Higher education / Baccalaureate
Principal subjects/occupational skills covered	Theoretical Lyceum / mathematics – physics, general education
Name and type of organization providing education and training	“MIHAI VITEAZUL” LYCEUM IN BUCHAREST
Level in national or international classification	Baccalaureate

### Personal skills and competences

Native language

**Romanian**

Other language(s)

Self-assessment

*European level (\*)*

**English**

**French**

**German**

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

(\*) [Common European Framework of Reference for Languages](#)

Social skills and competences

Member of the local community

Organizational skills and competences

Director, Doctoral School of Electrical Engineering, University POLITEHNICA of Bucharest (2012-)  
 Director, Department of Bioengineering and Biotechnology, the Faculty of Medical Engineering,  
 University POLITEHNICA of Bucharest (2002-2008, *ad interim* 2008-2012)

Technical skills and competences	<p>Member, Editorial board, Proceedings of the Romanian Academy, series A (2012-)  Chair, Romanian Chapter IEEE – Engineering in Medicine and Biology Society (2007–)  Vicepresident, National Society of Medical Engineering and Biologic Technology, Romania (2007-2016)  CNCSIS, Engineering sciences committee, member (2006–2011)  CNATDCU – Ministry of Education, Research, Youth and sports, member of the electrical engineering committee (2006-2016)  Member of the Scientific Committee, International Centre for Heat and Mass Transfer (ICHMT) (2010-)</p> <p>Research development, professional education.  (1) Design, optimization, mathematical modeling and numerical in electrical engineering – electromagnetic fields; biomedical applications.  (2) Design, optimization, mathematical modeling and numerical in heat and mass processes;  (3) Energy conversion and sources; biomedical applications.  (4) Structural optimization in engineering – a constructal approach.</p> <p>Senior member, IEEE – Engineering in Medicine and Biology Society and Industry Applications Society(1990–)  ASME member (1990–)  IEEE Chair at the IEEE-ATEE 2011, 2013, 2015, 2017, 2019, 2021 Symposium (Advanced Topics in Electrical Engineering)  Member of the Management Committee of the EU COST Action BM0701 (2008-2012)  Member of the Romanian standardization Technical Committee CT22 (Electro-medical equipment)  Member in several doctoral dissertation evaluation commissions  Scientific reviewer for technical and program committees at several international conferences (IEEE OPTIM 2002, 2004, 2006, 2008, BIOSIGNALS 2008, 2009, MediTech 2007, 2009, EHB 2007, 2009, 2011, etc.) and for international peer review journals (Rev. Roum. Sci.Tech. – Serie Electrotechnique et Energetique, Rom. J. of Biophysics, J. of Electromagnetic Waves and Applications Progress in Electromagnetic Research, Buletinul UPB, etc.)  Senior researcher – „Gheorghe Mihoc – Caius Iacob” Institute of Mathematical Statistics and Applied Mathematics, Romanian Academy (1995–2020)</p> <p><i>Visiting Researcher</i> (2005, 2006, 2007), Center for Advanced Power Systems (CAPS), Florida State University &amp; Florida Agricultural and Mechanical University (FAMU-FSU), High Magnetic Field Laboratory, Tallahassee, FL, USA  <i>Visiting Researcher</i> (2001), Laboratoires d’Electrotechnique de Grenoble, LEG, France  <i>Visiting Professor</i> (2001), Faculty of Engineering, Dept. of Mechanical Engineering, Energy Division, Yamaguchi University, Tokiwadai, Ube, 755, Japan  <i>Visiting Researcher</i> (2000), Dept. of Mechanical Engineering and Materials Science, Duke University, Durham, NC, USA  <i>Associated Professor</i> (1995-1996), Faculty of Engineering, Dept. of Mechanical Engineering, Energy Division, Yamaguchi University, Tokiwadai, Ube, 755, Japan  <i>Visiting Researcher</i> (1994), Dept. of Mechanical Engineering and Materials Science, Duke University, Durham, NC, USA</p>
Research areas of interest	<p>Engineering and Technology in Medicine and Biology  Constructal law applications, structural optimization  Electromagnetism, electric and magnetic circuits – theory, applications, mathematical, analytical, and numeric modeling  Heat and mass transfer processes and interactions circuits – theory, applications, mathematical, analytical, and numerical modeling  Energy conversion and sources  Nonlinear dynamics  Multiphysics problems</p>
Technical and professional activities	<p>Foundation of the Faculty of Medical Engineering, UPB – Coordinator and <i>ad interim</i> dean (2010-12)  Foundation of the Department of Bioengineering and Biotechnology, at UPB (2002) – Coordinator and director (2002-2012)  Foundation of BIOINGTEH – Platform for professional R&amp;D, UPB – CNCSIS at the Department of Bioengineering and Biotechnology, UPB (2006) – director (2006-)  Foundation of the Laboratory for Electrical Engineering in Medicine, at the Faculty of Electrical Engineering, UPB (1998)  Foundation of the Laboratory for Energy Conversion and Sources, at the Faculty of Electrical Engineering, UPB (2008)</p>

	<p>Founding member of IEEE – EMB national chapter; National Society of Medical Engineering and Biologic Technology</p> <p>The first laboratory installation for unidirectional solidification for <i>in situ</i> metallic composite materials – Bridgmann-Stockbarger method; first composite materials (Bi-MnBi, Ni-AlNi alloys) (1981-1987)</p> <p>The first forming installation in magnetic field – lost form casting (1982)</p>
Computer skills and competences	Expertise in the usage of R&D media for mathematical and numerical modeling, numerical simulation, data acquisition and processing, control, desktop publishing, e-learning – graduate studies, trainings, and personal experience.
Managerial and organizational competences	<p>Director, Doctoral School of Electrical Engineering, UPB (2012-)</p> <p>Head, Chair of Electrical Machines, Materials and Drives, UPB (2008-2012)</p> <p>Dean (<i>ad interim</i>) – Faculty of Medical Engineering, UPB (2010-2012)</p> <p>Director, Department of Bioengineering and Biotechnology, UPB (2002-2012)</p>
Driving license	Romania, B-category, 1974
<b>Additional information</b>	
Publications, patents, grants	Over 400 papers in peer reviewed journals (117) and conferences (226 international, 59 national); 14 books and chapters in books; 3 books translated in Romanian (Cambridge Univ. Press, 2000; John Wiley, 2008, DobleDay 2013); 5 text books; 7 patents; 34 reports; 18 international scientific seminars and lectures; H-index (ISI): 14; 16 defended thesis; 70 research grants (principal investigator 36, investigator 34).
Awards, Diplomas, Medals	<p><i>Diploma of Bronze Medal</i>, for “Power generation system by photovoltaic conversion, with antireflective coating”, L. Pîslaru-Dănescu, E. Chițanu, L.A. El-Leathey, C.A. Băbuțanu, M.D. Marin, A.M. Morega, M. Morega, N.C. Popa, EUROINVENT, 11 ed., 2019, Iași, Romania.</p> <p><i>Diploma of Gold Medal</i>, for “Rotary piezoelectric motor with double contact”, to L. Pîslaru-Dănescu, M. Popa, C.A. Băbuțanu, R.A. Chihaia, A.M. Morega, M. Morega, I. Fuiorea, F. Lică, D. Gabor, EUROINVENT, 10th Edition, May 19, 2018, Iași, Romania.</p> <p><i>Diploma de Excelență &amp; Trofeul INCDMTM</i> pentru L. Pîslaru-Dănescu, M. Popa, C.I. Ilie, R.A. Chihaia, C.A. Băbuțanu, S. Nicolaie, F. Bunea, F.D. Stoian, S. Holotescu, O.M. Marinică, A.M. Morega, M. Morega, J.B. Dumitru, N.C. Popa, cu ocazia Salonului Național al Cercetării Științifice, Inovării și Inventicii, PROINVENT, Ediția XVI, 21-23 Martie, 2018, Cluj-Napoca.</p> <p><i>Diploma de Excelență și Medalia de Aur cu Mențiune Specială</i> pentru „Transformator planar cu nanofluid magnetic”, Autori: L. Pîslaru-Dănescu, M. Popa, C.I. Ilie, R.A. Chihaia, C.A. Băbuțanu, S. Nicolaie, F. Bunea, F.D. Stoian, S. Holotescu, O.M. Marinică, A.M. Morega, M. Morega, J.B. Dumitru, N.C. Popa, la Salonul Național al Cercetării Științifice, Inovării și Inventicii, PROINVENT, Ediția XVI, 21-23 Martie, 2018, Cluj-Napoca.</p> <p>“TUDOR TANASESCU” award, Romanian Academy – awarded in 2000 for 1998).</p> <p><i>Silver Medal</i>, “Magnetostrictive sonic motor with electronic module drive”, The World Exhibition on Inventions, Research and New Technologies, Innova Brussels, 17- 19 Nov. 2016</p> <p><i>Commemorative Medal and Diploma</i>, 65 years of ICPE-CA, 164/25.11.2015.</p> <p><i>IEEE Certificate of Appreciation</i>, “In grateful recognition of 25 years of service as an IEEE member”, 4 December 2015</p> <p><i>Gold Medal and Diploma of Excellence</i>, International Fair PROINVENT, XIII editon, 2015, Cluj-Napoca, MEDCS, ASTR –Cluj Branch, for “Sonic Magnetostrictive Motor with Electronic Drive Module”</p> <p><i>Diploma of Excellence</i> ASTR, Technical Sciences Academy of Romania (ASTR) International Fair PROINVENT, Cluj-Napoca, 25-27 March 2015.</p> <p><i>Bronze Medal</i>, International Fair, Geneva, 20 April 2012, for <i>Moteur Electrique synchrone supraconducteur</i>, Patent Number: RO126815-A0, OSIM.</p> <p><i>Silver Medal</i> at “Inventica” Fair, Bucharest, 5-8 October 2011, for <i>Transformer with magnetic nanofluid agent</i>, Patent Number: RO126613-A0, OSIM, România.</p> <p><i>Best poster award</i>, 2010, COMSOL Conference Versailles, France.</p> <p><i>Best new IEEE-EMBS Chapter – 2007</i> for the National Chapter IEEE-EMB.</p> <p><i>Diploma of Excellence</i> for the contributions brought to the development and performances of the Faculty of Electrical Engineering, awarded by UPB Senate, 10 May 2012.</p> <p><i>Diploma of Excellence</i>, at the 90 years anniversary of electrotechnics education at UPB, 12 May, 2011.</p>
Professional associations and organizations	<p>The Institute of Electrical and Electronics Engineers (1990-)</p> <p>Engineering in Medicine and Biology Society (EMBS) – founding member of the National Chapter (2007-)</p>

	<p>Industry Applications Society – founding member of the National Chapter (2010-)</p> <p>The American Society of Mechanical Engineers (ASME – HTD) (1990-)</p> <p>The International Centre for Heat and Mass Transfer (ICHMT) (2010-)</p> <p>Duke University Alumni Association (DUAA) (1993-)</p> <p>National Geographic Society (2000-)</p> <p>National Society for Medical Engineering and Biomedical Technology, founding member and vice-president (2010-2016)</p>
Other data	<p>Reviewer for scientific journals (Royal Society, International Journal of Heat and Mass Transfer, Revue Roumaine des Sciences Techniques: Serie Electrotechnique et Energetique etc.) – more than 30 periodicals</p> <p>External reviewer, Hong Kong Research Grants Council (2012-)</p> <p>Member of the Engineering Panel, Hong Kong Research Grants Council (2018-)</p> <p>EU Commission, Science Advice for Policy by European Academies (SAPEA) — Scientific Advice Mechanism</p> <p>Chair of the <i>Advanced Topics in Electrical Engineering</i> (ATEE), editions VII – XI (2011 – 2019), international IEEE, ASTR conference, ISI-CPCI indexed</p> <p>Chair, Symposium of Electrical Machines (SME), annual editions 2008-2017, IEEE, ASTR</p> <p>Organizer, Regional contest „Prof. Marcel Roşculeţ”, Mathematics for Electrical Engineering –XI, XII, classes, The Faculty of Electrical Engineering, Department of Mathematics (Faculty of Applied Sciences), “Gh. Mihoc – C. Iacob” Institute of Statistical Mathematics and Applied Mathematics of the Romanian Academy, National Society of Mathematics (since 2011, each year) – technically co-sponsored by IEEE, Romania Section.</p>

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