

List of publications

1° Habilitation Thesis

Contributions Concerning the Use of Artificial Intelligence Techniques in the Supervision and Control of Power Systems

2° PhD Thesis

New techniques in the supervisory and control of power systems, 2005

3° Books/Chapter Books

International Publishing House

1. **Gheorghe Grigoraş**, Ovidiu Ivanov, Bogdan-Constantin Neagu, Pragma Kar, *Smart Metering Based Strategies for Improving Energy Efficiency in Microgrids*, chapter in the book "Microgrid Architectures, Control and Protection Methods, Editors: Naser Mahdavi Tabatabaei, Ersan Kabalci, Nicu Bizon, Springer International Publishing, Switzerland, 2020, ISBN: 978-3-030-23723-3.
2. **Gheorghe Grigoraş**, Bogdan-Constantin Neagu, Ovidiu Ivanov, Florina Scarlatache, *Smart Meter Data-based Strategies in the Optimal Operation of Electric Distribution Systems*, Lambert Academic Publishing, Riga, Lithuania, 2019, ISBN: 978-620-0-50306-0.
3. Bogdan-Constantin Neagu, **Gheorghe Grigoraş**, Ovidiu Ivanov, *The Optimal Operation of Active Distribution Networks with Smart Systems*, chapter in the book "Advanced Communication and Control Methods for Future Smartgrids", Editor: Taha Selim Ustun, IntechOpen, London, UK, 2019, ISBN: 978-1-78984-105-3.
4. **Gheorghe Grigoraş**, *Impact of smart meter implementation on saving electricity in distribution networks in Romania*, Chapter in the book "Application of Smart Grid Technologies. Case Studies in Saving Electricity in Different Parts of the World", Editors: Lisa Ann Lamont Ali Sayigh, Elsevier, Academic Press, Londra, UK, 2018, ISBN: ISBN 978-0-12-803128-5.
5. **Gheorghe Grigoraş**, *Electrical Energy Consumption Forecasting to Improve Energy Efficiency of Water Distribution Systems*, Chapter in the book: "Energy Harvesting and Energy Efficiency. Technology, Methods, and Applications", Editors: Nicu Bizon, Naser Mahdavi Tabatabaei, Frede Blaabjerg, Erol Kurt, Springer International Publishing, Switzerland, 2017, ISBN: 978-3-319-49874-4.
6. Florina Scarlatache, **Gheorghe Grigoraş**, *Impact of the Distributed Generation on Optimal Operation and Planning of the Electrical Networks*, Chapter in the book: "Distributed Generation. Systems, Performance and Emerging Technologies", Editor Tao Lin, Nova Science Publishers, USA, 2017, ISBN: 978 -1 – 53611-074-6.
7. Bogdan-Constantin Neagu, **Gheorghe Grigoraş**, *The Assessment of Power Quality in Electric Distribution Systems from Romania*, Chapter in the book "Advances in Energy Research", Editor Morena J. Acosta, Nova Science Publishers, USA, 2017, ISBN: 978-1-53612-699-0.
8. **Gheorghe Grigoraş**, Florina Scarlatache, Bogdan-Constantin Neagu, *Clustering in Power Systems. Applications*, Lambert Academic Publishing, Germany, 2016, ISBN: 978-3-330-01545-6.
9. **Gheorghe Grigoraş**, Gheorghe Cartina, *The impact of the Fuzzy Modeling in Electric Distribution Systems. Applications*, Lambert Academic Publishing, Germania, 168 pg., 2011, ISBN: 978-3-8473-2793-6.
10. **Gheorghe Grigoraş**, Gheorghe Cartina, Elena-Crenguta Bobric, *Trends and Directions for Energy Saving in Electric Networks – capitol in cartea Management of Technological Innovation in Developing and Developed Countries*, Ed. HongYI Sun, Editura Intech, Croatia, pp. 3 – 27, 2012, ISBN : 978-953-51-0365-3

National Publishing House (in Romanian)

1. **Gheorghe Grigoraş**, *Control of Power Systems using Artificial Intelligence Techniques*, PIM Publishing House, Iaşi, 2019, ISBN: 978-606-13-5339-2.
2. **Gheorghe Grigoraş**, *Optimization in Power Systems. Practical Applications*, PIM Publishing House, Iaşi, 2017, ISBN: 978-606-13-4053-8.

2. **Gheorghe Grigoraș**, Scarlatache Florina, *Numerical Methods. Practical Applications* PIM Publishing House, Iași, 2014, ISBN: 978-606-13-2143-8.
3. **Gheorghe Grigoraș**, *Numerical Methods. Applications in Matlab. Vol. II*, PIM Publishing House, Iași, 2012, ISBN: 978-606-13-0770-8.
4. **Gheorghe Grigoraș**, *Numerical Methods. Applications in Matlab, Vol. I*, PIM Publishing House, 2010, ISBN: 978-606-13-0175-1.
5. **Gheorghe Grigoraș**, Gheorghe Cartina, Elena Crenguta Bobric, *Supervisory, Control, and Data Acquisition Systems* SETIS Publishing House, Iași, 2009, ISBN: 978-606-92041-3-9.
6. Elena Crenguta Bobric, Gheorghe Cartina, **Gheorghe Grigoraș**, *Optimization Techniques in Power Engineering*, Didactică și pedagogică Publishing House, București, 2008, ISBN 978-973-30-2425-5.
7. Mihai Gavrilas, Gheorghe Cartina, Virgil Alexandrescu, Ovidiu Ivanov, **Gheorghe Grigoraș**, *Load Modelling in Electric Networks, Vol. I*, PIM Publishing House, Iași, 2007, ISBN: 978-973-716-433-4.
8. Mihai Gavrilas, Gheorghe Cartina, Virgil Alexandrescu, Ovidiu Ivanov, **Gheorghe Grigoraș** *Load Modelling in Electric Networks, Vol. II*, Cermi Publishing House, Iași, 2007, ISBN 978-973-667-315-3.
9. Mircea Eremia, Gheorghe Cartina, Dragos Petricică, Ion Bulac, Constantin Bulac, Ion Trîștiu, **Gheorghe Grigoraș**, *Artificial Intelligence Techniques in the Control of Power Systems*, AGIR Publishing House, București, 2006, ISBN: 973-160-106-X.
10. Gheorghe Cartina, **Gheorghe Grigoraș**, Elena Crenguta Bobric, *Clustering Techniques in Fuzzy Modelling. Applications in Power Systems*, VENUS Publishing House, Iași, 2005, ISBN: 973-7960-86-6.
11. Gheorghe Cartina, **Gheorghe Grigoraș**, *Artificial Intelligence Techniques in Power Systems*, Editura SETIS, Iași, 2004, ISBN: 973-86764-4-4.
12. Gheorghe Cârțină G., Yong-Hua Song, **Gheorghe Grigoraș**, *Optimal Operation and Planning of Power Systems*, Casa de Editură VENUS, Iași, 2003, ISBN: 973-7960-09-2.
13. Gheorghe Cârțină, **Gheorghe Grigoraș**, *Modern Optimization Techniques. Applications in Power Systems*, Venus Publishing House, Iași, 2002, ISBN: 973-8174-80-5.
14. Gheorghe Cartina, **Gheorghe Grigoraș**, *Artificial Intelligence. Optimization in Power Systems*, Casa de Editură VENUS, Iași, 2001, ISBN: 973-8174-22-8.

4° Articles in journals indexed WoS

1. Bogdan-Constantin Neagu, Ovidiu Ivanov, **Gheorghe Grigoras**, Mihai Gavrilas, *A New Vision on the Prosumers Energy Surplus Trading Considering Smart Peer-to-Peer Contracts*, Mathematics, Vol. 8, 235, 2020, ISSN 2227-7390.
2. **Gheorghe Grigoras**, Bogdan-Constantin Neagu, *Smart Meter Data-Based Three-Stage Algorithm to Calculate Power and Energy Losses in Low Voltage Distribution Networks*, Energies, Vol. 12(15), 3008, 2019, ISSN 1996-1073.
3. Avishek Banerjee, Samiran Chattopadhyay, **Gheorghe Grigoraș**, Mihai Gavrilas, *Minimization of reliability indices and cost of power distribution systems in urban areas using an efficient hybrid meta-heuristic algorithm*, Soft Computing, vol. 23, no. 4, pp. 1257 – 1281, 2019, ISSN: 1432-7643.
4. Ovidiu Ivanov, Bogdan-Constantin Neagu, **Gheorghe Grigoras**, Mihai Gavrilas, *Optimal Capacitor Bank Allocation in Electricity Distribution Networks Using Metaheuristic Algorithms*, Energies, vol. 12, 4239, 2019, ISSN 1996-1073.
5. V. Postolaty, V. Berzan, E. Bykova, V. Bosneaga., V. Suslov, I. Ermurachi, **Gheorghe Grigoras**, M. Gavrilas, M. Istrate, *Estimation of Power Exchange through 110 kV Overhead Power Lines at the Interface of the Romanian and Moldovan Power Systems*, Problemele Energeticii Regionale, vol 2 (37), pp. 46 – 61, 2018, ISSN 1857-0070.
6. **Gheorghe Grigoraș**, Florina Scarlatache, *An assessment of the renewable energy potential using a clustering based data mining method. Case study in Romania*, Energy, Volume 81, pp. 416–429, 2015, ISSN: 0360-5442.
7. **Gheorghe Grigoraș**, Elena-Crenguța Bobric, *Clustering Based Approach for Customers' Classification From Electrical Distribution Systems*, U.P.B. Sci. Bulletin, Series C, Vol. 77, Nr. 2, pp. 219-226, 2015, ISSN : 2286-3540.
8. **Gheorghe Grigoraș**, Cecilia Barbulescu, *Human errors monitoring in electrical transmission networks based on a partitioning algorithm*, International Journal of Electrical Power and Energy Systems, vol. 49, pp. 128–136, 2013, ISSN: 0142-0615.
9. **Gheorghe Grigoraș**, Gheorghe Cârțină, *The fuzzy correlation approach in operation of electrical distribution systems*, The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, Vol. 32, Nr. 3, pp. 1044-1066, 2013, ISSN: 0332-1649.

10. Florina Rotaru, Gianfranco Chicco, **Gheorghe Grigoraș**, Gheorghe Cârțină, *Two-stage distributed generation optimal sizing with clustering-based node selection*, International Journal of Electrical Power & Energy Systems, Vol. 40, Nr. 1, pp. 120–129, 2012, ISSN: 0142-0615
11. **Gheorghe Grigoraș**, Gheorghe Cârțină, Elena Crenguța Bobric, *Strategies for Power/Energy Saving in Distribution Networks*, Advances in Electrical and Computer Engineering, Vol. 10, Nr. 2, pp. 63 - 66, 2010, ISSN: 1582 – 7445.
12. Marcel Istrate, **Gheorghe Grigoraș**, *Energy Consumption Estimation in Water Distribution Systems using Fuzzy Techniques*, Environmental Engineering and Management Journal, Vol. 9, Nr. 2, pp. 249 – 256, 2010, ISSN: 1582 – 9596.
13. Elena Crenguța Bobric, Gheorghe Cârțină, **Gheorghe Grigoraș**, *Clustering Techniques in Load Profile Analyze for Distribution Stations*, Journal of Advances in Electrical and Computer Engineering, Nr.1, pp. 63 – 66, 2009, ISSN: 1582 – 7445.
14. Elena Crenguța Bobric, Gheorghe Cârțină, **Gheorghe Grigoraș**, *Fuzzy Techniques used for Energy Losses Determination in Medium and Low Voltage Networks*, Journal of Electronics and Electrical Engineering, Nr. 2, pp. 95 – 98, 2009, ISSN: 1392 – 1215.

5° Articles in journals indexed in other international databases

1. Bogdan-Constantin Neagu, Ovidiu Ivanov, **Gheorghe Grigoras**, Mihai Gavrilas, *Short Term Load Forecast Approach Based on Artificial Neural Networks*, Bulletin of the Polytechnic Institute of Iași, vol. 65(69), no. 2, pag. 9 – 21, 2019, ISSN 1223-8139.
2. Bogdan-Constantin Neagu, **Gheorghe Grigoraș**, *The Assessment of Power Quality in Electric Distribution Systems from Romania*, Advances in Energy Research, vol. 28, pp. 157 – 211, 2017, ISBN: 978-1-53612-699-0 (Scopus).
3. Mihai Gavrilas, **Gheorghe Grigoraș**, Mihaela Cazacu, Ovidiu Carp, Ioan Andrei, *Reducing Active Energy Losses in Low Voltage Distribution Grids*, Journal of Sustainable Energy Vol. 8, No. 3, pp. 113 – 120, 2017, ISSN 2067-5534.
4. **Gheorghe Grigoraș**, Mihai Gavrilas, Florina Scarlatache, Mihaela Cazacu, Mihaela Cosarca, *Assessing Energy Losses in Unbalanced Low Voltage Electric Distribution Networks*, Energetica, Vol. 64, Nr. 2, pp. 53 – 59, 2016.
5. **Gheorghe Grigoraș**, Mihai Gavrilas, Stelian Buliga, Cătălin Strugaru, *Solutions Regarding the Efficient Use of Transformers in Electric Distribution Networks*, Energetica, Vol. 63, Nr. 4, pp. 145 – 149, 2015, ISSN: 1453-2360, 2015.
6. Mihai Gavrilas, **Gheorghe Grigoraș**, Stelian Buliga, Cătălin Strugaru, *Influence of Renewable Sources Integration on Technical Energy Losses in High Voltage Distribution Networks*, Energetica, Vol. 63, Nr. 4, pp. 139 – 144, 2015, ISSN: 1453-2360.
7. Bogdan Neagu, **Gheorghe Grigoraș**, Florina Scarlatache, *Load Management in Distribution Systems with Smart Metering*, Energetica, Vol. 63, Nr. 4, pp. 150 – 156, 2015, ISSN: 1453-2360.
8. **Gheorghe Grigoraș**, Bogdan-Constantin Neagu, *Market Clearing Price Forecasting in Deregulated Electricity Markets Using a Fuzzy Approach*, Acta Electrotehnica, Vo. 56, Nr. 3, pp. 113-116, 2015, ISSN : 1841-3323.
9. Bogdan-Constantin Neagu, **Gheorghe Grigoraș**, *Data Mining Tools in Electricity Distribution Systems*, Acta Electrotehnica, Vol. 56, Nr. 3, pp. 209-212, 2015, ISSN : 1841-3323.
10. **Gheorghe Grigoraș**, *Assessment of Electrical Load in Water Distribution Systems Using Representative Load Profiles-Based Method*, Advances in Electrical Engineering, vol. 2014, Article ID 865621, 10 pages, 2014. doi:10.1155/2014/865621, ISSN: 2356-6655, ISSN: 2314-7636 (Online).
11. Florina Scarlatache, **Gheorghe Grigoraș**, Bogdan-Constantin Neagu, *The Impact Of Distributed Generation On The Voltage Control In Electrical Distribution Networks*, Energetica, Vol. 62, nr. 3, pp. 105 – 110, 2014, ISSN: 1453-2360.
12. **Gheorghe Grigoraș**, Mihai Gavrilas, *Maximum Load Estimation of Consumers in Low Voltage Networks Using a Clustering Techniques Based Method*, Energetica, Vol. 62, Nr. 3, pp. 90 – 94, 2014, ISSN: 1453-2360.
13. Florina Scarlatache, **Gheorghe Grigoraș**, *A Wind Energy Profiling Method Based On Unsupervised Learning Techniques*, Buletinul Institutului Politehnic din Iasi, Secția: Electrotehnică, Energetică, Electronică, Tomul LX (LXIV), Fasc. 2, pp. 9-17, 2014, ISSN 1223-8139.
14. **Gheorghe Grigoraș**, Florina Scarlatache, Cecilia Bărbulescu, *Optimal power flow analysis using the correlation method for estimation of nodal loads*, Acta Electrotehnica, vol. 54, no. 5, 2013, pp. 208 – 2012, 2013, ISSN : 1841-3323.
15. **Gheorghe Grigoraș**, Florina Scarlatache, Cecilia Bărbulescu, *Analysis of incidents caused by human factor in transmission power grids*, Acta Electrotehnica, vol. 54, no. 5, 2013, pp. 204 – 2007, 2013, ISSN : 1841-3323.

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17. **Gheorghe Grigoraș**, Florina Scarlatache, *Clustering to Peak Load Estimation in Transformer Substations from Electric Distribution Systems*, Buletinul Institutului Politehnic din Iasi, Secția: Electrotehnică, Energetică, Electronică, Tomul LIX (LXIII), Fasc. 3, pp. 141-149, 2013, ISSN 1223-8139.
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19. Florina Scarlatache, **Gheorghe Grigoraș**, *An Approach Regarding the Placement of Distributed Generation Sources in Electric Distribution Systems using Hurwitz Criterion*, Buletinul Institutului Politehnic din Iasi, Seria Electrotehnica, Energetica, Tomul LVIII(LXII), No. 4, pp 109 - 117, 2012, ISSN: 1223-8139.
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20. Florina Scarlatache, **Gheorghe Grigoraș**, Gheorghe Cârțină, *Using of Clustering Techniques for Placement of Distributed Generation Sources in Electrical Distribution Systems*, Buletinul AGIR, No. 3, pp. 1 - 6, 2012. ISSN: 2247-3548.
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24. Virgil Alexandrescu, Gheorghe Cârțină, **Gheorghe Grigoraș**, *On Distribution Network Operation Analysis*, Buletinul Institutului Politehnic din Iasi, Seria Electrotehnica, Energetica, Tomul LVIII(LXII), No. 1, pp. 105 – 114, 2012, ISSN : 1223-8139.
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36. Gheorghe Cârțină, **Gheorghe Grigoraș**, Elena-Crenguța Bobric, *Opportunities to conserve energy right from distribution installations*, Buletinul U.P.B, Series C, Vol. 72, No. 1, pp. 81 – 90, 2010, ISSN (print): 2286-3540.
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39. Virgil Alexandrescu, Gheorghe Cârțină, **Gheorghe Grigoraș**, *On Power Flow Problem of Distribution Networks Under Condition of Lack Of Information*, Buletinul Institutului Politehnic Iași, Seria: Electrotehnică, Energetică, Electronică, Tomul LVI (LX), Fasc. 2, pp. 77 – 87, 2010, ISSN 1223-8139.
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