

Instituția de învățământ superior: Universitatea Tehnică din Cluj-Napoca

Facultatea de Inginerie Electrică

Domeniul de licență: Inginerie Electrică

Programul de studii de licență: Sisteme electrice – Cluj Napoca engleză

Perioada evaluării:

TABEL PRIVIND INDEPLINIREA INDICATORULUI

Activitatea științifică în domeniul disciplinelor

„Cadrele didactice titulare* au pregătirea inițială, sunt doctori / doctoranzi și cercetează în domeniul în care se includ disciplinele din postul ocupat.”

Nr. crt.	Gradul didactic, numele și prenumele titularului vârsta / vechimea în învățământul superior	Disciplinele din cadrul programului de studii incluse în postul didactic și tipul activității desfășurate (curs, seminar, lucrări, proiect)	Competența cadrului didactic titular în disciplinele din postul didactic			Constatări privind îndeplinirea indicatorului conform Anexei 4.1
			Universitatea/facultatea/specializarea absolvită	Specializarea la masterat/doctorat	Numărul de cărți, numărul de lucrări științifice, numărul de brevete în domeniul disciplinelor din postul didactic (conform Anexelor 4.1.)	
0	1	2	3	4	5	6
1.	Conf. dr. ing. Horia Beleiu 40 / 16	Grafică asistată de calculator, curs și laborator	Universitatea Tehnică din Cluj / Facultatea de Inginerie Electrică / Electrotehnică generală	Doctorat în Inginerie electrică	1 carte (B4); 2 lucrări indexate ISI/BDI (C5, C7, C8, C9, C12, C18, C19, C26, C27, C29, C30, C32, C35);	Îndeplinit
2						

* Din statul de funcții cumulativ al tuturor disciplinelor și tuturor activităților didactice desfășurate în cadrul programului de studii evaluat.

Rector
Prof.dr.ing Vasile ȚOPA

Persoana de contact

A N E X A 4 . 1

Nume Prenume: Beleiu Horia Gheorghe

Gradul didactic: Conferențiar

Instituția unde este titular: Universitatea Tehnică din Cluj-Napoca

Facultatea: Inginerie Electrică

Departamentul: Electroenergetică și Management

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

„Implicații tehnice și economice ale noncalității energiei electrice la consumatori”

Conducător științific: Prof.dr.ing. Virgil Maier

Universitatea Tehnică din Cluj-Napoca

Susținere publică: 29 septembrie 2011.

B. Cărți și capitole în cărți publicate în ultimii 10 ani

CĂRȚI

1. **Horia G. Beleiu** – Implicații tehnice și economice ale noncalității energiei electrice la consumatori. Editura UTPRESS Cluj-Napoca, 2020, ISBN 978-606-737-446-9.
2. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu** – Calitatea Energiei Electrice. Editura: UPPRESS Cluj-Napoca, 2012, ISBN 978-973-662-784-2.
3. Sorin G. Pavel, Virgil Maier, **Horia G. Beleiu** – Aplicații privind Calitatea Energiei Electrice. Editura: UTPRESS Cluj-Napoca, 2012, ISBN 978-973-662-785-9.
4. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu** – Ghid pentru proiectarea instalațiilor electrice la consumatori. Editura: UTPRESS Cluj-Napoca, 2013, ISBN 978-973-662-819-1.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

c1) Articole / studii publicate la conferințe indexate sau în reviste de specialitate de circulație internațională recunoscute (cotate ISI)

1. Miron, A; Cziker, AC; **Beleiu, HG**, Fuzzy Control Systems for Power Quality Improvement-A Systematic Review Exploring Their Efficacy and Efficiency, Applied Sciences 2024, Vol. 14, Issues 11, DOI10.3390/app14114468.
2. **Horia G. Beleiu**, Sorin G. Pavel, Iulian M. T. Birou, Anca Miron, Pompei C. Darab & Mohammed Sallah (2022) Effects of voltage unbalance and harmonics on drive systems with

- induction motor, Journal of Taibah University for Science, 16:1, 381-391, DOI: 10.1080/16583655.2022.2064670.
3. Darab, C.; Antoniu, T.; **Beleiu, H.G.**; Pavel, S.; Birou, I.; Micu, D.D.; Ungureanu, S.; Cirstea, S.D. Hybrid Load Forecasting Using Gaussian Process Regression and Novel Residual Prediction. *Appl. Sci.* 2020, 10, 4588.
 4. **H.G. Beleiu**, V. Maier, S.G. Pavel, I. Birou, C.S. Pică, P.C. Dărab, Harmonics Consequences on Drive Systems with Induction Motor. *Applied Sciences* 2020, Vol. 10, Issue 4, pp. 1528, eISSN: 2076-3417, doi.org/10.3390/app10041528, WOS:000525287900335.
 5. S.G. Pavel, V. Maier, C. Ciorca, **H.G. Beleiu**, I. Birou, Optimal Design of the Vertical Earthing with Electrodes Arranged in Line *Applied Sciences* 2020, Vol. 10, Issue 3, pp. 1177, eISSN: 2076-3417, doi.org/10.3390/app10031177, WOS:000525305900446.
 6. **H.G. Beleiu**, I.N. Beleiu, S.G. Pavel and C.D. Dărab. Management of Power Quality Issues from an Economic Point of View, in *SUSTAINABILITY*, Volume: 10, Issue: 7, 2018, pp. 2326, eISSN: 2071-1050, doi.org/10.3390/su10072326, WOS:000440947600217.
 7. **H.G. Beleiu**, P.C. Darab, C. Pica, S.G. Pavel, T. Coldea, Impact of Different Materials Electrodes in Earth Grounding Systems, in *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, Volume: 61, Issue: 1, 2018, pp: 65-68, ISSN: 1221-5872, WOS:000428903500011.
 8. P.C. Darab, A. Turcu, C. Pica, S.G. Pavel, **H.G. Beleiu**, Reducing Earth Grounding Electrical Resistance by Using Metallurgy Industrial Waste as Backfill Materials, in *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, Volume: 61, Issue: 1, 2018, pp: 69-72, ISSN: 1221-5872, WOS:000428903500012.

c2) Studii publicate la conferințe sau în reviste indexate în baze de date internaționale de referință în domeniul (DBLP, ACM, IEEE, SCOPUS, etc)¹

9. V. Maier, S. Pavel, **H. Beleiu**, D. Niste and C. Darab, "Dimensioning Aspects of Horizontal Earth Grounding, With Pipe Type Electrodes," *2023 13th International Symposium on Advanced Topics in Electrical Engineering (ATEE)*, Bucharest, Romania, 2023, pp. 1-6, doi: 10.1109/ATEE58038.2023.10108263 [IEEE].
10. D. F. Niste, A. Miron, Ș. Ungureanu, A. C. Cziker, **H. G. Beleiu** and M. Misaros, "Research on Identifying Parallel Resonance in Power Networks using Artificial Neural Networks," *2023 10th International Conference on Modern Power Systems (MPS)*, Cluj-Napoca, Romania, 2023, pp. 01-06, doi: 10.1109/MPS58874.2023.10187583 [IEEE].
11. A. Miron, A. C. Cziker, C. P. Dărab, Ș. Ungureanu and **H. G. Beleiu**, "Reactive Power Compensation at Consumers Using Fuzzy Logic Control," *2023 10th International Conference on Modern Power Systems (MPS)*, Cluj-Napoca, Romania, 2023, pp. 1-6, doi: 10.1109/MPS58874.2023.10187471 [IEEE].
12. V. Maier, S. G. Pavel, **H. G. Beleiu** and D. F. Niste, "Optimal Solutions Identification for Horizontal Earth Grounding, With Pipe Type Electrodes," *2023 10th International Conference on*

¹ indexate în:

[IEEE] - IEEE Xplore (<http://ieeexplore.ieee.org/Xplore/guesthome.jsp>)

[ACM] - ACM portal (<http://portal.acm.org>)

[DBLP] - (<http://www.informatik.uni-trier.de>)

[SCOPUS] - (<http://www.scopus.com>)

...

- Modern Power Systems (MPS)*, Cluj-Napoca, Romania, 2023, pp. 1-6, doi: 10.1109/MPS58874.2023.10187440 [IEEE].
13. D. F. Niste, S. Ștefănescu, A. Botezan, S. G. Pavel, A. Miron and **H. G. Beleiu**, "Research on the implementation of voltage control on MV busbars due to the influence of PV connection," *2024 International Conference on Development and Application Systems (DAS)*, Suceava, Romania, 2024, pp. 13-18, doi: 10.1109/DAS61944.2024.10541174 [IEEE].
 14. A. Miron, A. C. Cziker, Ș. Ungureanu, **H. G. Beleiu** and C. P. Dărab, "Power Quality Prediction at Consumers Using a Hybrid Knowledge-Based Approach," *2023 IEEE International Smart Cities Conference (ISC2)*, Bucharest, Romania, 2023, pp. 1-7, doi: 10.1109/ISC257844.2023.10293729 [IEEE].
 15. T. Pavel, D. Micu, S. Pavel, **H. Beleiu** and S. Ungureanu, "Contributions to the optimization of the Electrical Power Distribution in the Station Centru From Cluj, in the Context of Updating Its Medium Voltage Network," *2022 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2022, pp. 545-549, doi: 10.1109/EPE56121.2022.9959802 [IEEE].
 16. A. Miron, A. C. Cziker, Ș. Ungureanu, **H. G. Beleiu** and C. P. Dărab, "Reactive Power Compensation at Industrial Consumers: Romanian Study Case," *2022 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2022, pp. 101-106, doi: 10.1109/EPE56121.2022.9959800 [IEEE].
 17. **H. Beleiu**, S. Ștefănescu and A. Botezan, "Photovoltaics as an Energetic Solution for a Commercial Building," *2022 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2022, pp. 579-582, doi: 10.1109/EPE56121.2022.9959830 [IEEE].
 18. V. Maier, S. G. Pavel, **H. G. Beleiu** and T. S. Pavel, "Harmonics of the Component Formed by Pairs of Alternative Unitary Step, Symmetrical Regarding the Central Step of the PWM Inverter Output Voltage," *2022 International Conference on Development and Application Systems (DAS)*, Suceava, Romania, 2022, pp. 57-61, doi: 10.1109/DAS54948.2022.9786199 [IEEE].
 19. V. Maier, S. G. Pavel and **H. G. Beleiu**, "Harmonics of the Central Component of the PWM Inverter Output Voltage," *2021 International Conference on Electromechanical and Energy Systems (SIELMEN)*, Iasi, Romania, 2021, pp. 527-533, doi: 10.1109/SIELMEN53755.2021.9600356 [IEEE].
 20. C. S. Pică, S. G. Pavel, **H. G. Beleiu**, V. Maier and A. C. Turcu, "Effects of Connecting Photovoltaic Power Plants on a Long Electrical Line," *2020 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2020, pp. 350-355, doi: 10.1109/EPE50722.2020.9305591 [IEEE].
 21. A. Miron, A. C. Cziker, Ș. Ungureanu and **H. G. Beleiu**, "The Impact of Multiple Small PV Units on Distribution Networks. Romanian Case-study," *2020 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2020, pp. 339-344, doi: 10.1109/EPE50722.2020.9305552 [IEEE].
 22. C. Martineac, P. C. Dărab, **H. G. Beleiu** and R. N. Hasanah, "Influence of Soil Resistivity on 110 kV Substation Grounding System," *2020 International Conference and Exposition on Electrical And Power Engineering (EPE)*, Iasi, Romania, 2020, pp. 715-720, doi: 10.1109/EPE50722.2020.9305645 [IEEE].
 23. **H.G. Beleiu**, V. Maier, S. G. Pavel, I. Birou and C. Pică, "Synchronous Motor Behavior in Harmonics," *2019 54th International Universities Power Engineering Conference (UPEC)*, Bucharest, Romania, 2019, pp. 1-6, doi: 10.1109/UPEC.2019.8893511 [IEEE].

24. V. Maier, S.G. Pavel, **H.G. Beleiu** and V. Farcas, Aspects on Harmonics Analytical Identification of a Periodic Non-Sinusoidal Wave, 2019 8th International Conference on Modern Power Systems (MPS), Cluj Napoca, Romania, 2019, pp. 1-6, doi: 10.1109/MPS.2019.8759685 [IEEE].
25. V. MAIER, S.G. PAVEL, C. CIORCA, **H.G. BELEIU** and I. BIROU, Dissipation Surface Minimization of Vertical Earth Grounding, with Rectangular Contour, 2019 11th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Bucharest, Romania, 2019, pp. 1-6. doi: 10.1109/ATEE.2019.8724882, WOS:000475904500039 [IEEE – ISI proceedings].
26. V. Maier, C. Ciorca, S.G. Pavel, **H.G. Beleiu** and I. Birou, Design of vertical earth grounding with rectangular outline by minimizing its total metal mass, 2018 International Conference on Development and Application Systems (DAS), Suceava, 2018, pp. 57-62, doi: 10.1109/DAAS.2018.8396071, WOS:000467080400011 [IEEE – ISI proceedings].
27. C. Ciorca, V. Maier, S.G. Pavel and **H.G. Beleiu**, Dimensioning of the Vertical Earth Grounding with Rectangular Contour through Minimizing the Investments Costs, 2018 International Conference and Exposition on Electrical And Power Engineering (EPE), Iasi, 2018, pp. 0154-0158, doi: 10.1109/ICEPE.2018.8559651, WOS:000458752200029 [IEEE – ISI proceedings].
28. C. Pica, R. Munteanu, S.G. Pavel and **H.G. Beleiu**, Modeling of Photovoltaic Panels, 2018 International Conference and Exposition on Electrical And Power Engineering (EPE), Iasi, 2018, pp. 0769-0773. doi: 10.1109/ICEPE.2018.8559884, WOS:000458752200150 [IEEE – ISI proceedings].
29. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu**, Constantin S. Pica, *Vertical Earth Grounding Design Using Optimal Criteria*, The 10th International Symposium on Advanced Topics in Electrical Engineering, Page(s):539 – 544, ATEE 2017, 23 – 25 martie, Universitatea Politehnica din București, Romania, DOI: 10.1109/ATEE.2017.7905162, Electronic ISBN: 978-1-5090-5160-1, USB ISBN: 978-1-5090-5159-5, PoD ISBN: 978-1-5090-5161-8 [IEEE – ISI proceedings].
30. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu** and Constantin S. Pică, *Optimal Design of Vertical Earth Grounding, with Rectangular Perimeter*. International Conference on Modern Power Systems, MPS 2017, pages: 1-5, 6 – 9 iunie, Universitatea Tehnică din Cluj-Napoca, DOI: 10.1109/MPS.2017.7974458, Electronic ISBN: 978-1-5090-6565-3, Print on Demand(PoD) ISBN: 978-1-5090-6566-0 [IEEE].
31. Constantin Sorin Pică, Virgil Maier, Sorin Gh. Pavel, **Horia Gh. Beleiu**. Synthesis and Analysis of PWM Inverter Output Voltages. In: Proceedings of the International Conference on Electromechanical and Power Systems (SIELMEN), Chișinău, 11 – 13 octombrie, 2017 [IEEE].
32. Virgil Maier, Sorin Gh. Pavel, Iulian Birou, **Horia Gh. Beleiu** and Claudiu Ciorca, Methodologies Regarding the Application of Optimum Criteria to the Vertical Earth Grounding Design, with Rectangular Outline. In: Proceedings of the International Conference on Electromechanical and Power Systems (SIELMEN), Chișinău, 11 – 13 octombrie, 2017, [IEEE].
33. Virgil MAIER, Sorin G. Pavel, **Horia G. Beleiu** and Constantin Pică, *Considerations regarding the characterization and design of vertical earth grounding*, Conferința de Inginerie Electrică și Sisteme „Ștefan Gârlașu” - 1-3 noiembrie 2016, Universitatea Eftimie Murgu, Reșița [Index Copernicus, Doaj, Ebscol].
34. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu**, Vasile Fărcaș. *Additional Indicators for Short Time Overvoltages and Voltage Impulses*, 2016 International Conference and Exposition on Electrical and Power Engineering (EPE 2016), 20-22 October, Iasi, Romania, ISBN:978-1-5090-6128-0 / ISSN: 2471-6855, WOS:000390706300162 [ISI Proceeding].
35. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu**, Iulian Birou, Vasile Fărcaș. *Nomograms for Sizing the Vertical Earth Grounding*, 2016 International Conference and Exposition on Electrical

- and Power Engineering (EPE 2016), 20-22 October, Iasi, Romania, ISBN:978-1-5090-6128-0 / ISSN: 2471-6855, WOS:000390706300097 [ISI Proceeding].
36. Virgil Maier, Sorin Gh. Pavel, **Horia Gh. Beleiu**, Constantin Buda, *Survey regarding additional indicators for voltage sags*, 13th International Conference on Development and Application Systems, May 19-21, 2016 - Suceava, Romania, ISBN:978-1-5090-1993-9, WOS:000383222200017, [ISI Proceeding].
37. Sorin Gh. Pavel, **Horia Gh. Beleiu**, Iulian Birou, Constantin Pică, Constantin Buda, *DMS steady state function validation by comparative study*, 13th International Conference on Development and Application Systems, May 19-21, 2016 - Suceava, Romania, ISBN:978-1-5090-1993-9, WOS:000383222200018, [ISI Proceeding].
38. Ionut Brandusoiu, Gavril Todorean, **Horia Beleiu**, *Methods for Churn Prediction in the Pre-Paid Mobile Telecommunications Industry* / 2016 INTERNATIONAL CONFERENCE ON COMMUNICATIONS (COMM 2016) / ISBN:978-1-4673-8197-0, pp. 97-100
39. Virgil Maier, Sorin G. Pavel, **Horia G. Beleiu**, Vasile Fărcaș and Claudiu Ciorca, *Actual Aspects of Flicker Phenomenon*, Proceedings of the 9th International Symposium on Advanced Topics in Electrical Engineering, May 7-9, 2015, ISBN:978-1-4799-7514-3, WOS:000368159800139, [ISI Proceeding].
40. Sorin G. Pavel. Virgil Maier, **Horia G. Beleiu**, Vasile Fărcaș, *Updating in Open Loop Electrical Networks*, In: Acta Electrotehnica, Volume 56, Number 3, 2015, Editura Mediamira, Cluj-Napoca, ISSN 1841-3323, pp. 252 – 256, [BDI].
41. Pavel, S. G., Maier, V., Birou, I., **Beleiu H. G.**, Fărcaș, V. *Efficient Distribution through the Medium Voltage Network Belonging to Cluj-Centre electrical Power Station*, EPE 2014, USB ISSN: 978-1-4799-5848-1, Oct. 16-17, 2014, Iași, ISBN:978-1-4799-5849-8 / ISSN 2471-6855, WOS:000353565300195, [ISI Proceeding].
42. Polec, Victoria F., Maier, V., Pavel, S. G., **Beleiu, H. G.**: *Graphic functions analytical identification at flicker evaluation*. In: Proceedings of the 16th IEEE International Conference on Harmonics and Quality of Power (ICHQP), May 28 – 30, București, Romania, 2014, Publisher **IEEE**, DOI: 10.1109/ICHQP.2014.6842829, pp. 425 – 429, [ISI Proceeding].

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

- Reviste

1. V. Maier, S. G. Pavel, V. Fărcaș, **H. G. Beleiu**. Contributions to the Unbalanced Regime Analysis (Contribuții la analiza regimului nesimetric). Revista Energetica nr. 6 / 2014, ISSN: 1453-2360, volumul 62, București.
4. Adina Filip, V. Maier, **H.G. Beleiu**, D.Pop. Possible Technical Solutions Identification in Indoor Lighting Systems Design. *In CIE 2012*, Oradea, Băile Felix , ISSN: 2067-5534.

Data:

Septembrie 2024

Semnătura:

Conf. dr. ing. Horia BELEIU