

THE PUBLICATIONS' LIST

1. Representative papers (maximum 10)

1. **S.I.Deaconu**, Popa Gabriel Nicolae, Toma Ioan Adrian, Topor Marcel, Modeling and Experimental Analysis for Modernization of 100t EAF, IEEE Transactions on Industry Application, Vol. 46, no. 6, pp. 2259-2266, November-December 2010.
2. Lucian Nicolae Tutelea, Ion Boldea, Nicolae Muntean, **S.I.Deaconu**, Modeling and Performance of Novel Scheme Dual Winding Cage Rotor Variable Speed Induction Generator with dc Link Power Delivery, IEEE ENERGY CONVERSION CONGRESS & EXPOSITION, ECCE 2014, September 14-18, Pittsburgh, USA, pp. 271-278, ISBN 978-1-4799-5776-7/14, 2014.
3. Lucian Nicolae Tutelea, **S.I.Deaconu**, Ion Boldea, Classical DC Excited Synchronous Generator for High Power Direct Driven Wind Turbine: Optimal Design and FEM Validation, EPE'15 ECCE Europe, Geneva, 8-10 September, pp. 7, ISBN: 9789075815238, 2015.
4. **S.I.Deaconu**, Marcel, Popa Gabriel Nicolae, Bistriean Diana Alina, Experimental study and comparative analysis of transients of induction motor with softstarter startup, Advanced in Electrical and Computer Engineering, Issue 3, pp. 27-33, 2010, ISSN 1582-7445.
5. Tutelea Lucian Nicolae, Boldea Ion, **S.I.Deaconu**, The Single Stator Dual Rotor PMSM for HEV: Two Windings and 4 Leg Inverter Control, EPE-PEMC ECCE Europe, 15th International Power Electronics and Motion Control Conference and Exposition, Novi Sad, Serbia, 4-6 September, 2012, pp. 6, ISBN 978-4673-1972-0.
6. Tutelea Lucian Nicolae, **S.I.Deaconu**, Boldea Ion, Fabrizzio Marignetti, Popa Gabriel Nicolae, Design and Control of a Single Stator Dual PM Rotors Axial Synchronous Machine for Hybrid Electric Vehicle, 14th European Conference on Power Electronics and Applications, EPE 2011, Birmingham, England, 1-2 September, pp. 10, ISBN 978-1-61284-167-0.
7. Boldea Ion, Tutelea Lucian, **S.I.Deaconu**, Fabrizzio Marignetti, Dual Rotor Single-Stator Axial Air gap PMSM Motor/Generator Drive for HEVs: A Review of Comprehensive Modeling and Performance Characterization, International Conference on Electrical Systems for Aircraft, Railway and Ship Propulsion, ESARS 2012, Bologna, Italy, 16-18 October, pp. 8, ISBN 978-4673-1371-1.
8. **S.I.Deaconu**, Topor Marcel, Tutelea Lucian Nicolae, Popa Gabriel Nicolae, Abrudean Cristian, Modelling and Experimental Investigations of a Reactive Homo-Heteropolar Brushless Synchronous Machine, IECON 2009 Proceedings, Porto, Portugalia, pp. 1205-1212, ISBN 978-1-4244-4659-0.
9. Tutelea Lucian Nicolae, **S.I.Deaconu**, Boldea Ion, Design and FEM Validation for an Axial Single Stator Dual Rotor PMSM, 38th Annual Conference on IEEE Industrial Electronics Society, IECON 2012, Montreal, Canada, 25-28 October, pp. 2911-2917, ISBN 978-4673-2420-5.
10. L.N.Tutelea, **S.I.Deaconu**, I.Boldea, N.Budisan, "Design, Control and 2D-FEM Validation for an Double Stator Winding Induction Generator", 39th Annual Conference

of the IEEE Industrial-Electronics-Society (IECON), 2013, Vienna, Austria, ISSN 1553-572X / ISBN 978-1-4799-0224-8, pp. 2732-2737.

2. PhD Thesis

1. **S.I.Deaconu**, “Study of brushless adjustable electric generator”, Politehnica University Timișoara, Scientific coordinator: Prof. dr. ing. Anton SAIMAC. Confirmed by Order of the Minister of National Education no. 5182 / 10.12.1998.

3. Inventions Brevets

1. Popa Gabriel Nicolae, Popa Iosif, **S.I.Deaconu**, “ Linear Continuous Voltage Convertor-Frequency Frequency Sinusoidal Signal”, RO130458 A2, 2015.
2. Boldea Ion, **S.I.Deaconu**, Marignetti Fabrizio, Tutelea Lucian Nicolae, “Brushless electrical actuator with two independent rotors for hybrid electrical propulsion”, IT 1409332-B, 2014.
3. Popa Iosif, Popa Gabriel Nicolae, **S.I.Deaconu**, “Electronic time relay with all common functions”, RO129042 A2, 2013.

4. Books and chapter in specialty books

1. **S.I.Deaconu**, V. Horga, M. Topor, F. Marignetti, L.N. Tutelea, I. Nucă, “Lightweight high efficiency power train propulsion with axial flux machines for electric or hybrid vehicles. Capitol în cartea: New Trends in Electrical Vehicle Powertrains”, IntechOpen London, 2018, 20 pp.
2. M. A. Tir, F. Marignetti, **S.I.Deaconu**, “Passive magnetic bearings. Capitol în cartea: Advances in Engineering Research”, Nova Science Publishers New York, ISBN 978-53614-218-1 (e-book), 2018, 24 pp.
3. L.N.Tutelea, N.Muntean, **S.I.Deaconu**, “Dual Stator Winding Induction Generator for Wind or Hydro Applications”, Politehnica publishing house Timișoara, ISBN 978-606-35-0111-1, 2017, 186 pp.
4. **S.I.Deaconu**, “Electric machines” in Romanian, Politehnica publishing house Timișoara, ISBN 978-606-35-0079-4, 2016, 446 pp.
5. L.N.Tutelea, **S.I.Deaconu**, “Dual rotor single stator permanent magnet motors for hybrid electrical vehicles”, Politehnica publishing house Timișoara, ISBN 978-606-554-861-9, 2014, 119 pp.
6. **S.I.Deaconu**, “General Elements of Electric Machines. Transformer and DC machine” in Romanian, Politehnica publishing house Timișoara, ISBN 978-973-625-739-1, 2008, 141 pp.
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8. G.N.,Popa, I., Popa, **S.I.Deaconu**, „PLC in applications” in Romanian, Mirton publishing house Timișoara, 2006.

9. **S.I.Deaconu**, “ Electric machines and drives” in Romanian, Politehnica publishing house Timișoara, ISBN 973-625-200-0, 2005, 268 pp.
10. **S.I.Deaconu**, “ Electrical Machines. Part I”, Destin publishing house Deva, ISBN 973-9105-38-6, 2000, 156 pp.
11. **S.I.Deaconu**, L.N.Tutelea, A.Iagăr, “Electrical Machines. Applications” in Romanian, Destin publishing house Deva, ISBN 973-9105-34-3, 2000, 169 pp.

5. Papers in extenso in Journals indexed ISI Thomson-Reuters

1. **S.I.Deaconu**, Popa Gabriel Nicolae, Toma Ioan Adrian, Topor Marcel, Modeling and Experimental Analysis for Modernization of 100t EAF, IEEE Transactions on Industry Application, Vol. 46, no. 6, pp. 2259-2266, November-December 2010.
2. **S.I.Deaconu**, Marcel, Popa Gabriel Nicolae, Bistriana Diana Alina, Experimental study and comparative analysis of transients of induction motor with softstarter startup, Advanced in Electrical and Computer Engineering, Issue 3, pp. 27-33, 2010, ISSN 1582-7445.
3. G.N.Popa, C.M. Diniș, **S.I.Deaconu**, Considerations on the Current Harmonics of Plate-Type Electrostatic Precipitators Power Supplies, ELEKTRONIKA IR ELEKTROTEHNIKA, 2013, Vol.19, Issue 5, ISSN 1392-1215, pp. 27-32.
4. G.N.Popa, I.Șora, C.M. Diniș, **S.I.Deaconu**, An Analysis on the Velocity of Dust Particles in the Plate-Type Electrostatic Precipitators Used in Thermoelectric Power Plants, Environment Protection Engineering, 2014, Vol. 40, No. 1, ISSN 0324-8828, pp. 85-102.

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1. **S.I.Deaconu**, G.N. Popa, C.D. Cuntan, Experimental Investigation of a Hydroelectric Power Plant, 2016 International Conference and Exposition on Electrical and Power Engineering, Iași, România, 2016, pp. 529-534.
2. G.N. Popa, C.M. Dinis, **S.I.Deaconu**, Numerical Simulations of the Electric Parameters of the Plate-Type Electrostatic Precipitators Supplied with DC Voltage, 2016 International Conference and Exposition on Electrical and Power Engineering, Iași, România, 2016, pp. 75-78.
3. C. Barz, **S.I.Deaconu**, T. Latinovici, A. Berdie, A. Pop-Vadean, M. Horgos, PLCs used in smart home control, IOP Conf. Series: Materials Science and Engineering 106 (2016) 012036, 2016, 7 pp.
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7. L.N.Tutelea, **S.I.Deaconu**, G.N.Popa, “Dual stator winding variable speed asynchronous generator: optimal design and experiments”, IOP Conf. Series: Materials Science and Engineering 85 (2015) 012010, 2015, ISSN: 1757-899X, 9 pp.
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10. Lucian Nicolae Tutelea, **S.I.Deaconu**, Ion Boldea, Classical DC Excited Synchronous Generator for High Power Direct Driven Wind Turbine: Optimal Design and FEM Validation, EPE'15 ECCE Europe, Geneva, 8-10 September, ISBN: 9789075815238, 2015 7 pp.
11. L.N.Tutelea, **S.I.Deaconu**, I.Boldea, G.N.Popa, “Dual rotor single-stator axial air gap PMSM motor/generator drive for high torque vehicles”, International Conference on Applied Sciences (ICAS2013) Book Series: IOP Conference Series-Materials Science and Engineering Vol: 57, Article No. 012009, 2014, ISSN 1757-8981, pp. 1-7.
12. Lucian Nicolae Tutelea, Ion Boldea, **S.I.Deaconu**, Parameter optimal identification of dual three phases stator winding induction machine, 14th International Conference on Optimizations on Electrical and Electronic Equipment OPTIM 2014, Braşov 22-24 May, ISBN 978-1-4799-5183-3/14, pp. 231-238.
13. **S.I.Deaconu**, G.N.Popa, R.Babău, “Study, Design and Industrial Implementation of Capacitive Power Factor Controller for Large Load Fluctuations in Steel Industry”, 8th International Conference and Exposition on Electrical and Power Engineering, IEEE, EPE, Iaşi, România, 2014, ISBN 978-1-4799-5849-8, pp. 962-967.
14. Lucian Nicolae Tutelea, Ion Boldea, Nicolae Muntean, **S.I.Deaconu**, Modeling and Performance of Novel Scheme Dual Winding Cage Rotor Variable Speed Induction Generator with dc Link Power Delivery, IEEE ENERGY CONVERSION CONGRESS & EXPOSITION, ECCE 2014, September 14-18, Pittsburgh, USA, pp. 271-278, ISBN 978-1-4799-5776-7/14, 2014.
15. L.N.Tutelea, **S.I.Deaconu**, G.N.Popa, “Reduced cost low speed wind or hydro energy conversion system with twin stator windings induction generator”, Power Electronics and Motion Control Conference and Exposition (PEMC), 2014 16th International, Antalya, Turkey, pp. 317-324.
16. Marcel Topor, Sorin Ioan Deaconu, Lucian Nicolae Tutelea, Homo-heteropolar Synchronous Machine for Low Power Variable Speed Wind or Hydro Applications: Design, 3D FEM Validation and Control, Power Electronics and Applications (EPE'14-ECCE Europe), 2014 16th European Conference on, 26-28 Aug. 2014, Lapenranta, Finland, ISBN 978-1-4799-3014-2 and 978-9-0758-1520-7, pp.10, 2014.
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22. Boldea Ion, Topor Marcel, Fabrizzio Marignetti, **S.I.Deaconu**, Tutelea Lucian Nicolae, A Novel, Single Stator Dual PM Rotor Synchronous Machine: Topology, Circuit model, Controlled Dynamics Simulation and 3D FEM Analysis of Torque Production, 12th Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2010, Brasov, Romania, ISBN 978-4244-7020-4, pp. 343-351.
23. Popa Gabriel Nicolae, Vaida Victor, **S.I.Deaconu**, Şora Ioan, An Analysis on the Optimal Fields Number of the Plate-Type Electrostatic Precipitators used in a Thermoelectric Power Plant, 12th Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2010, Brasov, Romania, ISBN 978-4244-7020-4, pp. 232-239.
24. **S.I.Deaconu**, Tutelea Lucian Nicolae, Popa Gabriel Nicolae, Latinovic Tihomir, Mathematical Models and the Control of Homopolar and Homo-heteropolar Reactive Synchronous Machine With Stator Excitation, European Conference of Systems, ECS 2010, Puerto de la Cruz, Tenerife, Spania, November 30-December 2, ISBN 978-960-474-250-9, pp. 78-83.
25. Popa Gabriel Nicolae, Abrudean Cristian, **S.I.Deaconu**, Popa Iosif , Vaida Victor, A Case Study of ESP Electrical Characteristics from a Thermal Power Station, 44th Annual Meeting of the IEEE-Industry-Applications-Society, 2009, Houston, Texas, USA, ISSN 0197-2618, ISBN 978-1-4244-3475-6, pp. 515-520.
26. **S.I.Deaconu**, Topor Marcel, Popa Gabriel Nicolae, Popa Iosif, Comprehensive Analysis for Modernization of 100t Electric Arc Furnace for Steel Production, IAS 2009, Annual Meeting, Houston Texas, USA, CFP 09 IAS-CDR, 4-8 October, ISBN 978-1-4244-3476-3, pp. 143-148.
27. **S.I.Deaconu**, Topor Marcel, Tutelea Lucian Nicolae, Popa Gabriel Nicolae, Abrudean Cristian, Mathematical Model of a Reactive Homopolar Synchronous Machine with Stator Excitation, EPE 2009, 13th European Conference on Power Electronics and Applications CFP 09850- CDR, Barcelona, Spain, 8-10 September, ISBN 978-9-0758-1150-09, pp.2269-2277.

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30. Popa Gabriel Nicolae, **S.I.Deaconu**, Diniş Corina Maria, Iagăr Angela, Implementation of a Numerical Distance Relay for the 110kV Electric Lines, Proceedings of the 13th WSEAS International Conference on SYSTEMS, WSEAS CSCC Multiconference, Rodos Island, Greece, July 22-24, ISBN 978-960-474-097-0, ISSN 1790-2769, pp. 271-276.
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34. Popa Gabriel Nicolae, Şora Ioan, Vaida Victor, **S.I.Deaconu**, Popa Iosif, Solutions To Improve Dust Collection With Plate-Type Electrostatic Precipitators, Recent Advances in Electrical Engineering, Bucharest, Romania, ISBN 978-960-6766-77-0, pp. 282-287.
35. **S.I.Deaconu**, Popa Gabriel Nicolae, Popa Iosif, Optimizing the Operation of an Urban District Heating System by Means of Variable Speed Drives, New Aspects of Systems. Part I, Proceedings of the 12th WSEAS International Conference on Systems (SYSTEMS '08), Heraklion, Greece, Published by WSEAS Press, 22-24, July, ISBN 978-960-6766-83-1, ISSN 1790-2769, pp. 149-154.
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7. Papers in journals and conferences Proceedings BDI indexed

1. **S.I.Deaconu**, R.Babău, G.N.Popa, P.L.Gherman, Hydroelectric power plant with variable flow on drinking water adduction, International Conference on Applied Sciences (ICAS2017), IOP Publishing, IOP Conf. Series: Materials Science and Engineering 294 (2017) 012023, ISSN 1757-899X, 9 pp.
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3. I.Nucă, T.Ambros, M.Burduniuc, **S.I. Deaconu**, A.Țurcanu, Electric machines with axial magnetic flux, International Conference on Applied Sciences (ICAS2017), IOP Publishing, IOP Conf. Series: Materials Science and Engineering 294 (2017) 012059, ISSN 1757-899X, 9 pp.
4. I.Popa, G.N.Popa, C.M.Diniș, **S.I.Deaconu**, Bidirectional automatic release of reserve for low voltage network made with low capacity PLCs, International Conference on Applied Sciences (ICAS2017), IOP Publishing, IOP Conf. Series: Materials Science and Engineering 294 (2017) 012053, ISSN 1757-899X, 15 pp.
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7. **S.I.Deaconu**, M.Topor, L.N.Tutelea, I.Nucă, M.Burduniuc, „Wind or Hydro Homo-Heteropolar Synchronous Generators: Equivalent Magnetic Circuit and FEM Analysis” MATEC Web of Conferences 210, 02008 (2018), CSCC 2018, pp. 7.
8. L.N.Tutelea, **S.I.Deaconu**, G.N.Popa, "Control System for Producing Electricity with Dual Stator Winding Cage-Rotor Induction Generator", Annals of "Eftimie Murgu" University Reșița , Vol. XXI, nr. 2, 2014, ISSN 1453-7397, pp. 323-334.
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12. L.N.Tutelea, **S.I.Deaconu**, I.Popa, G.N.Popa, "Control Methods of an Single Stator Dual Rotor PMSM", AGIR bulletin, vol. XVII, no. 4, 2012, ISSN 1224-7928, pp. 15-22.

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8. National and International Research Contracts/grants

8.1. National Grants win by competition

8.1.A Director

1. Performant power train for hybrid and electric vehicles with dual rotor single stator axial synchronous machine and single inverter, UEFISCDI, Program PN III/ European and International Cooperation / Romania-Moldova bilateral project, contract number 17 BM/19.09.2016.
2. Dual Stator Winding Induction Generator System for Wide-Variable Speed Wind Power Application, UEFISCDI, Program PN III/ European and International Cooperation / Romania-China bilateral project, contract number 8 BM/02.07.2018.

8.1 B Team member

1. Microgrid integrated small power renewable energy hybrid systems, UEFISCDI, project number PCCA 36/2012, PN-II-PT-PCCA-2011-3.2-1519, 2012-2016, Coordinator the Politehnica University of Timisoara, partner the Technical University of Cluj-Napoca.
2. New technologies of electric actuators for automobiles, CEEX Project, project number X2C33, 2006-2008, Coordinator the Politehnica University of Timisoara, partner the Technical University of Cluj-Napoca.
3. Improvement of energy quality indicators for electric steelworks and their implications for the technological process, Program RELANSIN, project number 1362, 2000-2004.
4. Research on modeling, simulation and optimal control of rolling mills in order to minimize energy consumption, with application to the mill 800 mm, S.C. Siderurgica S.A. Hunedoara, Program ORIZONT 2000, project number, 565, 2000.

8.2. International Research Grants and contracts

8.2 B Team member

1. Development and support of multidisciplinary postdoctoral programs in the priority technical fields of the national research - development - innovation strategy 4D-POSTDOC, Program POS DRU /89/1.5/S/52603, 2010-2013.
2. Partnership for students practical training in the field of information and communication technology, Program POS DRU /22/2.1/G/40356, 2010-2012.