Universitatea Tehnică din Cluj-Napoca
Facultatea de Inginerie Electrica
Departamentul de Mașini si Acționari Electrice
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L I S T A
lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

Titlu: Generator cu poli gheară utilizat în microcentrale electrice
conducător științific : Prof. dr. ing. Karoly Biro
Domeniul inginerie electrica
Universitatea Tehnică din Cluj-Napoca
Susținere publică: 06.11.2009

B. Cărţi si capitole în cărți publicate în ultimii 10 ani

1. **F.N. Jurca**, Mircea Ruba - ***Performance Analysis of an Integrated Starter-Alternator- Booster for Hybrid Electric Vehicles,*** INTECH 2017, ISBN:978-953-51-3297-4 – capitol carte.
2. **F.N. Jurca** - ***Design of a low-cost Permanent Synchronous machine for isolated wind conversion systems***, INTECH 2016, ISBN: 978-953-51-2495-5 – capitol carte.
3. D. Fodorean, **F.N. Jurca**, M. Ruba, D.C. Popa – ***Motorization Variants for Light Electric Vehicles – design, magnetic, mechanical and thermal aspects*****.** Editura Alma Mater, Cluj-Napoca, 2013, ISBN: 978-606-504-160-8.
4. C.Marţiş, H.Hedeşiu, **F.N. Jurca**, C.Oprea, M. Ruba - ***Introducere în sisteme electromecanice***, Editura Alma Mater 2012, ISBN: 978-606-504-136-3.

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

ISI Journals (reviste cotate ISI):

1. M.Ruba, **F.N. Jurca**, L. Czumbil, D.D Micu, C. Martis, A. Polycarpou, R. Rizzo - ***Synchronous reluctance machine geometry optimisation through a genetic algorithm based technique,*** IET Electric Power Applications, ISSN: 1751-8660, pp: 431-438, DOI: 10.1049/iet-epa.2017.0455, Martie 2018, WOS:000427928200017.
2. **F.N Jurca**, R.Inţe, C. Marţiş – ***Optimal design of novel outer rotor reluctance synchronous machine***, Electrical Engineering -Springer, Vol. 102, Issue 1, Martie 2020, pp: 107-116, DOI: 10.1007/s00202-019-00786-w.
3. 4. D.C Popa, **F.N Jurca**, R.A. Ințe, J. Hemphill, C.G. Cantemir -***Zero-airgap induction motor used to drive a transmission oil pump,*** Energies, Vol. 13, No. 17, Septembrie 2020, DOI: 10.3390/en13174286.
4. **F.N Jurca**, R.Inţe, D. Popa, B. Varaticeanu, P. Minciunescu, M. Claudia „**Electromagnetic and mechanical analysis of a modular rotor synchonous reluctance machine for light propulsion**

vehicles” IEEE Transaction on Transportation Electrification, Vol. 7, Issues 4, pp. 2798-2811, doi: 10.1109/TTE.2021.3067135.

ISI Proceedings (volume ale unor manifestări indexate ISI):

5. R.Inte, **F.N. Jurca**, C. Martis - ***A study of the rotor design influence in power factor value of ORSynRM,*** ELEKTRO 2018, pp: 1-6, DOI: 10.1109/ELEKTRO.2018.8398287, ISBN: 978-153864759-2, WOS:000468327400048.
6. M. Dranca, M. Chirca, S. Cosman, **F.N. Jurca**, S. Breban - ***Experimental validation of a permanent-magnet micro-wind turbine generator with counter rotating rotors***, CIEM 2018, pp: 335-338, ISBN: 978-1-5386-3943-6, WOS:000427610300071.
7. **F.N. Jurca**, C. Martis - ***Analysis of outer rotor synchronous reluctance motor for low-speed applications EDPE 2017***, pp: 242-247, WOS:000419281000036.
8. R. Inte, **F.N. Jurca** - ***Torque ripple reduction of outer rotor synchronous reluctance machine with concentrated winding***, EDPE 2017, pp: 248-252, WOS:000419281000037.
9. **F.N. Jurca**, M. Ruba, C. Martis - ***Design and Control of Synchronous Reluctances Motors for Electric Traction Vehicle***, SPEEDAM 2016, pp: 1144-1148., WOS:000387110600188.
10. M. Ruba, **F.N. Jurca**, C. Martis - ***Analysis of synchronous reluctance machine for light electric vehicle applications***, SPEEDAM 2016, pp: 1138-1143, WOS:000387110600187.
11. R. Inte, **F.N. Jurca** - ***A novel synchronous reluctance motor with outer rotor for an electric bike***, EPE 2016, pp. 213-218. WOS:000390706300045.
12. **F.N. Jurca**, M. Ruba, C. Martis - ***Analysis of permanent magnet synchronous machine for integrated starter-alternator-booster applications***, EDPE 2015, pp: 272-276. WOS:000380458300046.

Articole indexate BDI

1. B. Butanariu, R. Abderrahmane, R. Inte, **F. N. Jurca,** I. Deac, C. Martis –„***Design of an axial flux machine with distributed winding for automotive applications: Comparison of different rotor structures***” EPEi 2024, DOI: 10.1109/EPEi63510.2024.10758083, ISBN: 979-835035619-9, SCOPUS.
2. B. Butanariu, R. Abderrahmane, R. Inte, **F. N. Jurca,** J. Xavier, C. Martis – „***Influence of slot/pole combinations on the performance of dual-rotor axial-flux surface-mounted permanent magnet electric motor for automotive applications***” ELEKTRO 2024, DOI: 10.1109/ELEKTRO60337.2024.10556859, ISBN: 979-835037235-9, SCOPUS.
3. R. Inte, **F.N. Jurca,** R. Martis, C. Martis – „***Electromechanical conversion module design for flywheel storage systems: Reguirements generation***” MPS 2023, DOI: 10.1109/MPS58874.2023.10187581, ISBN: 979-835032682-6, Scopus.
4. D.V. Moldovan, F.N. Jurca – Performances evaluation of permanent magnet varnier machines with dual stator topologies, ATEE 2019, pp: 1-6, DOI: 10.1109/ATEE.2019.8724915, ISBN: 978-1-7281-0101-9, IEEE Xplore.
5. R.Inte, **F.N. Jurca**, C. Martis - ***Analysis performances of outer rotor synchronous reluctance machine with or without permanent magnet for small electric propulsion applications,*** ATEE 2019, pp: 1-6, DOI**:** 10.1109/ATEE.2019.8724868, ISBN: 978-1-7281-0101-9, IEEE Xplore.

6. R.Inte, **F.N. Jurca**, C. Martis - ***Comparative performances evaluation os synchronous reluctance machine with outer rotor versus inner rotor***, ENERGYCON 2018, pp: 1-5, DOI: 10.1109/ENERGYCON.2018.8398842. ISBN: 978-153863669-5, SCOPUS.
7. M. Ruba, **F.N. Jurca**, L. Szabo - ***Comparative study of switched and synchronous reluctance machines for electric propulsion***, Electromotion, Nr. 22, pp 15-18, 2015, ISSN 1223 - 057X.-revistă, INSPEC.
8. M. Ruba, **F.N. Jurca**, L. Szabo - ***Efficiency improvement of switched reluctance motors by means of using higher quality laminations***, Acta Electrotehnica , Nr: 56 , 2015-revista, EBSCO.
9. **F.N. Jurca**, D. Fodorean -***Steady-state analysis of permanent magnet synchronous machine for integrated starter-alternator applications***, Progess in Electromagnetics Research Symposium 2015, pp: 658-663, ISBN: 978-193414230-1 - SCOPUS.

D. Brevete obținute în întreaga activitate

1. **F.N. Jurca,** M. Ruba: ***Sistem jantă cu motor electric încorporat pentru vehicule electrice***, Nr. 131110 28.09.2018. OSIM.
2. **F.N Jurca,** R.A Ințe**:** ***Mașina sincronă cu reluctanță variabilă în construcție modulară, pentru propulsia bicicletelor electrice*****.** Nr. 131721 din 30.03.2020 OSIM.

Data: **Semnătura:**