

LIST OF THE PAPERS, PATENTS, RESEARCH PROJECTS AND OTHER SCIENTIFIC ACTIVITIES

1. Academic Activity

1.1 International Books and Chapters in the International Books

1. **Pleşca, A.**, *Thermal analysis of power electronics and electrical assemblies*, Verlag Scholar's Press Publishing House, Germany, 339 pg., 2014
2. **Pleşca, A.**, *Thermal Analysis of Power Semiconductor Converters*, chapter in the book: *Power Quality Harmonics Analysis and Real Measurements Data*, INTECH Publishing House, Croatia, 20 pg., 2011, ISBN 978-953-307-335-4
3. **Pleşca, A.**, *New Type of On-Load Tap-Changers. Basic, New Concepts, Solutions*, VDM Verlag Dr. Müller Publishing House, Germany, 218 pg., 2009

1.2 Books and Handbooks published at national publishing houses

1. **Pleşca, A.**, *Protection of the low voltage electrical installations (Protecția instalațiilor electrice de joasă tensiune)*, Tehnopress Publishing House, Iasi, 398 pg., 2015
2. **Pleşca, A.**, *On-Load Tap-Changers (Comutatoare de reglaj sub sarcina)*, Venus Publishing House, Iași, Romania, 214 pg., 2006
3. **Pleşca, A.**, Baraboi, A., Leonte, P., Adam, M., *Fuses for power semiconductor devices protection (Protecția prin siguranțe fuzibile a dispozitivelor semiconductoare de putere)*, Gh. Asachi Publishing House, Iași, Romania, 186 pg., 2001
4. **Pleşca, A.**, *Special Electrical Apparatus (Aparate electrice speciale)*, www.ee.tuiasi.ro/~aplesca, 178 ppt/pdf, 2013
5. **Pleşca, A.**, *Special Electrical Apparatus (Aparate electrice speciale)*, Politehniem Publishing House, Iasi, Romania, 211 pg., 2011
6. Furnica, E., **Pleşca, A.**, *Quality check and electrical apparatus testing (Controlul calității și încercarea aparatelor electrice)*, Venus Publishing House, Iași, Romania, 213 pg., 2006
7. **Pleşca, A.**, *Special Electrical Apparatus. Applications. Handbook (Aparate electrice speciale. Aplicații. Îndrumar laborator)*, Politehniem Publishing House, Iasi, Romania, 133 pg., 2011
8. **Pleşca, A.**, *CAD of electrical apparatus. Handbook (Proiectarea asistată de calculator a aparatelor electrice. Îndrumar de proiectare)*, CERMI Publishing House, Iași, Romania, 168 pg., 2008
9. **Pleşca, A.**, Furnică, E., *Quality check and electrical apparatus testing. Applications (Controlul calității și încercarea aparatelor electrice. Aplicații)*, SETIS Publishing House, Iași, Romania, 216 pg., 2008

2. Research Activity

2.1. Articles published in scientific journals indexed by ISI Thomson-Reuters (IF – Impact factor)

1. Bujoreanu, L.G., Lohan, N.M., Suru, M.G., **Pleşca, A.**, *Thermal analysis of eutectic alloy at HBC fuses*, Journal of Optoelectronics and Advanced Materials, vol. 17, no. 9-10, pp. 1500-1506, 2015 (IF = 0.429)
2. **Pleşca, A.**, *Numerical thermal analysis of fuse mounted on fuse holder*, Heat Transfer Engineering, vol.36, no.18, pp. 1518-1524, 2015 (IF = 0.814)
3. **Pleşca, A.**, *Thermal analysis of sliding electrical contacts with mechanical friction in steady state conditions*, International Journal of Thermal Sciences, vol.84, pp.125-133, October 2014 (IF = 2.563)
4. **Pleşca, A.T.**, *Electric arc power collection system for electric traction vehicles*, International Journal of Electrical Power and Energy Systems, vol.57, pp. 212–221, 2014
5. **Pleşca, A.T.**, *Thermal analysis of overload protection relays using finite element method*, Indian Journal of Science and Technology, vol.6, issue 8, pp. 5120-5125, August 2013
6. **Pleşca, A.T.**, *Mechanical analysis of power electromagnetic contactors*, Indian Journal of Science and Technology, vol.6, issue 8, pp. 5109-5114, August 2013
7. **Pleşca, A.T.**, *Modular installation for electromechanical processes*, Indian Journal of Science and Technology, vol.6, issue 7, pp. 4983-4989, July 2013

8. Plesca, A.T., *Power losses and thermal analysis of power rectifiers*, Indian Journal of Science and Technology, vol.6, issue 7, pp. 4976-4982, July 2013
9. Plesca, A.T., *Control method for electric fuses with controllable fusing*, Indian Journal of Science and Technology, vol.6, issue 7, pp. 4971-4975, July 2013
10. Plesca, A., *High breaking capacity fuses with improved cooling*, International Journal of Thermal Sciences, vol.70, pp.144-153, 2013 (IF = 2.563)
11. Plesca, A., *Thermal analysis of a traction system with double conducting points in steady state conditions*, Electric Power Systems Research, vol.97, pp.126-132, April 2013 (IF = 1.595)
12. Plesca, A., *Busbar heating during transient conditions*, Electric Power Systems Research, vol.89, n.1, pp.31-37, August 2012 (IF = 1.595)
13. Plesca, A., *Numerical thermal analysis of fuses for power semiconductors*, Electric Power Systems Research, vol.83, n.1, pp.144-150, February 2012 (IF = 1.595)
14. Plesca, A., *Analysis of the fuses' electro-thermal field*, Electronics and Electrical Engineering, no.8 (104), pp. 85-88, 2010 (IF = 0.445)
15. Plesca, A., *Considerations about controlled capacitors*, Journal of Electrical Engineering, vol.61, no.3, pp.189-192, 2010 (IF = 0.42)
16. Plesca, A., Scintee, A., *Thermal aspects related to power assemblies*, Advances in Electrical and Computer Engineering Journal, vol.10, no.1, pp. 23-27, 2010 (IF = 0.642)
17. Plesca, A., *About a new type of fuse based on the controllable fusing effect*, Advances in Electrical and Computer Engineering Journal, vol.9, no.2, pp. 34-37, 2009 (IF = 0.642)
18. Plesca, A., *Optimum vias distribution to a printed circuit board*, Journal of Electrical Engineering, vol.59, no.6, pp. 332-338, 2008 (IF = 0.42)

2.2. Patents

1. Doncean G., Danga V., Plesca A., Leonte P., Cotea D.V., Cotea V.V., *Modular source to provide magnetic field to treat the liquids from pots and cylindrical pipes (Sursa modulara de camp magnetic pentru tratarea lichidelor continute in vase si conducte cilindrice)*, RO 125380/29.05.2015
2. Plesca A., Doncean M., Danga V., Leonte P., Zanoaga C., Niculau M., *Electromagnetic device to treat the liquids within magnetic fields (Dispozitiv electromagnetic pentru tratarea in campuri magnetice a lichidelor)*, RO 125383/29.05.2015
3. Plesca A., Belousov V., Leonte P., Danga M., Caruntu V., Buburuzanu C., *Modular electromagnetic device to treat within magnetic field the liquids which flow through circular cross-section pipes (Dispozitiv electromagnetic liniar modular pentru tratarea in camp magnetic a lichidelor care circula in conducte cu sectiune circulara)*, RO 125382/29.05.2015
4. Leonte P., Niculau M., Plesca A., Danga V., Doncean M., Belousov V., Cotea V.V., *Modular single-phase source of magnetic field (Sursa de camp magnetic modulara monofazata)*, RO 125381/29.05.2015
5. Danga V., Nechita B., Plesca A., Leonte P., Doncean G., Odageriu G., *Vibrations' electromagnetic source to treat the liquids (Sursa electromagnetica de vibratii mecanice pentru tratarea lichidelor)*, RO 125365/29.05.2015
6. Doncean G., Caruntu V., Plesca A., Danga V., Leonte P., Acatrinei C., Nechita B., *Modular source of magnetic field to treat the liquids from thin stationary or moving layers (Sursa de camp magnetic modulara pentru tratarea lichidelor in paturi subtiri, stationare sau in miscare)*, RO 125378/30.07.2015
7. Leonte P., Nechita B., Plesca A., Danga V., Doncean G., Neacsu I., *Triple converter of electrical energy for liquids' treatment (Convertor triplu al energiei electrice pentru lichide)*, RO 125402/30.07.2015
8. Doncean G., Danga V., Plesca A., Leonte P., Caruntu V., Cotea V.V., Zanoaga C., *Modular electromagnetic device to treat the liquids within magnetic, thermal and mechanical forces field (Dispozitiv electromagnetic modular pentru tratarea lichidelor in camp magnetic, termic si de forte mecanice)*, RO 125379/30.12.2015
9. Doncean G., Danga V., Plesca A., Leonte P., Ilas I., Niculau M., *Electromagnetic source of mechanical vibrations for liquids' treatment (Sursa electromagnetica de vibratii mecanice pentru tratarea lichidelor)*, RO 125364/30.09.2013 (index in ISI Web of Knowledge – Derwent Innovations Index)
10. Plesca A., *Method and measurement device of differential magnetic permeability and its derivative for magnetic materials and electromagnetic devices (Metoda si aparat de masurare a permeabilitatii magnetice diferentiale si a derivatei sale la materiale magnetice si dispozitive electromagnetice)*, RO 123460/29.06.2012
11. Plesca, A.T., *Method to establish the maximum temperature for toroidal coils and transformers during steady-state conditions (Metodă pentru determinarea temperaturii maxime la bobine și transformatoare toroidale în regim staționar)*, RO 122381/30.04.2009
12. Plesca, A.T., *On-load single-phase stabilized tap-changer (Comutator modular monofazat stabilizat de reglaj sub sarcină a tensiunii)*, RO 122237/27.02.2009 (ISI Web of Knowledge – Derwent Innovations Index)
13. Plesca, A.T., *Albu, C., Modular electromagnetic device for electromechanical workshops (Dispozitiv electromagnetic modular destinat atelierelor electromecanice)*, RO 121401/30.04.2007

14. Plesca, A.T., *Cartridge for high voltage fuses (Element de inlocuire pentru sigurante fuzibile de înaltă tensiune)*, RO 120564/30.03.2006 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
15. Plesca, A.T., Leonte, P., *Special fuse for power rectifiers (Siguranta fuzibila speciala pentru redresoarele de putere)*, RO 120436/30.01.2006 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
16. Plesca, A.T., *Special fast fuse for power semiconductors protection (Siguranta ultrarapida speciala pentru protectia semiconductoarelor de putere)*, RO 120108/30.08.2005 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
17. Leonte, P., Racocea, C., Plesca, A.T., Racocea, C., *Method and devices to test the quality of radial ball bearings (Metoda si dispozitive pentru controlul calitatilor rulmentilor)*, RO 119906/30.05.2005 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
18. Plesca, A.T., *Special cartridge for HBC fuses (Element de inlocuire specializat pentru sigurante fuzibile cu mare putere de rupere)*, RO 120107/30.08.2005 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
19. Plesca, A.T., *Overcurrents protection device (Dispozitiv de protectie la supracurenti)*, RO 119396/30.08.2004 (ISI Web of Knowledge – Derwent Innovations Index)
20. Leonte, P., Ciutea, I., Plesca, A.T., Iacob, C., Sufletel, N., *Installation to test AC HRC fuses (Instalatie pentru incercarile sigurantelor fuzibile de mare putere de rupere de curent alternativ)*, RO 119489/30.11.2004 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
21. Leonte, P., Plesca, A.T., *Method to establish the maximum temperature and its coordinates at coils of electrical apparatus into steady-state conditions (Metoda pentru determinarea temperaturii maxime si a coordonatelor sale la bobinele aparatelor electrice in regim stationar)*, RO 119392/30.08.2004 (ISI Web of Knowledge – Derwent Innovations Index)
22. Plesca, A.T., *Protection current sensors (Senzori de curent pentru protectie)*, RO 118488/30.05.2003 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
23. Leonte, P., Furnică, E., Plesca, A.T., *Electromagnetic modular current source (Sursă modulară de curent electromagnetică)*, RO 118921/30.12.2003 (ISI Web of Knowledge – Derwent Innovations Index)
24. Plesca, A.T., *Modular fuse for protection of installations with semiconductors (Siguranta fuzibila modulara pentru protectia instalatiilor cu semiconductoare)*, RO 117953/30.09.2002 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
25. Plesca, A.T., *Overcurrents protection device for uncontrolled power rectifiers (Dispozitiv de protectie la supracurenti pentru redresoare de putere necomandate)*, RO 117824/30.07.2002 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
26. Plesca, A.T., *Protection device for power semiconductors (Dispozitiv de protectie pentru semiconductoare de putere)*, RO 117882/30.08.2002 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
27. Plesca, A.T., *Electromagnetic pump (Pompa motoare electromagnetica)*, RO 117557/30.04.2002 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)
28. Leonte, P., Plesca, A.T., *Fast fuse for power semiconductors protection (Siguranta ultrarapida pentru protectia semiconductoarelor de putere)*, RO 117661/30.05.2002 (European Patent Office database, ISI Web of Knowledge – Derwent Innovations Index)

2.3. Articles published in scientific journals and conference proceedings indexed in different International Data Bases

- R1, Plesca, A., Rotariu, M., Irimia, D., Andrusca, M., *About a possibility to fuse monitoring and testing*, International Review on Modelling and Simulations (IREMOS), vol.4, n.6, Part A, pp.2770-2779, December 2011 (EBSCO, SCOPUS, Copernicus – FI: 6.55)
- R2, Plesca, A., *Busbar temperature monitoring and correlation with protection electrical apparatus*, International Review of Electrical Engineering (IREE), vol.6, n.5, pp.2659-2665, Sep – Oct 2011 (EBSCO, SCOPUS)
- R3, Plesca, A., *Theoretical aspects related to active force evaluation in the case of electromagnetic devices*, International Review on Modelling and Simulations (IREMOS), vol.4, n.2, Part A, pp.668-673, April 2011 (EBSCO, SCOPUS, Copernicus – FI: 6.55)
- R4, Buțurca, C., Cioata, S., Plesca, A., *Equivalent electric scheme of the devices used to study the behaviour of liquids in electric fields*, Simpozionul International de Inginerie Electrica si Convertoare Energetice – ELS 2011, Buletinul AGIR, Anul XVI, nr.4, pg. 249-252, 2011 (Index Copernicus, Academic Keys, getCITED)
- R5, Plesca, A., *Three dimensional modelling and simulation aspects related to fuses for power semiconductors protection*, International Review on Modelling and Simulations (IREMOS), vol.3, n.5, Part B, pp.1162-1166, October 2010 - Tutorial (EBSCO, SCOPUS, Copernicus – FI: 6.55)

- R6, **Plesca, A.**, *Thermal transient regime analysis for fuses and power semiconductors*, International Review on Modelling and Simulations (IREMOS), vol.3, n.5, Part B, pp.1070-1076, October 2010 (**EBSCO, SCOPUS, Copernicus – FI: 6.55**)
- R7, **Plesca, A.**, *Thermal analysis of fuses and busbar connections at different type of load variations*, International Review on Modelling and Simulations (IREMOS), vol.3, n.5, Part B, pp.1077-1086, October 2010 (**EBSCO, SCOPUS, Copernicus – FI: 6.55**)
- R8, **Plesca, A.**, Scintee, A., *Testing of power electrical apparatus using modular high current source*, International Review of Electrical Engineering (IREE), vol.5, n.3, pp.1236-1243, May – June 2010 (**EBSCO, SCOPUS**)
- R9, M. Adam, A. Baraboi, C. Pancu, **A. Plesca**, *Reliability centered maintenance of the circuit breakers*, International Review of Electrical Engineering (IREE), vol.5, n.3, pp.1218-1224, May – June 2010 (**EBSCO, SCOPUS**)
- R10, **Plesca, A.**, Furnica, E., *Testing of High Breaking Capacity Fuses Using Modular Current Sources*, WSEAS Transactions on Circuits and Systems, vol.9, Issue 2, pp. 121-131, February 2010 (**Compendex, SCOPUS**)
- R11, Pancu, C., Baraboi, A., Adam, M., **Plesca, A.**, *Embedded system for monitoring, diagnosis and remote control of circuit breakers*, Buletinul Institutului Politehnic din Iasi, Tomul LVI (LX), Fasc. 1, Electrotehnică. Energetică. Electronică, pp. 109-117, 2010 (**Index Copernicus, getCITED, Ulrich**)
- R12, Adam, M., Baraboi, A., Pancu, C., **Plesca, A.**, *About the impedance of the static var compensator and of the thyristor controlled series capacitors*, Buletinul Institutului Politehnic din Iasi, Tomul LVI (LX), Fasc. 2, Electrotehnică. Energetică. Electronică, pp. 65-75, 2010 (**Index Copernicus, getCITED, Ulrich**)
- R13, **A. Plesca**, A. Baraboi, M. Adam, C. Pancu, *New aspects related to high breaking capacity fuses*, International Review of Electrical Engineering (IREE), vol.4, n.5, pp. 1035-1042, September – October 2009 (**EBSCO, SCOPUS**)
- R14, **A. Plesca**, M. Adam, A. Baraboi, C. Pancu, *New device to adjust on load the voltage level at power transformers*, International Review of Electrical Engineering (IREE), vol.4, n.1, pp. 66-74, January – February 2009 (**EBSCO, SCOPUS**)
- R15, **A. Plesca**, M. Adam, A. Baraboi, C. Pancu, *Thermal analysis of power semiconductor fuse*, International Review on Modelling and Simulations (IREMOS), vol.1, n.1, pp. 129-134, October 2008 (**EBSCO, SCOPUS, Copernicus – FI: 6.55**)
- R16, A. Baraboi, M. Adam, **A. Plesca**, C. Pancu, *Multiple non-linear resonance phenomena in circuits with an orthogonal magnetising controlled reactor*, International Review of Electrical Engineering (IREE), vol.3, n.6, pp. 1039-1047, November – December 2008 (**EBSCO, SCOPUS**)
- R17, M. Adam, A. Baraboi, C. Pancu, **A. Plesca**, *Aspects regarding the controlled switching of the circuit breakers*, International Review of Electrical Engineering (IREE), vol.3, n.5, pp. 759-767, September – October 2008 (**EBSCO, SCOPUS**)
- R18, **A. Plesca**, A. Baraboi, M. Adam, C. Pancu, *Optimum vias distribution for a printed circuit board using 3D modelling and simulation*, International Review of Electrical Engineering (IREE), vol.3, n.4, pp. 613-620, July – August 2008 (**EBSCO, SCOPUS**)
- R19, Hnatiuc, E., **Plesca, A.T.**, *The return transient regime at single phase electromagnets operating type E – I*, Buletinul Institutului Politehnic din Iasi, Tomul LIV (LVIII), Fasc. 3, Electrotehnică. Energetică. Electronică, pp. 93-98, 2008 (**Index Copernicus, getCITED, Ulrich**)
- R20, Hnatiuc, E., **Plesca, A.T.**, *The return transient regime at single phase electromagnets operating type U – I*, Buletinul Institutului Politehnic din Iasi, Tomul LIV (LVIII), Fasc. 3, Electrotehnică. Energetică. Electronică, pp. 99-104, 2008 (**Index Copernicus, getCITED, Ulrich**)
- R21, Furnica, E., **Plesca, A.T.**, *Modular fault current limiter*, Bulletin of Polytechnic Institute Iasi, Vol. XLV (IL), Fasc.5B, Electrotechnics, Energetics, Electronics, 1999, pp.170-173. (**Inspec database**)
- R22, **Plesca, A.T.**, Leonte, P., *Contributions about improvement of fuse cartridges of high breaking capacity fuses*, Buletinul Institutului Politehnic din Iasi, Tomul XLV (IL), Fasc.5B, Electrotehnică. Energetică. Electronică, 1999, pp.218-221. (**Inspec database**)
- R23, **Plesca, A.T.**, Leonte, P., *Contributions about improvement of ultra-rapid fuses for power semiconductors*, Buletinul Institutului Politehnic din Iasi, Tomul XLV (IL), Fasc.5B, Electrotehnică. Energetică. Electronică, 1999, pp.222-225. (**Inspec database**)
- V1, **Plesca, A.**, *Thermal Analysis of a Sliding Electric Contact System Using Finite Element Method*, International Conference on Modeling and Simulation ICMS 2013, Paris, France, World Academy of Science, Engineering and Technology, Issue 76, pp. 403-410, April 2013 (**SCOPUS, EBSCO, ERA**)
- V2, **Plesca, A.**, *Thermal Analysis of Toroidal Transformers Using Finite Element Method*, International Conference on Modeling and Simulation ICMS 2013, Paris, France, World Academy of Science, Engineering and Technology, Issue 76, pp. 411-420, April 2013 (**SCOPUS, EBSCO, ERA**)
- V3, **Plesca, A.**, *Thermal analysis of the current path from circuit breakers using finite element method*, International Conference on Modeling and Simulation ICMS 2012, Phuket, Thailand, World Academy of Science, Engineering and Technology, Issue 72, pp. 102-110, December 2012 (**SCOPUS, EBSCO, ERA**)

- V4, **Plesca, A.**, *Thermal analysis of the fuse with unequal fuse links using finite element method*, International Conference on Modeling and Simulation ICMS 2012, Phuket, Thailand, World Academy of Science, Engineering and Technology, Issue 72, pp. 93-101, December 2012 (**SCOPUS, EBSCO, ERA**)
- V5, **Plesca, A.**, Scintee, A., *Considerations about a new type of high breaking capacity fuses*, Proceedings of the Tenth IASTED European Conference on Power and Energy Systems, EuroPES 2011, Crete, Greece, pp.165-170, 2011. (**ISI Proceedings, SCOPUS, Inspec, Compendex database**)
- V6, **Plesca, A.**, Scintee, A., *3D thermal analysis of a power supply busbar structure*, ASME 10th Biennial Conference on Engineering Systems Design and Analysis (ESDA 2010), Istanbul, Turkey, pp.1-8, 2010 (**ISI Web of Knowledge**)
- V7, **Plesca, A.**, Furnica, E., *Application of power modular current sources to test high breaking capacity fuses*, 9th WSEAS International Conference on Applications of Electrical Engineering, Penang, Malaysia, pp. 80-85, 2010 (**SI Web of Knowledge**)
- V8, Panca, C., Baraboi, A., Maricel, A., **Plesca, A.**, *GSM based solution for monitoring and diagnostic of electrical equipment*, Proceedings of the 13th WSEAS International Conference in Circuits – Recent Advances in Circuits, Rodos, Greece, pp.58-63, 2009 (**ISI Web of Knowledge**)
- V9, **Plesca, A.T.**, *A complete 3D thermal model for fast fuses*, Eight International Conference on Electric Fuses and their Applications, ICEFA, Clermont-Ferrand, France, pp.79-85, 2007. (**IEEE Xplore, SCOPUS, Inspec, Compendex database**)
- V10, **Plesca, A.T.**, Licau, M., *New device to adjust on load the voltage level at power transformers*, Proceedings of the Seventh IASTED International Conference on European Power and Energy Systems, EuroPES 2007, Palma de Mallorca, Spain, pp.145-150, 2007. (**ISI Proceedings, SCOPUS, Inspec, Compendex database**)
- V11, **Plesca, A.T.**, *3D modelling and simulation of toroidal transformers*, Proceedings of the 16th IASTED International Conference on Applied Simulation and Modelling, ASM 2007, Palma de Mallorca, Spain, pp.358-363, 2007. (**ISI Proceedings, Inspec database**)
- V12, **Plesca, A.T.**, Licau, M., *Optimal adjustment of voltage level at power transformers to improve the power quality*, International Conference on Power System Technology, POWERCON2006, Chongqing, China, 2006 (CD-ROM; **ISI Proceedings, IEEE Xplore, SCOPUS, Compendex database**)
- V13, **Plesca, A.T.**, *Optimal heatsink design for a solid-state relay using a 3D modeling and simulation software*, International Conference on Power System Technology, POWERCON2006, Chongqing, China, 2006 (CD-ROM; **ISI Proceedings, IEEE Xplore, SCOPUS, Compendex database**)
- V14, **Plesca, A.T.**, Licau, M., *Voltage stabilizer with orthogonal polarized transformer*, Proceedings of the Sixth IASTED International Conference on European Power and Energy Systems, Rodos, Grecia, pg.63-68, 2006. (**ISI Proceedings, SCOPUS, Inspec, Compendex database**)
- V15, **Plesca, A.T.**, *3D modelling and simulation of fast fuses for power semiconductors*, Proceedings of the 15th IASTED International Conference on Applied Simulation and Modelling, 2006, Rodos, Grecia, pg.310-315. (**ISI Proceedings, SCOPUS, Inspec, Compendex database**)
- V16, **Plesca, A.T.**, Leonte, P., Licau, M., *Analysis and simulation of temperature variation waveforms at transient conditions to power rectifiers*, 25th International Conference on Fundamentals of Electrotechnics and Circuit Theory, IC-SPETO, Tom I, Gliwice-Ustron, Poland, pp.141-144, 2002. (**Inspec database**)
- V17, Leonte, P., **Plesca, A.T.**, *Sensors for current and voltage three-phase systems checking*, International Conference on Power System Technology, PowerCon 2002, China, vol.2, pp.1110-1113, 2002 (**IEEE Xplore, ISI Proceedings, Inspec database**)
- V18, **Plesca, A.T.**, Leonte, P., *About the possibility of overcurrent power semiconductor protection using controlled fusing*, International Semiconductor Conference, CAS 2001, vol.2, Sinaia, Romania, pp.489-492, 2001 (**ISI Proceedings, IEEE Xplore, SCOPUS, Inspec, Compendex database**)
- V19, Hnatiuc, E., Hnatiuc, B., **Plesca, A.T.**, Marcuta, M., *About the influence of the phase of voltage supply at the driving time for single-phase A.C. electromagnets*, The 6th International Conference on Optimization of Electrical and Electronic Equipments, OPTIM, Brasov, Romania, pp.221-224, 1998 (**IEEE Xplore**)

2.4. National and International Research Projects

2.4.1. National research projects

1. New concepts related to the fuse operating using specific methods of virtual instrumentation (Noi concepte privind funcționarea siguranțelor fuzibile folosind metode specifice instrumentației virtuale), grant no.706/19.01.2009, PNII IDEI, 2009-2011, National Agency for Science, Technology and Innovation

Position: Grant Director

Theoretical results: new concepts to improve the operating of the high breaking capacity fuses

Practical results: new type of fuses with controlled fusing and improved cooling

2. Intelligent system for monitoring and diagnose of the electrical equipment (Sistem inteligent de monitorizare și diagnosticare a echipamentelor electrice), grant no.21014, PNCDI 2, 2007-2009, National Agency for Science, Technology and Innovation

Position: Member of the research team

Theoretical results: new solutions/algorithms of monitoring and diagnostic of the electrical equipment

Practical results: a test bench based on microcontroller for monitoring and diagnostic of the electrical equipment

3. New intelligent device to improve the energy quality using specific methods of virtual instrumentation (Nou dispozitiv inteligent pentru îmbunătățirea calității energiei utilizând mijloace specifice instrumentației virtuale), CEEEX National Programme: Funding Application for Excellences Research Projects. Code proiect: 5, Contract no: 1489, 2006-2008

Position: Grant Director

Theoretical results: designing of the new intelligent device to improve the energy quality

Practical results: prototype of modular voltage adjusting level

4. Study of the stabilization and conditioning of the wines using the cold plasma (Studiul stabilizării și condiționării vinurilor prin tratament cu plasmă rece), grant no.117, CEEEX, 2006-2008, National Agency for Science, Technology and Innovation

Position: Member of the research team

Theoretical results: new solutions related to the possibilities to treat the wines through the cold plasma

Practical results: test bench to treat different type of wines using the cold plasma

5. Advanced design and testing methods of the insulation systems to operate in extreme conditions and with fault tolerances (Metode avansate de proiectare și testare a sistemelor de izolație destinate funcționării în condiții extreme și toleranțe la defectare), grant no.164, type A, CNCSIS, code 489, 2004 – 2006, National Agency for Science, Technology and Innovation

Position: Member of the research team

Theoretical results: new design and testing methods for the insulation systems

Practical results: test bench and experimental tests for different type of insulators at extreme conditions of temperature, humidity and mechanical stresses

6. Controlled system using artificial intelligence for monitoring the electromagnetic pollution emissions and diagnostic of electrical and electroenergetics apparatus, equipments and installations (Sistem controlat prin inteligența artificială de monitorizare a emisiilor electromagnetice poluante și de diagnosticare a aparatelor, echipamentelor și instalațiilor electrice și electroenergetice), grant type A, no. 27637/2005-2006, National Council of Scientific Research from University Education (CNCSIS).

Position: Member of the research team

Theoretical results: new solutions based on artificial intelligence for monitoring the electromagnetic pollution emissions because of different type of power electrical equipment

Practical results: laboratory tests of monitoring the electromagnetic pollution emissions and diagnostic of power electrical equipment

7. Modern solutions for monitoring and diagnose of electrical apparatus from different industrial installations (Soluții moderne privind monitorizarea și diagnosticarea aparatului din instalațiile electrice), grant type A, no.129/294/2002-2003, National Council of Scientific Research from University Education (CNCSIS).

Position: Member of the research team

Theoretical results: new solutions of monitoring and diagnostic of the apparatus from electrical networks using specific methods of virtual instrumentation

Practical results: a test bench with a data acquisition board for monitoring and diagnostic of the apparatus from electrical networks

8. Expert systems of total quality assurance in the industry of electrical materials and equipment (Sisteme expert de asigurare a calității totale în industria de materiale și echipamente electrotehnice), grant type D, no.42445/215, 2000-2001, World Development Bank and National Agency for Science, Technology and Innovation

Position: Member of the research team

Theoretical results: new solutions to provide the total quality of the electrical materials and equipment

Practical results: new laboratory to check/test the quality of the electrical materials and different type of electrical equipment

9. Modelling of magnetic material characteristics by using specific algorithms of neural networks (Modelarea caracteristicilor materialelor magnetice utilizând algoritmi specifici inteligenței artificiale), grant type T, no.6167/2000, National Agency for Science, Technology and Innovation.

Position: Member of the research team

Theoretical results: new models for magnetic material characteristics

Practical results: software programme about modelling of magnetic material characteristics

10. Reactors with cold plasma for air and water depollution (Reactoare cu plasma rece pentru depoluarea aerului si a apei), grant no.6177/1999-2000, Romanian Research and Technology Department.

Position: Member of the research team

Theoretical results: the using of electrical discharge for air and water depollution

Practical results: a cold plasma reactor for air and water depollution

11. Overcurrent protection devices for power semiconductors (Dispozitive de protectie la supracurenti pentru instalatiile cu semiconductoare de putere), contract no.442/1996-1999, National Agency for Science, Technology and Innovation.

Position: Member coordinator

Theoretical results: new solutions as regard the overcurrent protection of installations with power semiconductors

Practical results: overcurrent protection devices for installations with power semiconductors

2.4.2. International research projects

1. Modelling and simulation of the current limiting fuses, Capacities, Module III, Bilateral Research Project China - Romania, Contract no. 610/01.01.2013, 2013-2014

Position: Grant Director

Theoretical results: Mathematical models of the temperature of the current limiting fuses; Mathematical models of the time-current characteristics

Practical results: 3D thermal simulations; laboratory testing of the current limiting fuses

2. Modelling of metal vapor arc for high current interruption in vacuum, Capacities, Module III, Bilateral Research Project China - Romania, Contract no. 515/14.04.2011, 2011-2012

Position: Grant Director

Theoretical results: Mathematical models of the metal vapor density for high current interruption in vacuum; Mathematical models of the vacuum electric arc discharge

Practical results: 3D thermal simulations; laboratory testing of the vacuum circuit breakers

3. New Voltage Regulator for Power Transformers to Improve the Energy Quality, European Reintegration Grant (ERG), Contract no. MERG-7-CT-2005-014990, European Commission

Position: Main researcher

Theoretical results: Designing of a new device to regulate the voltage level between admissible limits (electromagnetic device design for step and continuous voltage adjustment; development of the programme for control unit; 3D thermal simulations)

Practical results: prototype for the new device; laboratory testing and validation of the proposed solution; dissemination of the new concept

4. Electro-thermal simulations of components and assemblies, Contract code PP03032501SF, DCSI – U.S.

Position: Member of the research team

Theoretical results: New solutions about electro-thermal modelling and simulation of the power semiconductors

Practical results: Modelling and simulation of different types of the power semiconductors, devices and power assemblies

5. Climatic tests on UPS, Contract code PP03101301SF, Azienda chimica genovese, Italy.

Position: Member coordinator

Theoretical results: Thermal aspects about uninterruptible power supply (UPS)

Practical results: Thermal checking of different type of uninterruptible power supply (UPS)

6. Burn-in and heat tests, Contract code PP04030302SF, Azienda chimica genovese, Italy.

Position: Member coordinator

Theoretical results: Thermal aspects about installations with power semiconductors

Practical results: Thermal checking of different installations with power semiconductors

7. Solution for MM160, Contract code PP03121001SF, Miller – U.S.

Position: Member of the research team

Theoretical results: Study about the replacement of a power semiconductor modul from a welding installation

Practical results: The achievement of a new power semiconductor modul for the welding installation type MM160

8. Thermal simulation and optimisation of PCB, Contract code PP04032401SF, Gate, Italy.
Position: Member coordinator
Theoretical results: New solutions about the optimisation of power circuit boards (PCB)
Practical results: The achievement of an optimum structure for the power circuit boards (PCB) from thermal point of view
9. Line filters for electric cabinets, Contract code PP04030401SF, Miller – U.S.
Position: Member of the research team
Theoretical results: Study about the overvoltage protection of power converters
Practical results: The achievement of some line filters for overvoltage protection of power converters
10. Alternative MOS for IRFZ46N, Contract code PP03052901SF, Miller – U.S.
Position: Member of the research team
Theoretical results: A comparative study about power semiconductors type MOS
Practical results: Experimental tests as regard the characteristics of the power semiconductors type MOS
11. On-line checking of the thermal contact between MOS and heatsink, Contract code PP03060401SF, BTM, Italy.
Position: Member of the research team
Theoretical results: New solutions to check the thermal contact between power semiconductors type MOS and heatsink
Practical results: The achievement of a test bench for on-line checking of the thermal contact between power semiconductors type MOS and heatsink
12. Accelerated reliability tests on electrolytic capacitors, Contract code PP03060901SF, Gate, Italy.
Position: Member coordinator
Theoretical results: Study as regard the reliability of the electrolytic capacitors
Practical results: Accelerated reliability tests for electrolytic capacitors
13. Thermal project of a heat spreader for TO220, Contract code PP04032201SF, BTM, Italy.
Position: Member coordinator
Theoretical results: New solutions about heat spreader for power semiconductors type TO220
Practical results: The achievement of thermal models for heat spreaders to be used for power semiconductors type TO220
14. Updated software for CEV test with PWM control, Contract code PP04102502SF, BTM, Italy.
Position: Member coordinator
Theoretical results: The improving of the software to check the thermal contact for the CEV devices with PWM control
Practical results: The achievement of an updated software to check the thermal contact for the CEV devices with PWM control
15. Optimisation of a heat spreader for TO220 – 2, Contract code PP04111701SF, BTM, Italy.
Position: Member coordinator
Theoretical results: New solutions about improving the heat spreader for power semiconductors type TO220
Practical results: The achievement of an optimum model for heat spreaders to be used for power semiconductors type TO220
16. Contact check for SCANIA, Contract code PP04121402SF, BTM, Italy.
Position: Member of the research team
Theoretical results: Solutions about checking the thermal contact at power semiconductor devices which equipped the SCANIA trucks
Practical results: The achievement of a test bench to check the thermal contact at power semiconductor devices which equipped the SCANIA trucks
17. Characterization of MOS STP140NF55 and STP60NS04Z, Contract code PP05012502SF, BTM, Italy.
Position: Member of the research team
Theoretical results: Theoretical aspects about the characteristics of the MOS power semiconductors type STP140NF55 and STP60NS04Z
Practical results: Experimental tests about the characteristics of the MOS power semiconductors type STP140NF55 and STP60NS04Z

3. Recognition of the Scientific Activity Impact

3.1. Citations in international scientific journals and proceedings

1. **Plesca, A.**, *High breaking capacity fuses with improved cooling*, International Journal of Thermal Sciences, vol.70, pp.144-153, August 2013

Cited in:

1.1. Minea, A.A., *Uncertainties in modeling thermal conductivity of laminar forced convection heat transfer with water alumina nanofluids*, International Journal of Heat and Mass Transfer, 68, pp. 78-84, 2014 (ISI)

1.2. Yang, R., Yang, C., Cui, X., Zhang, Z., *Silver dendrite-based nanocomposites for current cutting-off fuse*, 16th International Conference on Electronic Packaging Technology, ICEPT 2015, pp. 462-466

1.3. Sticea, D., Albu, M., Livint, G., *The bidirectional power exchange using a DC/DC converter with coupled inductances*, Proceedings of the 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, pp. 933-940

2. **Plesca, A.**, *Thermal analysis of a traction system with double conducting points in steady state conditions*, Electric Power Systems Research, vol.97, pp.126-132, April 2013

Cited in:

2.1. Dragomir, A., Adam, M., Andrusca, M., Molodeschi, M., Pantelimon, R., *About thermal stresses monitoring and diagnosis of electrical equipment*, Proceedings of the 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, pp. 289-294

3. **Plesca, A.T.**, *Power losses and thermal analysis of power rectifiers*, Indian Journal of Science and Technology, vol.6, issue 7, pp. 4976-4982, July 2013

Cited in:

3.1. Kini, C.R., Yalamarty, S.S., Mendonca, R.M., Sharma, N.Y., Shenoy, B.S., *CHT analysis of trailing edge region cooling in HP stage turbine blade*, Indian Journal of Science and Technology, vol.9, issue 6, 2016

4. **Plesca, A.**, *Numerical thermal analysis of fuses for power semiconductors*, Electric Power Systems Research, vol.83, n.1, pp.144-150, February 2012

Cited in:

4.1. Papagiannopoulos, I.; Chatziathanasiou, V.; Exizidis, L.; et al., *Behaviour of the thermal impedance of buried power cables*, International Journal Of Electrical Power & Energy Systems, vol. 44, n.1, pp.383-387, 2013 (ISI)

4.2. Chiriac, G., *Thermal analysis of fuses with variable cross-section fuselinks*, Electric Power Systems Research, vol. 92, pp. 73-80, 2012 (ISI)

4.3. Minea, A.A., Luciu, R.S., *Investigations on electrical conductivity of stabilized water based Al₂O₃ nanofluids*, Microfluidics and Nanofluidics 13 (6) , pp. 977-985, 2012 (ISI)

4.4. Nituca C., *Thermal analysis of electrical contacts from pantograph-catenary system for power supply of electric vehicles*, Electric Power Systems Research, 96, pp. 211-217, 2013 (ISI)

4.5. Minea, A.A., *Electrical and Rheological Behavior Of Stabilized Al₂O₃ Nanofluids*, Current Nanoscience, 2013, 9, pp. 81-88 (ISI)

4.6. Yang, R., Yang, C., Cui, X., Zhang, Z., *Silver dendrite-based nanocomposites for current cutting-off fuse*, 16th International Conference on Electronic Packaging Technology, ICEPT 2015, pp. 462-466

4.7. Wang, Y., Liu, Z.-G., Mu, X.-Q., Gao, S.-B., Wu, J.-Q., *Thermal steady-state analysis and validation with double slide electric contacts in pantograph-catenary system*, Journal of the China Railway Society, 37 (5), 2015, pp. 27-33

4.8. Wang, Y., Liu, Z., Mu, X., Gao, S., *Modeling and verification of contact line transient temperature difference based on lifting or lowering the pantograph electric contacts*, Chinese Journal of Scientific Instrument, 35 (12), 2014, pp. 2663-2672

4.9. Sticea, D., Albu, M., Livint, G., *The bidirectional power exchange using a DC/DC converter with coupled inductances*, Proceedings of the 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, pp. 933-940

4.10. Minea, A.A., Luciu, R.S., Manca, O., *Influence of microtube heating geometry on behavior of an alumina nanofluid at low reynolds numbers*, Applied Mechanics and Materials, 371, 2013, pp. 596-600

5. **Plesca, A.**, *Busbar heating during transient conditions*, Electric Power Systems Research, vol.89, n.1, pp.31-37, August 2012

Cited in:

5.1 Nituca, C., *Thermal analysis of electrical contacts from pantograph-catenary system for power supply of electric vehicles*, Electric Power Systems Research, 96, pp. 211-217, 2013 (ISI)

- 5.2. Smirnova, L., Juntunen, R., Murashko, K., Musikka, T., Pyrhonen, J., *Thermal Analysis of the Laminated Busbar System of a Multilevel Converter*, IEEE Transactions on Power Electronics, 31 (2), pp. 1479-1488 (ISI)
6. Andrusca M, Adam M, Baraboi A, Irimia DF, Pancu C, **Plesca AT.**, *Contributions regarding the asset management into electricity company*, International Conference of Management and Industrial Engineering, Bucuresti, 2011
Cited in:
6.1. Andrusca M., Adam M., Irimia D F, Baraboi A, *Prioritization of maintenance activities from an electricity company*, 13th International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2012), pp. 1259-1265, Brasov, 2012 (IEEE Xplore, INSPEC)
7. **Plesca, A.**, *Theoretical aspects related to active force evaluation in the case of electromagnetic devices*, International Review on Modelling and Simulations (IREMOS), vol.4, n.2, Part A, pp.668-673, April 2011
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7.1. Pricop, B., Söyler, U., Lohan, N.M., Özkal, B., Bujoreanu, L.G., Chicet, D., Munteanu, C., *Thermal behavior of mechanically alloyed powders used for producing an Fe-Mn-Si-Cr-Ni shape memory alloy*, Journal of Materials Engineering and Performance, 21 (11) , pp. 2407-2416, 2012 (ISI)
8. **Plesca, A.**, *Busbar temperature monitoring and correlation with protection electrical apparatus*, International Review of Electrical Engineering (IREE), vol.6, n.5, pp.2659-2665, Sep – Oct 2011
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8.1. Nituca, C., *Thermal analysis of electrical contacts from pantograph-catenary system for power supply of electric vehicles*, Electric Power Systems Research, 96, pp. 211-217, 2013 (ISI)
8.2. Nituca, C., *Thermal analysis for a double sided linear induction motor*, European Scientific Journal, vol.9, n.9, pp. 38-50, 2013 (Index Copernicus, Ulrich, EBSCO, getCITED)
9. **Pleşca, A.**, *Thermal Analysis of Power Semiconductor Converters*, capitol in cartea *Power Quality Harmonics Analysis and Real Measurements Data*, Editura INTECH, Croatia, 20 pg., 2011, ISBN 978-953-307-335-4
Cited in:
9.1. Nituca, C., *Thermal analysis for a double sided linear induction motor*, European Scientific Journal, vol.9, n.9, pp. 38-50, 2013 (Index Copernicus, Ulrich, EBSCO, getCITED)
10. **Plesca, A.**, *Thermal transient regime analysis for fuses and power semiconductors*, International Review on Modelling and Simulations (IREMOS), vol.3, n.5, Part B, pp.1070-1076, October 2010
Cited in:
10.1. Payam, M.S., Bijami, E., *Investigation of recloser-fuse coordination in distribution systems including DGs*, International Review on Modelling and Simulations, 4 (4) , pp. 1717-1722, 2011 (Scopus, Ebsco)
10.2. Nituca, C., *Thermal analysis for a double sided linear induction motor*, European Scientific Journal, vol.9, n.9, pp. 38-50, 2013 (Index Copernicus, Ulrich, EBSCO, getCITED)
11. **Plesca, A.**, Scintee, A., *Thermal aspects related to power assemblies*, Advances in Electrical and Computer Engineering Journal, vol.10, no.1, pp. 23-27, 2010
Cited in:
11.1. Rata M, Rata G, Cernomazu D., Mandici L, Afanasov C., *Unconventional motors based on vibration motion*, International Review of Electrical Engineering (IREE), vol. 7, no.5, pp. 5542 – 5548, 2012 (SCOPUS, Ebsco)
11.2. Rata, G., Rata, M., *A solution for study of PID controllers using cRIO system*, 9th International Symposium on Advanced Topics in Electrical Engineering, ATEE 2015, pp. 121-124, 2015
12. M. Adam, A. Baraboi, C. Pancu, **A. Plesca**, *Reliability centered maintenance of the circuit breakers*, International Review of Electrical Engineering (IREE), vol.5, n.3, pp.1218-1224, May – June 2010
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12.2. Nourollah, S., Pirayesh, A., *Assessment of voltage stability margin constrained by electricity market uncertainties*, International Review on Modelling and Simulations, 5 (3) , pp. 1308-1312, 2012 (Scopus, Ebsco)
12.3. Otsmani, Z., Khiat, M., Chaker, A., *A genetic algorithm to minimize the periodic preventive maintenance cost in electrical system*, International Review of Electrical Engineering, 6 (3) , pp. 1439-1445, 2011 (Ebsco, SCOPUS)
12.4. Vatau D, Surianu F.D., Olariu A.F., *Power quality level measurement and estimation issues*, The 6th International Conference on Advanced Engineering Computing and Applications in Sciences, ADVCOMP 2012, pp. 1-7, Barcelona, Spain (ISI)
12.5. Andrusca M., Adam M., Irimia D F, Baraboi A, *Prioritization of maintenance activities from an electricity company*, 13th International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2012), pp. 1259-1265, Brasov, 2012 (IEEE Xplore, INSPEC)

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- 12.10. Otsmani, Z., Khat, M., Chaker, A., Frioui, Z., *Metaheuristic method for minimizing the periodic preventive maintenance cost in an electrical system*, International Review of Electrical Engineering, 8 (1), pp. 379-387, 2013
- 12.11. Rama Rao, N., Amarnath, J., *Effect of image charges and dielectric coating on particle trajectory in a 3-Phase Gas Insulated Busduct using charge simulation method*, International Review on Modelling and Simulations, 5 (4), pp. 1541-1549, 2012
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13.1. Chiriac, G., *Thermal analysis of fuses with variable cross-section fuselinks*, Electric Power Systems Research, vol. 92, pp. 73-80, 2012 (ISI)
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3.2. Member of International Scientific Committee (Scopus, Ebsco, Compendex):

1. International Scientific Committee of IASTED Conference on Power and Energy Systems, PES 2008, Baltimore, USA;
2. International Scientific Committee of IASTED Conference on Applied Simulation and Modeling, ASM 2008, Corfu, Greece;
3. International Scientific Committee of IASTED Conference on Power and Energy Systems, EuroPES 2009, Palma de Mallorca, Spain;
4. International Scientific Committee of IASTED Conference on Applied Simulation and Modelling, ASM 2009, in Palma de Mallorca, Spain;
5. International Scientific Committee of ICOMOS, International Conference on Modelling and Simulations, 2010, Capri, Naples, Italy;
6. International Scientific Committee of IASTED Conference on Power and Energy Systems, EuroPES 2011, Crete, Greece;
7. International Scientific Committee of IASTED Conference on Applied Simulation and Modelling, ASM 2011, Crete, Greece
8. International Scientific Committee of IASTED Conference on Power and Energy Systems, EuroPES 2012, Naples, Italy;
9. International Scientific Committee of IASTED Conference on Applied Simulation and Modelling, ASM 2012, Naples, Italy
10. International Scientific Committee of IASTED Conference on Modelling, Identification and Control, MIC 2016, Innsbruck, Austria
11. International Scientific Committee of International Conference on Energy, Power and Electrical Engineering, EPEE 2016, Bangkok, Thailand

3.3. Awards

- 2 Gold Medals and 2 Silver Medal** at World Exhibition of Invention, Research and Industrial Innovation, Brussels, Belgium, EUREKA, 2001, 2004;
- Special Prize**, The First International Invention's Day Convention, Bangkok, Thailand, 2008;
- Gold Medal and Excellence Diploma** - 4th International Exhibition of New Technologies, Sevastopol, Ucraina, 2008;
- Bronze Medal** - 6th International Exhibition of Inventions, Suzhou, China, 2008;
- Gold Medal** - 4th International Warsaw Invention Show IWIS, 2010;
- Bronze Medal** - 2nd International Exhibition of Inventions in Slovenia, 2010;
- Diploma and Genius Medal** - 2nd International Invention Exhibition, Ljubljana, 2010;
- Bronze Medal** – 2nd World Cup of Computer Implemented Inventions, Kaohsiung, Taiwan, 2011;
- Gold Prize** – Seoul International Invention Fair, Korea, 2011
- Diploma of Excellence with Fair Medal – International Fair of Inventions and Practical Ideas, INVENT – INVEST, Iasi, Romania, 2015

3.4. Professional memberships

Member of Athens Institute for Education and Research – Electrical Engineering Research Unit;

Member of Fuse Club;

Member of Marie Curie Fellows Association (MCFA);

Member of Inventor's Association from Romania affiliated to International Federation of Inventor's Association (IFIA);

Marie Curie Alumni Association (MCAA);

Member of the Technical Committee TC 32/SC 32B (Low-voltage fuses) of International Electrotechnical Commission (IEC);

Member of the Technical Committee SR 32B (Low-voltage fuses) of European Committee for Electrotechnical Standardization (CENELEC)

3.5. Legal Technical Expert

Authorizations issued by the Ministry of Justice for the following specializations:

1. Electrical Engineering, Authorization No. 24429052013
2. Industrial Energetics, Authorization No. 44429052013
3. Energetics, Authorization No. 34429052013
4. Electroenergetics, Authorization No. 14429052013

24th March, 2016

Prof. Adrian Pleșca