

## LISTA DE LUCRĂRI

### A. Lista completă de lucrări

1. Ștefănescu, S., **Botezan, A.**, *Overview of the Protection Lightning Standards Suite EN/IEC 62305*, Proceedings of the International Conference and Exposition on Electrical and Power Engineering, EPE 2016, 20-22 October 2016, Iași, pp. 504-509, 2016;
2. **Botezan, A.**, Tîrnovan, R., Munteanu R., Graur, A., Rafiroiu D., *Hysteresis Current Control of the Single-Phase Voltage Source Inverter Using eMEGAsim Real-Time Simulator*, In Advances of Electrical and Computer Engineering, Volume 15, Number 3, ISSN 1582-7445, pp. 99-104, 2015;
3. **Botezan, A.**, Tîrnovan, R., Ștefănescu, S., Rafiroiu, D., *Solutions for Compensating Voltage Variation and Flicker in Electricity Distribution Networks*, In Acta Electrotehnica, Vol 56, No. 1-2, ISSN 1841-3323, pp. 57-63, 2015;
4. **Botezan, A.**, Tîrnovan, R., Boiciuc, I., Ștefănescu. S., Rafiroiu, D., *Automatic Transfer Switch using IEC 61850 Protocol in Smart Grids*, Proceedings of the International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, 2014;
5. **Botezan, A.**, Vădan, I., Ștefănescu, S., *Hysteresis Current Control of the Single-Phase Active Filter*, In Annals of the University of Craiova, Serie Electrical Engineering, Year 37, No. 37, ISSN 1842-4805, 2013;
6. **Botezan, A.**, Vădan, I., Ștefănescu, S., *Grid Connection of Small Hydropower Plant*, In Acta Electrotehnica, Vol 54, No. 5, ISSN 1841-3323, pp. 73-77, 2013;
7. Balan, H., Buzdugan, M.I., **Botezan, A.**, Munteanu, R.A., Karaissas, P., Psomopoulos, C., *Testing wind variable speed driving systems for conducted interferences*, In Proceedings of the 21st International Symposium on Power Electronics, Electrical Drives, Automation and Motion, SPEEDAM 2012, Sorrento, Italy, 20-22 June 2012;
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11. Onet, Oana, Tîrnovan, R., Breaz, Elena, **Botezan, A.**, *Fuzzy Logic Control of DC-DC Converter Used for Regulating of the PEM Fuel Cell Output Voltage*, In Acta Electrotehnica, Special Issue, Vol 52, No. 5, ISSN 1841-3323, 2011;
12. Chiorean, Cristina, Bălan, H., Buzdugan, M., **Botezan, A.**, Vădan, I., Karaissas, P., Vernados, P., *Reduction of the Current Distortion Factor of the Electromagnetic Vibrators Supplied at Variable Frequency*, International Symposium JapMed'7, Budapest, Hungary, 6-9 July 2011;
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15. Bălan, H., Buzdugan, M., **Botezan, A.**, Sasu, G., Munteanu, R.A., Duță, M., Iacob, Ana, *Testing Variable Speed Driving Systems for Conducted Interferences*, In Annals of the University of Craiova, Serie Electrical Engineering, No. 34, 2010, Vol. II, ISSN 1842-4805, Proceedings of 15th National Conference on Electrical Drives, CNAE 2010;
16. Bălan, H., **Botezan, A.**, Buzdugan, M., Karaissas, P., Duță, M., Iacob, Ana, *Real time simulation of Active Filters with EMEGASIM 4508 Platform-Case Study*, Annals of the University of Craiova, Serie Electrical Engineering, No. 34, 2010, Vol. II, ISSN 1842-4805, Proceedings of 15th National Conference on Electrical Drives, CNAE 2010;
17. Tîrnovan, R., Vădan, I., Bălan, H., **Botezan, A.**, Breaz, Elena, *Residential combined heat and power system based on proton exchange*, WEC Regional Symposium Foren 2010;
18. Vădan, I., Bălan, H., Tîrnovan, R., **Botezan, A.**, Mutu, Anca, *Hydrodynamic cavitation converter for wind energy – heat conversion*, WEC Regional Symposium Foren 2010;
19. Tîrnovan, R., Breaz, E., Vădan, I., Bălan, H., **Botezan, A.**, *Analysis of the Dynamic Performance of a Proton Exchange Membrane Fuel Cell Stack for Stand-Alone Applications*, Acta Electrotehnica, Special Issue, Vol 51, No. 5, ISSN 1841-3323, 2010;
20. Bălan, H., **Botezan, A.**, Ștefan, Elena, Cozorici, I., Chiorean, Cristina, Karaissas, P., *Pierderi prin comutatie la convertoarele din sistemele HVDC*, Simpozionul Național de Electrotehnica Teoretică, SNET'10, București, 3–4 December 2010;
21. **Botezan, A.**, Bălan, H., Micu, D.D., Avram, V., *Wave Reconstruction with Harmonic Analysis using Programmable Source CTS 15003 iX*, Simpozionul Național de Electrotehnica Teoretică, SNET'10, București, 3–4 December 2010;
22. **Botezan, A.**, Bălan, H., Tîrnovan, R., Vadan, I., Stefanescu, S., *Real Time Simulation of a Single-Phase Shunt Active Filter*, ACTA ELECTROTEHNICA, Special Issue, Vol 51, No. 5, ISSN 1841-3323, pp. 53-58, 2010;
23. **Botezan, A.**, Maier, V., Stefanescu, S., *Reference Current Estimation for Shunt Active Filter Control*, ACTA ELECTROTEHNICA, Special Issue, Vol 51, No. 5, ISSN 1841-3323, pp. 59-64, 2010;
24. Leach, Florina, Munteanu, R. A., Vădan, I., **Botezan, A.**, *LabView Based Instrumentation System for wind – hidro Power Station*, Proceedings of the XIV Conference Computer Applications in Electrical Engineering, Poznan, April 20-22, 2009;
25. Bălan, H., Vadan, I., Buzdugan, M., **Botezan, A.**, Karaissas, P., *EMI Filters Performances Analysis. Case Study.*, International Conference on EDPE, 12-14 October 2009, Dubrovnik, Croatia, 2009;
26. Balan, H., Munteanu, R., **Botezan, A.**, Balan, Anca, *Environment Management on Phonic Aspect of One Surgeon Room. A Case Study*, Proceedings of the 6<sup>th</sup> International Conference on Management of Technological Changes, 3-5 September 2009, Alexandroupolis, Greece, ISBN 978-960-89832-6-7, ISBN (Vol. 1) 978-960-89832-7-4, 2009;
27. **Botezan, A.**, Darie, S., Vadan, I., Balan, H., Tîrnovan, R., *Design and Analysis of a Permanent-Magnet Electrodynamic Vibrator*, Electromotion 2009-EPE Chapter ‘Electric Drives’ Joint Symposium, 1-3 July 2009, Lille, France, 2009;
28. Bălan, H., Buzdugan, M., Munteanu, R., Vădan, I., **Botezan, A.**, Ri cobon, A., *A Design Method for EMI Filters Mitigating Perturbations generated by a PWM Converter*, ICCEP 2009, 9-11 June, Capri, Italy, 2009
29. Bălan H., Munteanu R., Vădan I., **Botezan A.**, Nedelcut D., *Inverse Currents Injection Module for Direct Current Interrupters* International Symposium on Power Electronics,

- Electrical Drives, Automation and Motion SPEEDAM 2008 11-14 iun 2008 Ischia, Italia, ISBN 978-1-4244-1664-6, 2008;
30. Bălan H., Vădan I., Botezan A., Ștefănescu S., Karaissas P., *Vibro-Acoustic Diagnosis of a Ventilator Driving System* International Conference on Electrical Machines ICEM 2008, Vilamoura, Portugalia, 06-Sep 2008, ISBN 978-1-4244-1736-0, pp. 234-238, 2008;
  31. Vădan I., Pavel Gh. S., Botezan A., Ardelean Simona, Mutu Anca, *The Developing of a Scientific Renewable Energies Park*, ACTA ELECTROTEHNICA, Special Issue, Vol. 49, No. 5, ISSN 1841-3323, pp. 265-268, 2008;
  32. Tîrnovan R., Vădan I., Bălan H., Botezan A., *Energetic Balance of a Proton Exchange Membrane Fuel Cell (PEMFC) Generator*, ACTA ELECTROTEHNICA, Special Issue, Vol. 49, No. 5, ISSN 1841-3323, pp. 256-260, 2008;
  33. Balan, H., Vădan, I., Botezan, A., "Vibro-acoustic Diagnosis for Ventilators Driving System of UNIGLASS Equipment Type UGT-2400x4200" International Symposium on Progress in Electrical Equipment Monitoring and Diagnosis, SMDEE 2007, Baile Olanesti, 26-28 Noiembrie 2007, ISSN 1224-0575, 2007;
  34. Balan, H., Chindris, M., Vădan, I., Botezan, A., Proca, V., "Frequency Converter Energetic Performances Analysis", International Aegean Conference on Electrical Machines and Power Electronics, ACEMP'07 Electromotion'07 Joint Conference, 10-12 September, Bodrum, Turkey, 2007;
  35. Balan, H., Botezan, A., Vădan, I., Karaissas, P., Proca, V., "Analysis of Modern Techniques for Machining of Pieces with Cylindrical Symmetry" 11<sup>th</sup> International Research/Expert Conference" Trends in the Development of Machinery and Associated Technology" TMT 2007, Hammamet, Tunisia, 5-9 September 2007
  36. Balan, H., Botezan, A., Vădan, I., Tîrnovan, R., Proca, V., "Analysis of Inverter-Electromagnetic Vibrator System Used in Vibrocompacting Technology" 11<sup>th</sup> International Research/Expert Conference" Trends in the Development of Machinery and Associated Technology" TMT 2007, Hammamet, Tunisia, 5-9 September 2007
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  38. Vădan, I., Tîrnovan, R., Stefanescu, S., Botezan, A. “Mechanical Model of an Electric System”, Acta Electrotehnica, Vol. 47, No. 4, pp 187-192, 2006;
  39. Vădan, I., Tîrnovan, R., Balan, H., Botezan, A., “Motoare electrice de inalta eficienta”, Simpozionul International de Eficienta Energetica-editia a-V-a, 3-5 octombrie, Cluj Napoca, Romania, 2006, Sectiunea 4, pag. 213-219, 2006;
  40. Turcu, A.C., Balan, H., Chindris, M., Botezan, A., *Piezoelectric transducers in system of tools*, Buletinul științific al Conferinței internaționale TMT 2006, 11-15 septembrie, Barcelona, Spania, pag. 96, GRAFORAD Zenica, ISBN 9958-617-30-7, 2006;
  41. Balan, H., Tîrnovan, R., Botezan, A., Turcu, A., Karaissas, P., Balan, R., "Vibroacoustic Methods in the Diagnosis of the Electric Machines", Proceedings of XVII International Conference on Electrical Machines, September 2-5, Chania, Crete Island Greece, 2006;
  42. Darie, S., Bălan, H., Tîrnovan, R., Vădan, I., Botezan, A., "Tehnici de Testare a Sistemelor de Protecție, Control și Măsură Folosind Semnale Sintetizate", Simpozionul de Informatică în Energetică, Baia-Mare, 22-24 Noiembrie 2000, pag. 531-537, 2000;
  43. Tîrnovan, R., Munteanu, R., Bălan, H., Botezan, A., "Contribution to the Computer Aided Design for Magnetic-Abrasive Finishing Equipment", International Conference on Electrical Machines ICEM 2000 ESPOO Finland, 28-30 August 2000, pp 1975-1978, 2000;

44. Tirnovan, R., Munteanu, R., Bălan, H., **Botezan, A.**, Morosan, P., "Instrumentație Virtuală în Măsurarea și Analiza Mărimilor Electrice", Revista de Instrumentație Virtuală, Anul III, volumul III, nr. 3, Toamna 2000, pag. 73-78;
45. Tirnovan, R., Bălan, H., Munteanu, R., **Botezan, A.**, „Monitorizarea și Diagnosticarea Virtuală a Aparatelor Electrice de Comutație”, Revista de Instrumentație Virtuală, Anul III, volumul III, nr. 1, Primavara 2000, pag. 17-22;
46. Tirnovan, R., Bălan, H., **Botezan, A.**, „Analizor spectral superheterodină”, Simpozion CEM, 27-28 noiembrie 1999, București, pag. 72-75, 1999;
47. Darie, S., Vădan, I., Vădan, D., **Botezan, A.**, „Computer Aided Power System Constant Calculation”, Proceedings of the 2<sup>nd</sup> International Workshop Cad in Electromagnetism and Electrical Circuits, CADEMEC 99, 7-9 September 1999, Cluj-Napoca, Romania, pp 41-44, 1999;
48. Bălan, H., Hedeșiu, H., Tirnovan, R., **Botezan, A.**, „Instrumentație Virtuală în Tehnici de Diagnosticare a Mașinilor și Echipamentelor Electrice”, Simpozionul Național de Electrotehnică Craiova, 27-28 August 1999, pag. 247-250, 1999;
49. Vădan, I., Darie, S., Bălan, H., Tirnovan, R., **Botezan, A.** “*Electrodynamic Vibrators Optimal Design (EDV)*”, Proceedings of the 3<sup>rd</sup> International Symposium on Advanced Electromechanical Motion Systems, July 8-9, Patras, Greece, 1999, Vol II, pp 725-729, 1999;

#### B. Teza de doctorat

1. Îmbunătățirea calității energiei electrice la consumator utilizând sisteme active, conducător științific Prof. dr. ing. Virgil Maier.

#### C. Brevete de invenție și alte tipuri de proprietate industrială și intelectuală

#### D. Cărți și capitole în cărți

1. **Botezan A.**, Vădan I., Tirnovan R., Bălan H., *Producerea energiei electrice. Lucrări de laborator*. Editura UT PRESS, 2013, ISBN 978-973-662-826-9;
2. Bălan H., **Botezan A.**, Munteanu R.A., *Echipamente electrice*. Editura Mediamira, Cluj-Napoca, 2010, ISBN 978-973-713-282-6
3. Tirnovan R., Vădan I., Bălan H., **Botezan A.**, *Protecții prin relee în sistemele electroenergetice*. Curs. Editura UT PRESS Cluj-Napoca, 2008, ISBN 978-973-662-375-2;
4. Tirnovan, R., Balan, H., Dragan, S., **Botezan, A.**, *Producerea, transportul și distribuția energiei electrice – Încercarea echipamentelor electrice, Lucrari de laborator*, UT PRESS Cluj-Napoca 2003, ISBN 973-662-053-0.

#### E. Articole / studii în extenso, publicate în reviste din fluxul științific internațional principal

1. **Botezan, A.**, Tirnovan, R., Munteanu R., Graur, A., Rafiroiu D., *Hysteresis Current Control of the Single-Phase Voltage Source Inverter Using eMEGAsim Real-Time Simulator*, In Advances of Electrical and Computer Engineering, Volume 15, Number 3, ISSN 1582-7445, pp. 99-104, 2015;

2. **Botezan, A.**, Tîrnovan, R., Stefanescu, S., Rafiroiu, D., *Solutions for Compensating Voltage Variation and Flicker in Electricity Distribution Networks*, In Acta Electrotehnica, Vol 56, No. 1-2, ISSN 1841-3323, pp. 57-63, 2015;
3. **Botezan, A.**, Vădan, I., Stefanescu, S., *Hysteresis Current Control of the Single-Phase Active Filter*, In Annals of the University of Craiova, Serie Electrical Engineering, Year 37, No. 37, ISSN 1842-4805, 2013;
4. **Botezan, A.**, Vădan, I., Stefanescu, S., *Grid Connection of Small Hydropower Plant*, In Acta Electrotehnica, Vol 54, No. 5, ISSN 1841-3323, pp. 73-77, 2013;
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6. Oneț, Oana, Tîrnovan, R., Breaz, Elena, **Botezan, A.**, *Fuzzy Logic Control of DC-DC Converter Used for Regulating of the PEM Fuel Cell Output Voltage*, In Acta Electrotehnica, Special Issue, Vol 52, No. 5, ISSN 1841-3323, 2011;
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**F. Publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate**

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8. Bălan, H., Vadan, I., Buzdugan, M., **Botezan, A.**, Karaissas, P., *EMI Filters Performances Analysis. Case Study.*, International Conference on EDPE, 12-14 October 2009, Dubrovnik, Croatia, 2009;
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10. **Botezan, A.**, Darie, S., Vadan, I., Balan, H., Tirnovan, R., *Design and Analysis of a Permanent-Magnet Electrodynamic Vibrator*, Electromotion 2009-EPE Chapter ‘Electric Drives’ Joint Symposium, 1-3 July 2009, Lille, France, 2009;
11. Bălan, H., Buzdugan, M., Munteanu, R., Vădan, I., **Botezan, A.**, Ricobon, A., *A Design Method for EMI Filters Mitigating Perturbations generated by a PWM Converter*, ICCEP 2009, 9-11 June, Capri, Italy, 2009;
12. Bălan H., Munteanu R., Vădan I., **Botezan A.**, Nedelcut D., *Inverse Currents Injection Module for Direct Current Interrupters* International Symposium on Power Electronics, Electrical Drives, Automation and Motion SPEEDAM 2008 11 14 iun 2008 Ischia, Italia, ISBN 978-1-4244-1664-6, 2008;
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15. Balan, H., Chindris, M., Vădan, I., **Botezan, A.**, Proca, V., "Frequency Converter Energetic Performances Analysis", International Aegean Conference on Electrical Machines and Power Electronics, ACEMP'07 Electromotion'07 Joint Conference, 10-12 September, Bodrum, Turkey, 2007;
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18. Balan, H., **Botezan, A.**, Tirnovan, R., Vădan, I., Iacob, Ana „Inverter with hybrid commutation for DC-AC conversion systems” on IFAC workshop Convergence of Information Technologies and Control Methods with Power Plants and Power Systems ICPS'07, 9<sup>th</sup>-11<sup>th</sup> July, Cluj Napoca, Romania, 2007;
19. Vădan, I., Tirnovan, R., Balan, H., **Botezan, A.**, "Motoare electrice de inalta eficienta", Simpozionul International de Eficienta Energetica-editia a-V-a, 3-5 octombrie, Cluj Napoca, Romania, 2006, Sectiunea 4, pag. 213-219, 2006;
20. Turcu, A.C., Balan, H., Chindris, M., Botezan, A., Piezoelectric transducers in system of tools, Buletinul științific al Conferinței internaționale TMT 2006, 11-15 septembrie, Barcelona, Spania, pag. 96, GRAFORAD Zenica, ISBN 9958-617-30-7, 2006;
21. Balan, H., Tirnovan, R., **Botezan, A.**, Turcu, A., Karaissas, P., Balan, R., "Vibroacoustic Methods in the Diagnosis of the Electric Machines", Proceedings of XVII International Conference on Electrical Machines, September 2-5, Chania, Crete Island Greece, 2006;
22. Tirnovan, R., Munteanu, R., Bălan, H., **Botezan, A.**, "Contribution to the Computer Aided Design for Magnetic-Abrasive Finishing Equipment", International Conference on Electrical Machines ICEM 2000 ESPOO Finland, 28-30 August 2000, pp 1975-1978, 2000;
23. Darie, S., Vădan, I., Vădan, D., **Botezan, A.**, „Computer Aided Power System Constant Calculation”, Proceedings of the 2<sup>nd</sup> International Workshop Cad in Electromagnetism and Electrical Circuits, CADEMEC 99, 7-9 September 1999, Cluj-Napoca, Romania, pp 41-44, 1999;
24. Vădan, I., Darie, S., Bălan, H., Tirnovan, R., **Botezan, A.** "Electrodynamic Vibrators Optimal Design (EDV)", Proceedings of the 3<sup>rd</sup> International Symposium on Advanced Electromechanical Motion Systems, July 8-9, Patras, Greece, 1999, Vol II, pp 725-729, 1999;

#### G. Alte lucrări și contribuții științifice sau, după caz, din domeniul creației artistice

1. Tirnovan, R., Vădan, I., Bălan, H., **Botezan, A.**, Breaz, Elena, Residential combined heat and power system based on proton exchange, WEC Regional Symposium Foren 2010;
2. Vădan, I., Bălan, H., Tirnovan, R., **Botezan, A.**, Mutu, Anca, Hydrodynamic cavitation converter for wind energy – heat conversion, WEC Regional Symposium Foren 2010;

*Botezan*

3. Bălan, H., **Botezan, A.**, Ștefan, Elena, Cozorici, I., Chiorean, Cristina, Karaissas, P., *Pierderi prin comutatie la convertoarele din sistemele HVDC*, Simpozionul Național de Electrotehnică Teoretică, SNET'10, București, 3–4 December 2010;
4. **Botezan, A.**, Bălan, H., Micu, D.D., Avram, V., *Reconstructia formelor de undă prin analiză armonică utilizând sursa programabilă CTS 15003 iX*, Simpozionul Național de Electrotehnică Teoretică, SNET'10, București, 3–4 December 2010;
5. Darie, S., Bălan, H., Tîrnovan, R., Vădan, I., **Botezan, A.**, “*Tehnici de Testare a Sistemelor de Protecție, Control și Măsură Folosind Semnale Sintetizate*”, Simpozionul de Informatică în Energetică, Baia-Mare, 22-24 Noiembrie 2000, pag. 531-537, 2000;
6. Tîrnovan, R., Munteanu, R., Bălan, H., **Botezan, A.**, Morosan, P., ”Instrumentație Virtuală în Măsurarea și Analiza Mărimilor Electrice”, Revista de Instrumentație Virtuală, Anul III, volumul III, nr. 3, Toamna 2000, pag. 73-78;
7. Tîrnovan, R., Bălan, H., Munteanu, R., **Botezan, A.**, „Monitorizarea și Diagnosticarea Virtuală a Aparatelor Electrice de Comutație”, Revista de Instrumentație Virtuală, Anul III, volumul III, nr. 1, Primavara 2000, pag. 17-22;
8. Tîrnovan, R., Bălan, H., **Botezan, A.**, „Analizor spectral superheterodină”, Simpozion CEM, 27-28 noiembrie 1999, București, pag. 72-75, 1999;
9. Bălan, H., Hedeșiu, H., Tîrnovan, R., **Botezan, A.**, „Instrumentație Virtuală în Tehnici de Diagnosticare a Mașinilor și Echipamentelor Electrice”, Simpozionul Național de Electrotehnică Craiova, 27-28 August 1999, pag. 247-250, 1999;

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*Botezan*

## LISTA DE LUCRĂRI REPREZENTATIVE

1. **Botezan, A.**, Tirnovan, R., Munteanu R., Graur, A., Rafiroiu D., *Hysteresis Current Control of the Single-Phase Voltage Source Inverter Using eMEGAsim Real-Time Simulator*, In Advances of Electrical and Computer Engineering, Volume 15, Number 3, ISSN 1582-7445, pp. 99-104, 2015;
2. **Botezan, A.**, Tirnovan, R., Stefănescu, S., Rafiroiu, D., *Solutions for Compensating Voltage Variation and Flicker in Electricity Distribution Networks*, In Acta Electrotehnica, Vol 56, No. 1-2, ISSN 1841-3323, pp. 57-63, 2015;
3. **Botezan, A.**, Tirnovan, R., Boiciuc, I., Stefănescu. S., Rafiroiu, D., *Automatic Transfer Switch using IEC 61850 Protocol in Smart Grids*, Proceedings of the International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, 2014;
4. **Botezan, A.**, Vădan, I., Stefănescu, S., *Hysteresis Current Control of the Single-Phase Active Filter*, In Annals of the University of Craiova, Serie Electrical Engineering, Year 37, No. 37, ISSN 1842-4805, 2013;
5. **Botezan, A.**, Vădan, I., Stefănescu, S., *Grid Connection of Small Hydropower Plant*, In Acta Electrotehnica, Vol 54, No. 5, ISSN 1841-3323, pp. 73-77, 2013;
6. **Botezan, A.**, Bălan, H., Micu, D.D., Avram, V., *Reconstructia formelor de undă prin analiză armonică utilizând sursa programabilă CTS 15003 iX*, Simpozionul Național de Electrotehnică Teoretică, SNET'10, București, 3–4 December 2010;
7. **Botezan, A.**, Bălan, H., Tirnovan, R., Vădan, I., Stefanescu, S., *Real Time Simulation of a Single Phase Shunt Active Filter*, ACTA ELECTROTEHNICA, Special Issue, Vol 51, No. 5, ISSN 1841-3323, pp. 53-58, 2010;
8. **Botezan, A.**, Maier, V., Stefanescu, S., *Reference Current Estimation for Shunt Active Filter Control*, ACTA ELECTROTEHNICA, Special Issue, Vol 51, No. 5, ISSN 1841-3323, pp. 59-64, 2010;
9. Balan, H., Chindris, M., Vădan, I., **Botezan, A.**, Proca, V., “*Frequency Converter Energetic Performances Analysis*”, International Aegean Conference on Electrical Machines and Power Electronics, ACEMP'07 Electromotion'07 Joint Conference, 10-12 September, Bodrum, Turkey, 2007;
10. Balan, H., **Botezan, A.**, Tirnovan, R., Vădan, I., Iacob, Ana „*Inverter with hybrid commutation for DC-AC conversion systems*” on IFAC workshop Convergence of Information Technologies and Control Methods with Power Plants and Power Systems ICPS'07, 9<sup>th</sup>-11<sup>th</sup> July, Cluj-Napoca, Romania, 2007;

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## LISTA CONTRACTELOR DE CERCETARE

### **Director contract de cercetare**

1. Managementul distribuție energiei electrice în sisteme descentralizate funcționând pe principiile economiei de piață, TD 83 / 2008, Perioada de desfășurare 2008-2009, Director de contract șef. lucr. dr. ing. Aurel Botezan

### **Membru contracte de cercetare**

1. Centru de cercetare pentru testarea, diagnosticarea și monitorizarea echipamentelor electrice din sistemele electroenergetice cu eficiență energetică ridicată. Contract PN II – Capacități nr. 87/2007, perioada: 2007-2009, Beneficiar: ANCS, director proiect prof. dr. ing. Horia Bălan;
2. Tehnici și strategii de comanda, control și proiectare a filtrilor active utilizate în rețele electrice poluate. Contract UTCN 24/2007, perioada: 2006-2009, beneficiar: CNCSU Ministerul Educației, director proiect prof. dr. ing. Horia Bălan;
3. Cercetări privind realizarea de tehnologii ecologice, pe baza vibrațiilor induse magnetostrictiv, în vederea reducerii consumurilor energetice. PN II, Contract nr. 21-059; perioada: 2007-2010, beneficiar: ANCS, responsabil contract partener P II, prof. dr. ing. Horia Bălan;
4. Contract Parteneriate Nr. 21-062/1/18.09.2007, Structură energetică hibridă hidro-elicitară. Modelare și tuning pe stație pilot – HIDROEOL, perioada 2007-2010, responsabil contract UTCN prof dr. ing. Ioan Vădan

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