Europass Curriculum Vitae



Personal information

Alexandru-Mihail, MOREGA, Professor

Contact data	Department of Electrical Machines, Materials and Drives, Faculty of Electrical Engineering, National University of Science and Technology POLITEHNICA Bucharest
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Nationality	Romanian
Web page	http://www.iem.pub.ro/~amm
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-)
Corresponding Member, Romanian Academy, Engineering Sciences Section (2012-), member of the Section Board (2014-)
Member, 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); Associated Researcher (2020-)
Member of the Senate, UPB (2002-2020)
Member of the Engineering Panel (2018-), Member of the Research Fellow Scheme (RFS), Senior Research Fellow Scheme (SRFS), Science, Technology, Engineering, Mathematics (STEM), CRF (CRPG/CREG), Area of Excellence (AoE) and Strategic Topics Grants (STG) (2020-) the 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

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Main activities and responsibilities	Professional education and research activities. PhD advisor since 1998 – 19 Doctoral Theses.
Name and address of employer	National University of Science and Technology POLITEHNICA 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	PRIMARY SCHOOL, GYMNASIUM: VASILE ALECSANDRI, BUCHAREST; "MIHAI VITEAZUL" LYCEUM IN BUCHAREST
Level in national or international classification	Baccalaureate

Personal skills and competences

Native language: **Romanian**

Other language(s)

Self-assessment	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
English	C1	Proficient user	C1	Proficient user	B1	Proficient user	B1	Proficient user	C1	Proficient user
French	C1	Proficient user	C1	Proficient user	B1	Proficient user	B1	Proficient user	C1	Proficient user
German	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, National University of Science and Technology POLITEHNICA of Bucharest (2012-2024)

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Director, Department of Bioengineering and Biotechnology, the Faculty of Medical Engineering, National University of Science and Technology POLITEHNICA of Bucharest (2002-2008, *ad interim* 2008-2012)
Member, Editorial board, Proceedings of the Romanian Academy, series A (2012-)
Chair, Romanian Chapter IEEE – Engineering in Medicine and Biology Society (2007–)
Vice-president, 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-)

Technical skills and competences

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.
Senior member, IEEE – Engineering in Medicine and Biology Society and Industry Applications Society (1990–2021), life senior member (2021-).
ASME member (1990–2021), life member (2021-).
IEEE Chair of the IEEE-ATEE 2011, 2013, 2015, 2017, 2019, 2021, 2023, 2025 International Symposium on 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); Associate Researcher (2020-).
Chief Editor (2019-) Rev. Roum. Sci.Tech. – Serie Electrotechnique et Energetique. A journal of the Romanian Academy.

Visiting Researcher (2005, 2006, 2007), Center for Advanced Power Systems (CAPS), Florida State University & Florida Agricultural and Mechanical University (FAMU-FSU), High Magnetic Field Laboratory, Tallahassee, FL, USA.
Visiting Researcher (2001), Laboratoires d'Electrotechnique de Grenoble, LEG, France.
Visiting Professor (2001), Faculty of Engineering, Dept. of Mechanical Engineering, Energy Division, Yamaguchi University, Tokiwadai, Ube, 755, Japan.
Visiting Researcher (2000), Dept. of Mechanical Engineering and Materials Science, Duke University, Durham, NC, USA.
Associated Professor (1995-1996), Faculty of Engineering, Dept. of Mechanical Engineering, Energy Division, Yamaguchi University, Tokiwadai, Ube, 755, Japan
Visiting Researcher (1994), Dept. of Mechanical Engineering and Materials Science, Duke University, Durham, NC, USA.

Research areas of interest

Engineering and Technology in Medicine and Biology.
Constructal law and applications, structural optimization.
Electromagnetism, electric and magnetic circuits – theory, applications, mathematical, analytical, and numeric modelling.
Heat and mass transfer processes and interactions circuits – theory, applications, mathematical, analytical, and numerical modelling.
Energy conversion and sources.
Nonlinear dynamics.
Multiphysics problems.

Technical and professional activities

Foundation of the Faculty of Medical Engineering, UPB – Coordinator and *ad interim* 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&D, UPB – CNCSIS at the Department of Bioengineering and Biotechnology, UPB (2006) – director (2006-)

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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)
Founding member of IEEE – EMB national chapter; National Society of Medical Engineering and Biologic Technology
The first laboratory installation for unidirectional solidification for *in situ* metallic composite materials – Bridgmann-Stockbarger method; first composite materials (Bi-MnBi, Ni-AlNi alloys) (1981-1987)
The first forming installation in magnetic field – lost foam casting (1982)

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

Director, Doctoral School of Electrical Engineering, UNSTPB (2012-2024).
Head, Chair of Electrical Machines, Materials and Drives, UPB (2008-2012).
Dean – Faculty of Medical Engineering, UPB (2010-2012).
Director, Department of Bioengineering and Biotechnology, UPB (2002-2012).
President of "Patrimoniu" foundation of the Romanian Academy (2021-).

Driving license

Romania, B-category, 1974

Additional information

Publications, patents, grants

Over 400 papers in peer reviewed journals (over 120) and conferences (over 240 international, over 60 national); 14 books (e.g., Academic Press) and chapters in books (e.g., Academic Press); 4 books translated in Romanian (Cambridge Univ. Press, 2000; John Wiley, 2008, DobleDay 2013, Springer 2020); 6 textbooks; 7 patents; 36 reports; 25 international scientific seminars and lectures; H-index (ISI): 15; advisor for 21 defended theses; 70 research grants (principal investigator 36, investigator 34); "Henri Coandă" award, Romanian Academy, 2022 (co-author of awarded book).

Awards, Diplomas, Medals

Diploma of Bronze Medal, for "Power generation system by photovoltaic conversion, with antireflective coating", L. Pîslaru-Dănescu, E. Chiţanu, L.A. El-Leathey, C.A. Băbuţanu, M.D. Marin, A.M. Morega, M. Morega, N.C. Popa, EUROINVENT, 11 ed., 2019, Iaşi, Romania.
Diploma of Gold Medal, for "Rotary piezoelectric motor with double contact", to L. Pîslaru-Dănescu, M. Popa, C.A. Băbuţanu, R.A. Chihaia, A.M. Morega, M. Morega, I. Fuiorea, F. Lică, D. Gabor, EUROINVENT, 10th Edition, May 19, 2018, Iaşi, Romania.
Diploma de Excelenţă & Trofeul INCDMTM pentru L. Pîslaru-Dănescu, M. Popa, C.I. Ilie, R.A. Chihaia, C.A. Băbuţanu, 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 Naţional al Cercetării Ştiinţifice, Inovării şi Inventicii, PROINVENT, Ediţia XVI, 21-23 Martie, 2018, Cluj-Napoca.
Diploma de Excelenţă şi Mediala de Aur cu Menţiue Specială pentru „Transformator planar cu nanofluid magnetic", Autori: L. Pîslaru-Dănescu, M. Popa, C.I. Ilie, R.A. Chihaia, C.A. Băbuţanu, 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 Naţional al Cercetării Ştiinţifice, Inovării şi Inventicii, PROINVENT, Ediţia XVI, 21-23 Martie, 2018, Cluj-Napoca.
"TUDOR TANASESCU" award, Romanian Academy – awarded in 2000 for 1998).
Silver Medal, "Magnetostrictive sonic motor with electronic module drive", The World Exhibition on Inventions, Research and New Technologies, Innova Brussels, 17- 19 Nov. 2016
Commemorative Medal and *Diploma*, 65 years of ICPE-CA, 164/25.11.2015.
IEEE Certificate of Appreciation, "In grateful recognition of 25 years of service as an IEEE member", 4 December 2015
Gold Medal and *Diploma of Excellence*, International Fair PROINVENT, XIII editon, 2015, Cluj-Napoca, MEDCS, ASTR –Cluj Branch, for "Sonic Magnetostrictive Motor with Electronic Drive Module"
Diploma of Excellence ASTR, Technical Sciences Academy of Romania (ASTR) International Fair PROINVENT, Cluj-Napoca, 25-27 March 2015.
Bronze Medal, International Fair, Geneva, 20 April 2012, for *Moteur Electrique synchrone supraconducteur*, Patent Number: RO126815-A0, OSIM.
Silver Medal at "Inventica" Fair, Bucharest, 5-8 October 2011, for *Transformer with magnetic nanofluid agent,* Patent Number: RO126613-A0, OSIM, România.
Best poster award, 2010, COMSOL Conference Versailles, France.
Best new IEEE-EMBS Chapter – 2007 for the National Chapter IEEE-EMB.
Diploma of Excellence for the contributions brought to the development and performances of the Faculty of Electrical Engineering, awarded by UPB Senate, 10 May 2012.

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	Diploma of Excellence, at the 90 years anniversary of electrotechnics education at UPB, 12 May 2011.
Professional associations and organizations	The Institute of Electrical and Electronics Engineers (1990-), life Senior Member. Engineering in Medicine and Biology Society (EMBS) – founding member of the National Chapter (2007-). Industry Applications Society – founding member of the National Chapter (2010-). The American Society of Mechanical Engineers (ASME – HTD) (1990-). The International Centre for Heat and Mass Transfer (ICHMT) (2010-). Duke University Alumni Association (DUAA) (1993-). National Geographic Society (2000-). National Society for Medical Engineering and Biomedical Technology, founding member and vice-president (2010-2016), Member (2010-).
Other data	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. External reviewer, Hong Kong Research Grants Council (2012-2020). Member of the Engineering Panel, Hong Kong Research Grants Council (2018-). EU Commission, Science Advice for Policy by European Academies (SAPEA) — Scientific Advice Mechanism. Chair of the *Advanced Topics in Electrical Engineering* (ATEE), editions VII – XI (2011 – 2023), international IEEE, ASTR conference, ISI-CPCI indexed. Chair, Symposium of Electrical Machines (SME), annual editions 2008-2023, IEEE, ASTR. Organizer, National 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.

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