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Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Horia Cătălin GAVRILĂ**
Address(es)	99, George Missail Street, Bucharest, Romania
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Fax(es)	
E-mail	horia.gavrila@upb.ro
Nationality	Romanian
Date of birth	07/12/1940
Gender	male

Employment/ Occupational field

Politehnica University of Bucharest, Faculty of Electrical Engineering/ Teaching

Work experience

Dates	***1962 - present***
Occupation or position held	Emeritus Professor (2012 - present), Professor (1990 – 2012), Associate Professor (1978 – 1990), Lecturer (1972 – 1978), Univ. Assistant (1962 – 1972)
Main activities and responsibilities	Teaching courses of Electrical Engineering at license and master level, Doctoral Supervisor (since 1990)
Name and address of employer	Politehnica University of Bucharest, Faculty of Electrical Engineering, Splaiul Independenței, no. 313, zip code 060042, Bucharest
Type of business or sector	Teaching
Dates	***2000 - 2005***
Occupation or position held	Director of research in higher education
Main activities and responsibilities	
Name and address of employer	Ministry of Education and Research, Bucharest, Romania
Type of business or sector	
Dates	***1997 - 2000***
Occupation or position held	Secretary General
Main activities and responsibilities	
Name and address of employer	Ministry of National Education, Bucharest, Romania
Type of business or sector	

Education and training

Dates	**1972**
Title of qualification awarded	PhD in Theoretical Electrical Engineering
Principal subjects/occupational skills covered	Study of properties and some technical applications of ferromagnetic sheets.

Name and type of organisation providing education and training	"Politehnica" University of Bucharest, Faculty of Electrical Engineering
Level in national or international classification	Post-graduate studies
Dates	**1967**
Title of qualification awarded	MS in Theoretical Physics
Principal subjects/occupational skills covered	Teoretical magnetism, Magnetic measurements techniques, Magnetic materials; Quantic Physics
Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics
Level in national or international classification	Graduate studies
Dates	**1962**
Title of qualification awarded	MS in Electrical Machines and Aparatus
Principal subjects/occupational skills covered	Graduate studies in power electronics, electrical machines, electromagnetic materials
Name and type of organisation providing education and training	Politehnica University of Bucharest, Faculty of Electrical Engineering
Level in national or international classification	Graduate studies

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s) **English, French**

Self-assessment

	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
English	B1	Independent user	B1	Independent user	B1	Independent user	B1	Independent user	B1	Independent user
French	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

(*) *Common European Framework of Reference for Languages*

Social skills and competences

Excellent interaction with various native audiences: students, professors, researchers, partners in research projects.
Experience of working in team, gained in international and interdisciplinary research activity
Good communication skills
Excellent results to form students, doctorate students and young collaborators

Organisational skills and competences

Coordinator/responsable of 28 national research projects (16 between 2001 – 2017)

Responsabilities in the European Higher-education Program TEMPUS: administrator of the project PEC 2736 (1993-1994), the most important project of University "Politehnica" of Bucharest, director-coordinator of the projects M-PEC 07147 (1994-1997) and PEC-12 018 (1997-2000).

Director of the scientific bi-lateral (România – Italia) project "Nanostrucred and amorphous magnetic alloys for high-frequency applications" (2006-2008); participants UPB – Center MAGNAT and Istituto Nazionale di Ricerca Metrologica INRIM di Torino

Participant (2001 – 2017) at over 55 national research projects

Initiator and co-president of the Scientific French-Canadiano-Romanian Workshop "Matériaux (magnétiques et diélectriques) pour l'Electrotechnique" / Scientific International Workshop "Materials for Electrotechnics" and of the Joint International Conferences "Materials for Electrical Engineering" (1997 – 2010).

Technical skills and competences

Ability to use complex characterization techniques: Magnetic measurements, Alternating Gradient Force Magnetometry, Vibrating Sample Magnetometry, Hysteresisgraph

Computer skills and competences	A very good familiarity with instruments Microsoft Office (Word, Excel, Power Point) Using modern tools for searching and filtering data and information from Internet and Databases (e.g. ISI Thompson Web of Knowledge)
Other skills and competences	**Corresponding member of Academy of Technical Sciences in Romania** Award "Traian Vuia" of Romanian Academy (2000), for the monograph: "Technical and Applied Magnetism". Director of Center of excellence research in higher education MAGNAT, in the field of Applied and Technical Magnetism. Award "OPERA OMNIA" of University "Politehnica" of Bucharest (2008), for his entire research activity. Member in Program and Scientific Committees and chairman of sections in numerous national and international conferences. Member in numerous juries of doctorate theses. Gold Medal to International Exhibition "Inventika" (for inventions, research and new technologies), Bucharest, 28-31 October 2009 and Silver Medal to the 37th International Exhibition of Inventions, New Techniques and Products, Geneva, 1-5 May 2009, for "Electrical machines with permanent magnets in special configurations". Gold Medal to « Eureka » (The International Trade Fair for Technological Innovation), Bruxelles, May 2009 and "Inventika", as well as Award for the Best Invention, FIRI (First Institute Inventors and Researchers in Iran) for "Electrical machine with double excitation". 1992: Invited researcher in Laboratoire d'Electrotechnique de Grenoble, with a grant "haut niveau" of the French Ministry of Research and Technology, working in the Group of Magnetic Materials with professors Pierre Brissonneau and Bruno Cornut (4 months); 1994: Invited researcher, Laboratoire de Magnétisme "Louis Néel" (C.N.R.S.), Grenoble (1 month); 1995: Invited professor, Département de Génie Physique de l'École Polytechnique de Montréal (2 grants of 3 months). Collaboration with professor Arthur Yelon, in research and ellaboration of scientific monographs. Scientific referent of the most important european conferences in the field of magnetic materials, SMM: Soft Magnetic Materials, respectively Joint European Magnetic Symposium. Member in the edtorial board of Revue Internationale de Génie Electrique (Eds. Hermès - Fran\a) Co-director, with Prof. George C. Hadjipanayis (SUA), of the Advanced Studies Institute NATO „Magnetic Storage Systems beyond 2000", Rhodes (Greece), June 2000, Grant NATO PST.ASI 975.548. Expert of the Extern Advisory Group "Human Ressources and Mobility" (2002-2006) and of the Extern Advisory Group "Research Potential" (2006-2008) of the Directorate General for Research of the European Comission.
Additional information	**Member of professional associations:** Member of Institute of Electrical and Electronics Engineers (I.E.E.E.), Magnetics Society - S.U.A., since 1990 and vicepresident of IEEE Magnetics Society Chapter of the Romanian Section (since 2002). Senior member I.E.E.E. (since 2000); Life Senior member I.E.E.E. (since 2016).
Patents / Patent Application	W. Kappel, **Horia-Cătălin Gavrilă**, Gh. Mihaiescu, S. Nicolaie, V. Ioniță, D. Marin, E. Macamete, *„Double-energized electrical machine consists of a ring wound armature, an annular hollow cylinder-shaped electromagnetic yoke having located on its surface a winding with spiral wires, without notches"* - ***Patent no. 125881 / 29.07.2011*** W. Kappel, G. M. Miohaiescu, **Horia Gavrilă**, C. I. Ilie, I. Vasile: "*Structură inductor-indus fără miez feromagnetic pentru maşini electrice cu magneţi permanenţi*". ***Brevet de invenţie nr.123604/2014***

Books /chapters

- P. Ciureanu, **H. Gavrilă**, Magnetic Heads for Digital Recording, Elsevier Science Publishers B.V., Amsterdam, 1990, 720 pages; ISBN 0-444-98853-X
- **H. Gavrilă**, O. Centea, Modern Theory of Electromagnetic Field and Applications (in Romanian), Editura All, Bucharest, 1998, 535 pages; ISBN 973-571-257-1
- **H. Gavrilă** (coordinator), P. Ciureanu, V. Ionita, H. Chiriac, and A.Yelon, Technical and Applied Magnetism (in Romanian), Editura Academiei, Bucharest, 2000, 1188 pages; ISBN 973-27-0756-9
- **H. Gavrilă**, V. Ioniță, Experimental Metods in Magnetism (in Romanian), Editura UMF, Bucharest, 2003; 356 pages; ISBN 973-9718-01-0
- **H. Gavrilă**, P. Ciureanu and A. Yelon, Magnétisme appliqué, 2 volumes, Eds. de l'Ecole Polytechnique de Montréal, Canada, 1998, 2003 ; 623 pages;
- A. Lebouc, éd, Matériaux magnétiques en Génie Electrique: Développements récents et applications, Hermes Science Publishing Ltd, Paris, France, 2006; ISBN 2-7462-1165-3
- **H. Gavrilă**, Magnetic recording (in Romanian), Editura Printech, Bucharest, 2005; 350 pages; ISBN 973-718-353-2
- **H. Gavrilă**, W. Kappel, M.M. Codescu, Magnetic Materials (in Romanian), Editura Printech, Bucharest, 2005; 330 pages; ISBN 973-718-354-1

ISI Articles
Selection , 2007 - 2017

1) G. Paltanea, V. Paltanea, H. Gavrilă: Energy losses prediction in non-oriented silicon iron sheets. *Rév.Roum.Sci.Techn.* (Série *Electrotechn.Energ.*) **58**, pp.53-62 (2013).
2) V. Paltanea, G. Paltanea, H. Gavrilă, E. Patroi, I. Peter: The influence of the sheet metal cutting technologies on the energy losses in non-oriented silicon iron alloys. *Rév.Roum.Sci.Techn.* (Série *Electrotechn.Energ.*) **59**, pp.47-55 (2014)
3) M. Maricaru, H. Gavrilă, G.-M. Vasilescu, F. I. Hantila : Analysis of the motion of conducting sheets in magnetic fields. *I.E.E.E. Transactions on Magnetics* **50**, 7001604 (2014)
4) G. Scutaru, H. Gavrilă, I. Peter: An estimation method of the manutacturing process' effect on iron losses. *Advances in Electrical and Computer Enegineering* **14**, pp.49-52 (2014)
5) H. Gavrilă, Coupled Granular/Continuous Media For Perpendicular Magnetic Recording, *Proceedings Of The Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science*,:**11**, pp. 41-46 (2010)
6) H. Gavrilă, Heat-assisted magnetic recording, *Journal of Optoelectronics And Advanced Materials*, **10**, pp.1796-1804 (2008)
7) H. Gavrilă, Patterned magnetic recording media, *Journal Of Optoelectronics And Advanced Materials*, **10**, pp.757-767 (2008)
8) V. Paltanea, G. Paltanea, H. Gavrilă, A. Nicolaide: Analysis of the cutting area, obtained through mechanical and electrical discharge technologies in non oriented silicon iron sheets. *Rév.Roum. Sci.Techn.* (Série *Electrotechn.Energ.*) **60**, pp.143-152 (2015)
9) V. Paltanea, G. Paltanea, H. Gavrilă: Hysteresis model and statistical interpretation of energy losses in non-oriented steels. *Physica B: Condensed Matter* **486C**, pp.12-16 (2016).
10) G. Paltanea, V. Paltanea, H. Gavrilă, A. Nicolaide, B. Dumiotrescu: Comparison between magnetic industrial frequency properties of non-oriented FeSi alloys, cut by mechanical and water jet technologies. *Rév.Roum.Sci.Techn.* (Série *Electrotechn.Energ.*) **61**, pp.26-31 (2016)
11) B. Dumiotrescu, A.D. Ionita, H. Gavrilă: Picking lines modeling. *Rév.Roum.Sci.Techn.* (Série *Electrotechn.Energ.*) **61**, pp.78-83 (2016)
12) H. Gavrilă, V. Paltanea, G. Paltanea,, G. Scutaru, I. Peter: New trends in energy efficient electrical machines. *Procedia Engineering* **181**, pp.568-574 (2017)