

INFORMAȚII PERSONALE



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Sexul M | Data nașterii 12/06/1960 | Naționalitatea Română

LOCUL DE MUNCA PENTRU
CARE SE CANDIDEAZĂ
POZIȚIA
LOCUL DE MUNCĂ DORIT
STUDIILE PENTRU CARE SE
CANDIDEAZĂ

EXPERIENȚA PROFESIONALĂ

2006-

Profesor universitar

Universitatea Tehnică din Cluj-Napoca

- Învățământ și cercetare

Tipul sau sectorul de activitate Învățământ superior

2010-

Director

Centru de Cercetări Aplicate în Inginerie Electrică pentru Dezvoltare Durabilă (CCAIEDD)

- Învățământ și cercetare

Tipul sau sectorul de activitate Învățământ superior

2003-2006

Conferențiar

Universitatea Tehnică din Cluj-Napoca

- Învățământ și cercetare

Tipul sau sectorul de activitate Învățământ superior

1999-2003

Șef de lucrări

Universitatea Tehnică din Cluj-Napoca

- Învățământ și cercetare

Tipul sau sectorul de activitate Învățământ superior

1990-1999

Inginer

Universitatea Tehnică din Cluj-Napoca

- Microproducție

Tipul sau sectorul de activitate Învățământ superior

1985-1990

Inginer

Combinatul pentru Lianți și Azbociment din Aleșd (județul Bihor)

- Întreținerea și depanarea instalațiilor de automatizări și acționări electrice

Tipul sau sectorul de activitate Industrie

EDUCAȚIE ȘI FORMARE

1991-1995

Ph.D.

Universitatea Tehnică din Cluj-Napoca

- Mașini și acționări electrice

1980-1985

Inginer electrotehnic

Institutul Politehnic Cluj-Napoca

- Mașini și acționări electrice

2012-2013

Școală universitară de formare inițială și continuă a personalului didactic și a trainerilor din domeniul specializărilor tehnice și ingineresti - DidaTec

Universitatea Tehnică din Cluj-Napoca

- Formarea cadrelor didactice în vederea extinderii și utilizării cu succes a tehnicilor de predare-învățare având la baza suportul oferit de TIC și instrumente suport pentru managementul activităților didactice

2010

Manager de proiect

S.C. RoMarketing S.R.L.

-
-

COMPETENTE PERSONALE

Limba(i) maternă(e)

Maghiară

Alte limbi străine cunoscute

	ÎNȚELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
Română	C2 - Utilizator experimentat	C2 - Utilizator experimentat	C2 - Utilizator experimentat	C2 - Utilizator experimentat	C2 - Utilizator experimentat
Engleză	B2 - Utilizator independent	B2 - Utilizator independent	B2 - Utilizator independent	B2 - Utilizator independent	B2 - Utilizator independent

Competențe de comunicare
Competențe
organizaționale/manageriale

- Bune competențe de comunicare dobândite prin pregătirea profesională, prin activitatea desfășurată
- Coordonarea unor proiecte naționale și internaționale și ca expert evaluator național și internațional
- Competențe dobândite în coordonarea Catedrei de Mașini Electrice și a Centrului de Cercetări Aplicate în Inginerie Electrică pentru Dezvoltare Durabilă (CCAIEDD)

Competențe dobândite la locul de
muncă

- Competențe de predare
- Competențe de cercetare aplicativă

Competențe informatice

- Medii de programare: Matlab
- CAD electromagnetic: MagNet, AnSYS-MotorCAD
- Medii de simulare: SIMULINK, CASPOC, Simplorer
- Limbaje de programare: Turbo PASCAL, BASIC
- Programe CAD: AutoCAD, OrCAD, Protel
- Grafică și procesare de imagini: CorelDraw, SmartDraw, Visio, GIF animator
- WEB design: Dreamweaver

Alte competențe

- Grădinărit
- Pictură

Permis de conducere

- B

INFORMAȚII SUPLIMENTARE

Publicații

307 publicații:

- 5 cărți și 4 capitole de cărți;
- 17 articole în reviste cotate în ISI Web of Science;
- 58 articole publicate în reviste de circulație cu referenți și colective editoriale;
- 130 articole în volumele unor conferințe internaționale indexate în baze de date;
- 57 articole în volumele unor conferințe naționale sau internaționale neindexate în baze de date;
- 26 articole în anale universitare;
- 10 alte publicații.

Proiecte

Contracte de cercetare:

- 4 internaționale în calitate de director / 1 internațional în calitate de responsabil partener local
- 5 naționale în calitate de director
- 5 internaționale în calitate de membru în echipa de cercetare
- 28 naționale în calitate de membru în echipa de cercetare

Distincții

Premii:

- IET Electric Power Applications Premium Award (Best Paper) 2015 – cea mai bună lucrare în anul 2015.
- 9 premii la expoziții și târguri de inovație
- Pannon University Veszprém (Ungaria): 2007 și 2008;
- University of Pavia (Italia): 2015, 2018, 2022, 2023, 2024 și 2025
- Collegio Borromeo Pavia (Italia): 2024

Profesor invitat

Servicii academice

Membru în *Consiliul Național de Atestare a Titlurilor, Diplomelor și Certificatelor Universitare* (CNADTCU) – Comisia de Inginerie Electrică: 2016-
 Membru în *Consiliul Național al Cercetării Științifice* (CNCS) – Comisia de Științe Inginerești: 2016
 Coordonatorul *Consiliului de coordonare a programelor doctorale Inginerie electrică* – IOSUD UTCN, 2019-
 Membru în *Consiliul Facultății de Inginerie Electrică* (FIE) – Universitatea Tehnică din Cluj-Napoca: 2008-2012, 2014-
 Membru în *Senatul Universității Tehnice din Cluj-Napoca*: 2010-2012, 2015-2016
 Membru în *Consiliul Departamentului de Mașini și Acționări Electrice* – Universitatea Tehnică din Cluj-Napoca: 2011-2020.
 Șeful *Catedrei de Mașini Electrice, Marketing și Management*: 2010-2011.

Alte activități

Evaluator proiecte de cercetare:

- *Comisia Europeană (European Commission) - Horizon 2020 - programul-cadru de cercetare și inovare al Uniunii Europene pentru perioada 2014–2020*: "Societal Challenges" section, "Secure, Clean and Efficient Energy" work programme, "Competitive Low Carbon Energy" Call (H2020-LCE): 2014, 2015
- *Comisia Europeană (European Commission) - Horizon Europe - programul-cadru de cercetare și inovare al Uniunii Europene pentru perioada 2021–2027*: apelul CL4-2024-TWIN-TRANSITION din cadrul Clusterului 4 (Digital, Industrie și Spațiu): 2024
- *Comisia Europeană (European Commission) - Horizon Europe - EIC (European Innovation Council) Pathfinder program*, 2024
- *Comisia Europeană (European Commission) - Education, Audiovisual and Culture Executive Agency (EACEA) – Youth in Action Programme*: 2010, 2011, 2013
- *Comisia Europeană (European Commission) - Erasmus+ Programme* – Foundation Tempus (Republic of Serbia), Key Action 1 (KA1) - Learning mobility of individuals: 2020, 2021, 2022, 2023, 2024, 2025, Key Action 2 (KA2) - Cooperation for innovation and the exchange of good practices: 2020, 2021, 2022, 2023, 2024, 2025
- *Comisia Europeană (European Commission) - Marie Skłodowska-Curie Actions* – Co-funding of regional, national and international (COFUND) Programme - Martí i Franquès Programme (Universitat Rovira i Virgili, Tarragona, Spain): 2022
- *Comisia Europeană (European Commission), Directorate-General for Communications Networks, Content and Technology* – în cadrul proiectului "Business-Oriented Support to the European Robotics and Agri-food Sector, towards a network of Digital Innovation Hubs in Robotics (agROBOfood)" (nr. H2020-DT-2018-) din cadrul programului Horizon 2020: 2020
- *European Institute of Innovation and Technology (EIT), organism al Uniunii Europene – EIT RawMaterials, Regional Innovation Scheme (RIS), Internationalization, Upscaling and Capacity Building panels*: 2018, 2019., 2020, 2021, 2022, 2023, 2024, 2025
- *Comunitatea Europeană (European Community) - International Association for the promotion of co-operation with scientists from the New Independent States of the former Soviet Union (INTAS)*: 2005, 2006
- *World Bank* – Proiectul privind învățământul secundar (ROSE), Proiecte școli de vară: 2017, 2019, Proiecte centre de cercetare: 2017, 2018, Proiecte necompetitive: 2019, Proiecte pentru sprijinul studenților: 2020

- *National Fund for Scientific Research (NFSR)*, Belgium, "Researcher" (Grants and Fellowships): 2012, 2013, 2014, 2015, 2016, 2017, "Credits and Projects": 2014, 2019, Belgian industrial Research and Development Board (BiR&D) Award: 2015, Research projects - Walloon Institute for Sustainable Development: 2016, Excellence of Science projects: 2017, Bilateral research mobility projects: 2022
- *Research Foundation Flanders (FWO)*, Belgium – Bilateral Scientific Cooperation Russia programme: 2019
- *Ministry of Education, Youth and Sports, Czech Republic*, Operational Programme Research and Development for Innovation Management: 2015, Operational Programme Research, Development and Education: 2016, Large Infrastructures for Research, Experimental Development and Innovation of the Czech Republic: 2017, Pre-Application Research (PAR): 2017, Long-term Intersectoral Cooperation: 2018
- *Norwegian Centre for International Cooperation in Education (SIU)*: Norwegian Cooperation Programme in Higher Education with Eurasia: 2016, 2018, 2019, Norwegian Partnership Programme for Global Academic Cooperation (NORPART): 2016, 2018, UTFORSK Partnership Programme: 2016, 2017
- *Ministry of Science of Montenegro*, Scientific Research Grants: 2019, Collaborative Grants for Innovations: 2022
- *Latvian Quality Agency for Higher Education* – Assessment of Higher Education Institutions, Accreditation of Study Fields and Licensing of Study Programmes: 2021, 2023
- *University of Malta*, Internal Research Grants: 2021, 2022, Transdisciplinary Research and Knowledge Exchange (TRAKE) Projects: 2021
- *AdditiveManufacturABLE (AMABLE)* – Projects supporting SMEs in the uptake of additive manufacturing: 2018
- *ERA-NET Smart Cities & Communities, Joint Programming Initiative (JPI) Urban Europe*: 2015
- *ERANETMED, Renewable energies, water resources and their connections for the Mediterranean Region* - Renewable energies, water resources and their connections for the Mediterranean Region: 2015
- *German-Egyptian Research Fund (GERF)*, German Federal Ministry of Education and Research (BMBF) and Egyptian Ministry of Scientific Research (MoSR): 2015
- *Shota Rustaveli National Science Foundation (SRNSF) former Georgian National Science Foundation (GNSF)*, Georgia: 2006, 2007, 2011, 2012, 2013, 2014, 2015
- *Unitatea Executivă pentru Finanțarea Învățământului Superior, a Cercetării, Dezvoltării și Inovării (UEFISCDI)*, "Proiecte complexe": 2017, "Dotarea cu mobilier, materiale didactice și echipamente digitale a unităților de învățământ preuniversitar și a unităților conexe" din cadrul PNRR (Planul Național de Redresare și Reziliență): 2023, "Proiecte de dezvoltare instituțională - proiecte de finanțare a excelenței în CDI" din cadrul PNCDI III: 2021, 2022, 2023 și 2024, "esecperimen"
- *Agenția Română de Asigurare a Calității în Învățământul Superior (ARACIS)* : 2007, 2009, 2013, 2018, 2021, 2022, 2023
- *Consiliul Național al Cercetării Științifice (CNCSIS)*, Proiecte de tip "A": 2005, 2006, Proiecte de tip "AT": 2005, Proiecte de tip "TD": 2004, 2005, Proiecte de excelență pentru tineri cercetători (CEEX): 2006
- *Ministerul Cercetării, Inovării Și Digitalizării (MCID)*: programul "Proiecte de dezvoltare instituțională - proiecte de finanțare a excelenței în CDI" din cadrul PNCDI III: 2021, 2022, 2023, 2024
- *Universitatea Tehnică din Cluj-Napoca*, evaluarea internă a programelor de master: 2009, 2011, evaluarea internă a activității de cercetare: 2008, 2009, 2010, 2014, 2016, 2017, 2018
- *Institutul de Programe Științifice al Fundației "Sapientia", Cluj*: 2004.

Editor șef adjunct:

- *Electrical Engineering* – fosta *Archiv für Elektrotechnik* (Springer, ISSN: 0948 7921)
- *Designs* (MDPI, EISSN 2411-9660)

Membru în colegiul de redacție al revistelor:

- *Energies* (MDPI, ISSN: 1996-1073)
- *Vehicles* (MDPI, EISSN 2624-8921)
- *International Journal of Engineering & Technology* - IJET (Science Publishing Corporation, ISSN: 2227-524X)
- *Advances in Electrical and Electronic Engineering* - AEEE (VŠB-Technical University of Ostrava, Republica Cehă, ISSN: 1336-1376)
- *International Review of Applied Sciences and Engineering* (Akadémiai Kiadó, Budapest, Ungaria, ISSN: 2062-0810)
- *Journal of Computer Science and Control Systems* - JCSCS (Universitatea din Oradea, ISSN: 1844-6043)
- *Journal of Electrical and Electronics Engineering* - JEEE (Universitatea din Oradea, ISSN: 1844-6043)
- *Electrical and Power Engineering Frontier* - EPEF (World Academic Publishing, ISSN: 2306-

9368)

Evaluator reviste:

- *Renewable and Sustainable Energy Reviews* (Elsevier, ISSN: 1364-0321): 2023(3), 2024(1), 2025(1)
- *IEEE Industrial Electronics Magazine* (IEEE, ISSN: 1932-4529) 2023(2), 2024(2)
- *IEEE Transactions on Energy Conversion* (IEEE, ISSN: 0093-9994) 2014(1), 2016(2), 2017(2), 2019(1), 2020(2), 2021(7), 2022(1)
- *IEEE Transactions on Industry Applications* (IEEE, ISSN: 0885-8969): 2012(2), 2013(2), 2014(2), 2015(2), 2016(4), 2017(1), 2018(4), 2019(1), 2020(2), 2021(4), 2022(2), 2024(3), 2025(1)
- *IEEE Transactions on Industrial Electronics* (IEEE, ISSN: 0278-0046): 2009(1), 2011(1), 2014(2), 2015(4), 2016(4), 2017(6), 2018(2), 2019(1), 2020(1), 2022(1)
- *IEEE Transactions on Magnetics* (IEEE, ISSN: 0018-9464): 2012(1), 2013(2), 2014(2), 2015(2), 2016(1), 2017(1), 2018(1),
- *IEEE Transactions on Power Electronics* (IEEE, ISSN: 0885-8993): 2013(1), 2014(1), 2015(1), 2017(1)
- *IEEE Transactions on Industrial Informatics* (IEEE, ISSN: 1551-3203): 2015(1), 2018(1), 2019(1)
- *IEEE Transactions on Transportation Electrification* (IEEE, ISSN: 2332-7782): 2021(3), 2022(1), 2023(4), 2024(2), 2025(1)
- *IET Electric Power Applications* (IET, ISSN: 1751-8660): 2015(7), 2016(5), 2017(5), 2018(1), 2019(3), 2020(4), 2023(1)
- *IET Power Electronics* (IET, ISSN: 1755-4535): 2016(1)
- *IET Electrical Systems in Transportation* (IET, ISSN: 2042-9738): 2015(1)
- *Electric Power Components and Systems* (Taylor & Francis, ISSN: 1532-5008): 2015(1)
- *Electrical Engineering – fosta Archiv für Elektrotechnik* (Springer, ISSN: 0948 7921): 2017(1), 2019(3), 2020(4), 2021(5), 2022(22), 2023(25), 2024(42), 2025(23)
- *Measurement* (Journal of the International Measurement Confederation, Elsevier, ISSN: 0263-2241): 2010(1), 2012(1), 2013(1)
- *International Journal of Marine Energy* (Elsevier, ISSN: 2214-1669): 2014(1)
- *International Journal of Electrical Power & Energy Systems - IJEPES* (Elsevier, ISSN: 0142-0615): 2014(1), 2017(1), 2018(1), 2019(2), 2020 (2)
- *Journal of Magnetism and Magnetic Materials - MAGMA* (Elsevier, ISSN: 0304-8853): 2014(1)
- *EPE Journal - European Power Electronics and Drives Journal* (European Power Electronics and Drives Association, ISSN: 0939-8368): 2013(1)
- *COMPEL - The international journal for computation and mathematics in electrical and electronic engineering* (Emerald, ISSN: 0332-1649): 2013(1), 2014(1), 2016(2), 2018(1)
- *Actuators* (MDPI AG, Basel, Switzerland, ISSN: 2076-0825): 2023(4)
- *Applied Sciences* (MDPI AG, Basel, Switzerland, ISSN: 2076-3417): 2019(1), 2020(1), 2021(1), 2022(2), 2023(1)
- *Electronics* (MDPI AG, Basel, Switzerland, ISSN: 2079-9292): 2018(1), 2019(1), 2017(3), 2021(1), 2022(1), 2023(2)
- *Energies - Open Access Energy Research, Engineering and Policy Journal* (MDPI AG, Basel, Switzerland, ISSN: 1996-1073): 2012(1), 2016(1), 2017(3), 2018(12), 2019(8), 2020 (1), 2021(4), 2022(5), 2023(3)
- *Entropy* (MDPI AG, Basel, Switzerland, ISSN: 1099-4300): 2015(1), 2016(2), 2017(3), 2018(7), 2019(2), 2021(1), 2023(1)
- *Machines* (MDPI AG, Basel, Switzerland, ISSN: 2075-1702): 2017(2), 2019(1), 2020(1), 2021(2), 2022(5), 2023(1)
- *Sensors* (MDPI AG, Basel, Switzerland, ISSN: 1424-8220): 2015(1), 2017(3), 2018(5), 2019(4), 2020(5)
- *World Electric Vehicle Journal* (MDPI AG, Basel, Switzerland, ISSN: 2032-6653): 2023(2), 2024(1)
- *Electric Power Components and Systems* (Taylor & Francis, ISSN: 1532-5008) 2015(1)
- *Smart Science* (Taylor & Francis, ISSN: 2308-0477): 2016(1)
- *International Transactions on Electrical Energy Systems* (John Wiley & Sons Ltd, ISSN: 2050-7038): 2014(1), 2023(1), 2025(1)
- *International Journal of Robotics and Automation* (ACTA Press, ISSN: 0826-8185): 2014(1), 2015(5), 2016(1)
- *Engineering Science and Technology, an International Journal - JESTCH* (Elsevier, ISSN: 2215-0986): 2015(1)
- *Journal of Electrical and Computer Engineering* (Wiley, ISSN: 2090-0147): 2024(1)
- *Engineering Applications of Artificial Intelligence* (IFAC, ISSN: 0952-1976): 2024(1)
- *Automatika - Journal for Control, Measurement, Electronics, Computing and Communications* (Taylor & Francis Group, ISSN: 0005-1144): 2016(2)
- *Development and Applications of Oceanic Engineering - DAOE* (Science and Engineering Publishing Company, ISSN: 2325-3754): 2012(1), 2013(2)

- *Electrical and Power Engineering Frontier - EPEF* (World Academic Publishing, ISSN: 2306-9368): 2012(1), 2013(1), 2014(2)
- *International Journal of Practical Electronics - IJPE* (Science Publishing Corporation: 2014(1)
- *Frontiers in Robotics and AI* (Frontiers Media S.A., Lausanne, Switzerland, ISSN: 2296-9144): 2016(1)
- *Advances in Electrical and Electronic Engineering - AEEE* (VŠB-Technical University of Ostrava, Czech Republic, ISSN: 1336-1376): 2011(1), 2015(2), 2016(3)
- *COMMUNICATIONS - Scientific Letters of the University of Žilina* (University of Žilina, Slovak Republic, ISSN: 1335-4205): 2015(1)
- *Archives of Electrical Engineering (AEE)* (Polish Academy of Sciences, ISSN: 1427-4221): 2015(1)
- *Journal of Computer Science and Control Systems - JCSCS* (Oradea University, Romania, ISSN: 1844-6043): 2012(1), 2013(2)
- *Annals of the University of Craiova - Electrical Engineering Series* (University of Craiova, Romania, ISSN: 1842-4805): 2015(1), 2016(1)
- *Journal of Electric Engineering - JEE* (Politechnica Publishing House, Timișoara, Romania, ISSN: 1582-4594): 2012(7)
- *Automation, Computers, Applied Mathematics Journal* (Technical University of Cluj, Romania, ISSN: 1221-437X): 2012(1)
- *Environmental Engineering and Management Journal* ("Gheorghe Asachi" Technical University of Iași, Romania, ISSN: 1582-9596): 2010(1)
- *International Journal of Electrical Engineering and Transportation - IJEET* (University of Technology of Belfort-Montbéliard, France, ISSN: 1773-9357): 2010(1)
- *Journal of Energy Optimization and Engineering - IJEOE* (IGI Global, ISSN: 2160-9500): 2010(1), 2011(2), 2012(2), 2014(3)
- *Journal of Energy and Power Engineering - JEPE* (David Publishing Company, ISSN 1934-8975): 2010(5)
- *Iranian Journal of Electrical and Computer Engineering - IJECE* (ISSN 1682-005): 2004(2)

Evaluator conferințe internaționale:

- *European Conference on Modelling and Simulation - ECMS*: 2009(3), 2010(1), 2011(3), 2012(1), 2014(3)
- *European Conference on Power Electronics and Applications - EPE*: 2009(10), 2011(6), 2013(5)
- *IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives - SDEMPED*: 2013(3), 2017(3), 2019(3), 2021(2), 2023(2)
- *International Conference on Electrical Machines - ICEM*: 2010(5), 2012(6), 2014(2), 2016(1), 2020(4), 2022(1), 2024(3)
- *Interdisciplinary Research in Engineering Steps towards Breakthrough Innovation for Sustainable Development Conference - INTERIN*: 2013(3)
- *IEEE Annual Conference on Industrial Electronics - IECON*: 2007(1), 2010(2), 2013(2), 2016(1)
- *International Conference on Optimization of Electrical and Electronic Equipment - OPTIM*: 2010(3), 2012(3)
- *International Conference ELEKTRO*: 2012(2), 2016(1), 2018(1), 2020(1), 2022(1)
- *International Carpathian Control Conference – ICC*: 2018(2), 2029(1), 2021(1), 2023(5), 2024(1), 2025(1)
- *International Power Electronics and Motion Control Conference - EPE-PEMC* : 2006(5), 2012(2), 2016(2)
- *IEEE Region 8 EUROCON Conference*: 2009(3), 2011(4)
- *International Youth Conference on Energetics - IYCE*: 2011(4)
- *IEEE International Conference on Power Electronics & ECCE Asia - ICPE-ECCE Asia*: 2011(1)
- *IEEE International Symposium on Industrial Electronics - ISIE*: 2007(3), 2010(2)
- *IEEE International Conference on Industrial Informatics - INDIN*: 2010(1)
- *International Conference on Electrical Engineering - ICEENG*: 2010(1)
- *IEEE International Conference on Electrical Machines and Drives - IEMDC*: 2007(5), 2009(5), 2019(1)
- *IEEE International Conference on Industrial Technology - ICIT*: 2008(1)
- *IEEE International Conference on Power System Technology - POWERCON*: 2008(4)
- *IEEE Workshop on Electrical Machine Design, Control, and Diagnostics – WEMDCD*: 2021(1), 2025(2)

Afilieri IEEE, EMT



Anexe

A1 - Principalele publicații

Cărți

- Szabó L. - Fodorean D.: **Simularea ansamblului convertor - mașină utilizat în sisteme electromecanice**. U.T. Press, Cluj-Napoca, 2009. ISBN: 978-973-662-480-3. 210 pagini.
- Bíró K.Á. - Viorel I.A. - Szabó L. - Henneberger G.: **Mașini electrice speciale**, Mediamira, Cluj-Napoca, 2005. ISBN: 973-713-055-3. 258 pagini.
- Szabó L.: **Medii de programare uzuale în ingineria electrică - MATLAB**, Mediamira, Cluj-Napoca, 2003. ISBN: 973-9357-23-7. 191 pagini.
- Viorel I.A. - Ivan D.M. - Szabó L.: **Metode numerice cu aplicații în ingineria electrică**, Editura Universității din Oradea, Oradea, 2000. ISBN: 973-8083-29-X. 202 pagini.
- Viorel I.A. - Szabó L.: **Hybrid Linear Stepper Motors**, Mediamira, Cluj-Napoca, 1998. ISBN: 973-9358-12-8. 85 pagini.

Capitole de cărți

- Chindriș V. - Terec R. - Ruba M. - Szabó L.: **Software Environment for Online Simulation of Switched Reluctance Machines**, in: *Advances in Intelligent Modelling and Simulation* (eds.: Byrski, A.; Oplatková, Z.; Carvalho, M.; Kisiel-Dorohinicki, M.), Simulation Tools and Applications Series: Studies in Computational Intelligence, vol. 416, pp. 85-109, Springer, Berlin (Germania), 2012. ISBN: 978-3-642-28887-6.
- Szabó L. - Dobai B.J. - Bíró K.Á.: **Discrete Wavelet Transform Based Rotor Faults Detection Method for Induction Machines**, in: *Intelligent Systems at the Service of Mankind*, vol. 2., (eds: Elmenreich, W., Machado, J.T., Rudas, I.J.), Ubooks, Augsburg (Germania), 2005, pp. 63-74. ISBN: 3-86608-052-2.

Lucrări publicate în reviste cotate ISI Web of Science

- Popa D.-C. – Szabó L.: **Overcoming Catch-22 for rare earth metals in green transition: Solutions in electrical machine manufacturing**, Renewable and Sustainable Energy Reviews, vol. 207 (January 2025), paper #1149172024, 2025. ISSN: 1364-0321, impact factor 16.3, rank Q1 (2023).
- Popa D.-C. – Szabó L.: **Securing Rare Earth Permanent Magnet Needs for Sustainable Energy Initiatives**, Materials, vol. 17, no. 22, paper #5442, 2024. EISSN: 1996-1944, impact factor 3.1, rank Q1 (2023).
- Szabó G.S. - Szabó R. - Szabó L.: **A Review of the Mitigating Methods Against the Energy Conversion Decrease in Solar Panels**, Energies, vol. 15, no. 18, paper #6558, 2022. ISSN: 1996-1073, impact factor 3.2, rank Q3 (2022).
- Szabó L. - Fodor D.: **The Key Role of 3D Printing Technologies in the Further Development of Electrical Machines**, Machines, vol. 10, no. 5, paper #330, 2022. ISSN: 2075-1702, impact factor 2.1, rank Q2 (2022).
- Uberti F. – Frosini L. – Szabó L.: **New Design Procedure for Rotor Laminations of Synchronous Reluctance Machines with Fluid Shaped Barriers**, Electronics, vol. 11, paper #134, 2022. EISSN 2079-9292, impact factor 2.9, rank Q2 (2022).
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A2 - Principalele contracte de cercetare

Director proiecte internaționale

- **Monitorizarea acționărilor electrice cu mașini liniare și rotative utilizând dispozitive avansate de procesare a datelor**, Contract de colaborare științifică și tehnologică bilaterală româno-maghiară dintre Universitatea din Miskolc (Ungaria) și Universitatea Tehnică din Cluj-Napoca (România). Finanțatori: Ministerele Educației din România și Ungaria, 2006-2007, contract nr. C18001/09.01.2006.
- **Comanda avansată la distanță, monitorizarea și diagnoza actualelor electromecanice liniare și rotative utilizate în sisteme industriale automatizate**, Contract de colaborare științifică și tehnologică bilaterală româno-maghiară dintre Universitatea din Miskolc (Ungaria) și Universitatea Tehnică din Cluj-Napoca (România). Finanțatori: Ministerele Educației din România și Ungaria, 2008-2009, contract nr. RO 9/2007, RO ID1) integrat în programul CAPACITĂȚI modulul III. (contract nr. 27 / 09.06.08). http://memm.utcluj.ro/ColabUngaria/index_ro.html
- **Mașini cu reluctanță variabilă de performanțe îmbunătățite destinate aplicațiilor din procese industriale critice**, Contract de colaborare științifică și tehnologică bilaterală româno-slovacă dintre Universitatea din Zilina (Republica Slovacă) și Universitatea Tehnică din Cluj-Napoca (România). Finanțatori: Ministerele Educației din România și Republica Slovacă, 2011-2012, contract integrat în programul CAPACITĂȚI modulul III (contract nr. 472 / 07.03.11).
- **Mașini cu reluctanță comutată electronic destinate aplicațiilor auto avansate**, Contract de colaborare științifică și tehnologică bilaterală româno-slovacă dintre Universitatea din Zilina (Republica Slovacă) și Universitatea Tehnică din Cluj-Napoca (România). Finanțatori: Unitatea Executivă pentru Finanțarea Învățământului Superior, a Cercetării, Dezvoltării și Inovării din România (UEFISCDI) și Agenția pentru Cercetare și Dezvoltare din Republica Slovacă (SRDA), 2013-2014, contract integrat în programul CAPACITĂȚI modulul III (contract nr. 647 / 15.04.13).
- **Optimizarea și promovarea pe piață a turbinelor eoliene mici (Small Wind Turbines Optimization and Market Promotion – SWTOMP)**, Contract ERANet-LAC – Network of the European Union (EU), Latin America and the Caribbean Countries (LAC) on Joint Innovation and Research Activities, 2017-2019.

Director proiecte naționale

- **Proiectarea, modelarea și optimizarea unui motor cu deplasare în plan**, Contract de tip AT (CNCSIS), nr. contract: 34970/2001, cod CNCSIS: 231, nr. temă: 96113/2001. 2001.
- **Motoare cu deplasare în plan**, contract de cercetare nr.: 15/09.04.2001 (cu acordarea unei burse de cercetare), finanțat de Institutul Programelor de Cercetare al Fundației "Sapientia", Cluj. 2001-2002.
- **Motor modular planar destinat liniilor flexibile de fabricație**, Contract de tip A (CNCSIS), nr. contract: 40216/2003, cod CNCSIS: 369, 2003-2005.
- **Generatoare liniare pentru centrale electrice bazate pe energia regenerabilă a valurilor**, Contract de tip A (CNCSIS), nr. contract 2783/2006, cod CNCSIS: 1305, 2006-2008.
- **Studiul generatoarelor liniare destinate asigurării alimentării dispozitivelor electrice portabile moderne**, contract de cercetare nr.: 1019/05.10.2006 (cu acordarea unei burse de cercetare), finanțat de Institutul Programelor de Cercetare al Fundației "Sapientia", Cluj. 2006-2007.

Membru în echipele de cercetare contracte internaționale (din ultimii ani)

- **Design, Modelling and Testing Tools for Electrical Vehicles Powertrain Drives (DeMoTest-EV)**, FP7-PEOPLE-2012-IAPP (Industry Academia Partnerships and Pathways) Program, Finanțator: European Commission, Parteneri: Universitatea Tehnică din Cluj-Napoca, LMS International NV (Belgia), Université Libre de Bruxelles (Belgia) și ICPE-Institutul de Cercetări Electrotehnice București, Director de proiect: MARȚIȘ Claudia, 2013-2016.
- **Optimal Low-Noise Energy-Efficient Electrical Machines and Drives for Automotive Applications (EMDA_LoOp)**, FP7-PEOPLE-2012-IAPP (Industry Academia Partnerships and Pathways) Program, Finanțator: European Commission, Parteneri: Universitatea Tehnică din Cluj-Napoca și Brose Fahrzeugteile GmbH & Co. (Germania), Director de proiect: MARȚIȘ Claudia, 2013-2016.
- **Strengthening the Research Potential of CAREESD in the Field of Electromechanical Systems and Power Electronics for Sustainable Applications (ESPESA)**, H2020-TWINN-2015 - Twinning Coordination and support actions, Finanțator: European Commission, Parteneri: Universitatea Tehnică din Cluj-Napoca, Technical University of Eindhoven (Olanda), École Nationale Supérieure des Arts et Métiers, Lille (Franța), Rheinisch-Westfälische Technische Hochschule, Aachen (Germania), German Aerospace Center (DLR) -

Institute of Vehicle Concepts, Stuttgart (Germania), Siemens Industry Software NV, Leuven (Belgia),
Université de Technologie de Belfort-Montbéliard (Franța), Director de proiect: Claudia MARȚIȘ, 2016-2018

Membru în echipele de cercetare contracte naționale (din ultimii ani)

- **Echipamente tolerante la defecte controlate prin arhitecturi electronice de inspirație biologică.**
Contract Parteneriate (PNCD II) nr. 12121 / 01.10.2008, finanțat de CNMP. Parteneri: Universitatea Tehnică din Cluj-Napoca, Universitatea Babeș-Bolyai din Cluj-Napoca, Centrul Internațional de Biodinamică București și S.C. ICPE - Institutul de Cercetări pentru Mașini Electrice S.A. București. Responsabil echipă de cercetare. 2008-2011. Director de proiect: Szász Csaba. <http://elbioarch.utcluj.ro>
- **Automotive Low-Noise Electrical Machines and Drives Optimal Design and Development (ALNEMAD),**
Contract Parteneriate – Subprogramul "Proiecte Colaborative de Cercetare Aplicativă" (PNCD II), 2012-2016. Director de proiect: Marțiș Claudia. <http://memm.utcluj.ro/alnemad>
- **Hardware-in-the-Loop Modular Platform for Testing the Energy Management of Competitive & Highly-Efficient Hybrid-Electric Vehicles (HiTECH-HEV),** Contract Parteneriate – Subprogramul "Proiecte Colaborative de Cercetare Aplicativă" (PNCD II), 2012-2016. Director de proiect: Fodorean Daniel. <http://www.hitech-hev.utcluj.ro>
- **Analiza cuplată interferențe electromagnetice/vibrații pentru dezvoltarea de actuatori electrice dedicate aplicațiilor auto cu emisii reduse (CEMIVA),** Contract Parteneriate – Subprogramul "Proiecte Colaborative de Cercetare Aplicativă" (PNCD II), 2014-2016. Director de proiect: Călin Munteanu.

