



Curriculum vitae Europass

CURRICULUM VITAE



Personal information

First name(s) / Surname(s)

Address(es)

Telephone(s)

Fax(es)

E-mail

Nationality

Date of birth

Gender

Horia Leonard Andrei

Home address: 43, Blvd. Nicolae Grigorescu, Bl. D1, Sc. A, ap.2, sector 3, 030443, Bucharest, Romania

Residence address: 1, Plaiului str., Moreni, 135300, Dambovita, Romania

Office address: 13, Aleea Sinaia, Targoviste, 130004, Dambovita, Romania

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Romania

May 15th 1954

Male

Desired employment / Occupational field

Work experience

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Type of business or sector

1979-1982

SC ROMLUX SA, Targoviste, Romania

Industrial activity, design of electric equipments, and control systems

Trainee Engineer

Maintenance and design of electric equipments, control systems

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Type of business or sector

1982-1991

Assistant

Teaching and research

University Politehnica of Bucharest, Romania, Department of Electrotechnics

University (Academic)

Seminars, laboratory: Fundamentals of Electrotechnics, Electrical drives;

Courses: Fundamentals of Electrotechnics, Industrial Electronics.

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Type of business or sector

1991-1999

Lecturer

Teaching and research

University Politehnica of Bucharest, Romania, Department of Electrotechnics

University (Academic)

Seminars and laboratory: Fundamentals of Electrotechnics, Electrical drives;

Courses: Fundamentals of Electrotechnics, Electrotechnics and Electrical Drives, Industrial Electronics.

Dates 1999-2002
Occupation or position held Assistant professor
Main activities and responsibilities - Teaching and research;
- Academic Advisor or Co-Advisor of over 20 Final Theses for the License and MSc degree in Electrical Engineering since 1999.
Name and address of employer University Politehnica of Bucharest, Romania, Department of Electrotechnics
Type of business or sector University (Academic)
Seminars and laboratory: Fundamentals of Electrotechnics, Electrical drives;
Courses: Fundamentals of Electrotechnics, Electrotechnics and Electrical Drives.

Dates 2000- present
Occupation or position held Professor at University Valahia of Targoviste, Doctoral School of Engineering Sciences;
Supervisor (Tutor) of PhD candidates in Electrical Engineering 2010- present;
Head of Electrotechnical Department 2000-2004, Vice-Dean of Electrical Engineering Faculty 2004-2008, Vice-Director of Automatics, Informatics and Electrical Engineering Department 2008-2012.
Main activities and responsibilities - Teaching and research;
- Academic Advisor of over 100 Final Thesis for the License and MSc degree in Electrical Engineering since 1998;
- Member of over 30 Final degree Examination Commission for the Electrical Engineering PhD (Doctorate) since 2000.
Name and address of employer University Valahia of Targoviste, Bd. Carol I, Nr. 2, 130024, Targoviste, Dambovita, Romania
Type of business or sector University (Academic), teaching and research activities.

Education and training

Dates 1969-1973
Title of qualification awarded Baccalaureate degree
Principal subjects/occupational skills covered Learning activities
Name and type of organisation providing education and training Theoretical High School no. 1 of Moreni, Dambovita, Romania
Level in national or international classification High school graduate

Dates 1974-1979
Title of qualification awarded MSc (Engineer Diploma) in Control Systems and Computer Science
Principal subjects/occupational skills covered Learning and research activities
Name and type of organisation providing education and training Faculty of Control Systems and Computer Science, University (Institute) Politehnica of Bucharest, Romania
Level in national or international classification MSc (Engineer Diploma)

Dates 1996
Title of qualification awarded PhD in Electrical Engineering
Principal subjects/occupational skills covered Teaching and research activities
Name and type of organisation providing education and training Faculty of Electrotechnics (Electrical Engineering), University Politehnica of Bucharest, Romania
Level in national or international classification PhD

Personal skills and competences

Other language(s)

Self-assessment

European level (*)

Language-English

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
Very Good	Very Good	Very Good	Very Good	Very Good

Language-French	Very Good	Very Good	Very Good	Very Good	Very Good e
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Social skills and competences	Many friends, sociable
Organisational skills and competences	Ability to work in team, administrative and management competences
Technical skills and competences	Very good didactical and research competences; technical skills: CAD and CADDY++ applications
Computer skills and competences	Microsoft Office, Basic, Pascal, C++, SPICE, PSPICE, Matlab/Simulink, LabVIEW
Artistic skills and competences	Music and painting
Other skills and competences	Competences in mathematics and physics
Driving licence	B

Additional information

1. Specializations and qualifications:

- Graduate of the PHARE program RO9807.01.01.02.0030 "Getting Started in Project Management" at University Politehnica of Bucharest, Romania;
- Trainer accreditation CPI-SA technique for teaching and knowledge of computer science;
- European Computer Driving Licence - ECDL RO 007634

2. Research activity - Experience (including managerial experience) in national and international projects:

- **40 (32 / 8)** national/international projects, in *13* of them I have been director or responsible;
- 1 H2020, 1 IEE, 2 FP7 and 4 COST proposals.

3. Publications:

- I have published a total number / first author of *327 / 164* papers and articles in international and national journals and in the proceedings of international scientific conferences;
- *195 / 87* of them are published in journals and conferences proceedings indexed by **ISI Web of Science-WoS (59/24), and SCOPUS (136/63)**;
- I have published a total number / first author of *53 / 31* books, chapters of books and technical monographs;
- More than **600 citations** in books and articles, including **228 citations in ISI WoS and SCOPUS**;
- **WoS h-index 10; Google Scholar h-index 14, i10-index 18; Scopus h-index 10.**

4. Member of professional associations:

- **Senior Member IEEE** (Institute of Electric and Electronic Engineering): Circuits and Systems (CAS) Society since 2012 (Membership since 2006), IEEE Broadcast Technology Society Membership since 2011;
- **AGIR** (General Association of Romanian Engineers), since 2014;
- **AMSE** (Association for the Advancement of Modeling and Simulation techniques in Enterprises) since 1986;
- **WSEAS** (World Scientific and Engineering Academy and Society), since 2005;
- **SIEAR** (Romanian Electrical Installations and Automatization Engineers Society) since 2001;
- **AIEER** (Romanian Electrical and Electronical Engineers Society) since 2003;
- **SRR** (Romanian Society of Robotics), since 2006.

5. International experience, national and international recognition:

- *Visiting Professor* : University of Rouen, France, 2005, Politecnico di Torino, Italy, 2006, 2007, 2009, 2014; University College of Engineering – Copenhagen, Denmark, 2010, under the Socrates/Erasmus Staff Exchange Programme;

- *Reviewer of the international journals indexed by ISI Web of Science*: "AA-Acta Astronautica", „MSB-Materials Science and Engineering B", „JPROCONT-Journal of Process Control" and „APEN-Applied Energy" - Elsevier Editorial System; „Journal of Electrical and Electronics Engineering Research-JEER"; „IEEE - Transactions on Industrial Electronics (TIE)"; „IEEE - Transactions on Very Large Scale Integration Systems (TVSLI), AKTA-IMEKO;

- *Reviewer of the national journals*: "The Scientific Bulletin of Electrical Engineering Faculty", "Journal of Electrical and Electronics Engineering", "Electrotechnics, Electronics and Control Systems – EEA" indexed by Romanian CNCSIS with classification B+ and by Index Copernicus – Master Journal List;

- *Editor in chief of the journal* "The Scientific Bulletin of Electrical Engineering Faculty-SBEEF"; Co-Chief Editor of the "Journal of Electrical Engineering, Electronics, Control and Computer Science-JEECCS";

- *Expert of European IEE-EACI – Programme*;

- *Invited presentation/paper* : WSEAS Bucharest 2006 and Rhodos 2008, IEEE-ECAI Pitesti 2010, EW-DGSRES Pitesti 2012;

- *National evaluator-expert* of the research proposals for: PNCDI, CE-EX, RELANSIN, CNCISIS, CERES, AMCSIT;

- *Chairmen of conferences*: ISEM 2000 Univ. Valahia Targoviste; ISEE 2001, 2002, 2003, 2004, 2005, 2007, 2009, 2011 Univ. Valahia Targoviste; WSEAS 2006 Bucharest, WSEAS 2008 Rhodos; WESC 2010 Targoviste;

- *Member of the Conferences Scientific/Organizing/Program Committee, Reviewer*: RJJSAEM 2001, Univ. Oradea; METSIM 2002, 2003, 2005 University Politehnica Bucharest (UPB); IEEE-EMES 2004, 2005, 2009, 2011, 2013, 2015-Univ. Oradea; SNET 2004, 2005, 2007, 2009, 2012 UPB; IEEE-ATEE 2004, 2006, 2008, 2010, 2012 UPB; GSP 2005 UPB; IEEE-ECAI – 2010, 2011, 2013, 2014, 2015 Univ. Pitesti; WESC – 2004 Oradea, 2006 Torino, 2008 Iasi, 2012 Suceava; IEEE-INDIN Viena 2007; WSEAS –Lisabona and Bucharest, 2006, Istanbul, and Creta 2007, Rhodos 2008; 11th Int. Conf. on Microwave and high Frequency Heating (Ampere Conf), 2007 Oradea; JAPMED 2009, 2011; IEEE-EEIC Roma, 2011,2015, Venice-Athens 2012, Wroclaw 2013; IEEE-MELECON 2012, Tunis; IEEE-PES-DEMSEE 2012, Bucharest; EW-DGSRES Pitesti 2012; IEEE-ISCAS 2016;

- *Award and Honors*: Included in “Who’s Who in the World - Who’s Who in Science and Engineering”, VIP Number 32846430 since 2008, pp. 77; Included in “The IBC Leading Engineers of the World 2008”, International Biographical Centre, Cambridge, England; I received “Diploma of Excellence” from the 13-th National Inventions Conference, Iasi, Romania, 4-6 June, 2009; Nominee at ENI Award in 2010, 2011; I received „Diploma of Excellence” from University „Stefan cel Mare” of Suceava, Romania, 28 June 2012; I received the grade of Senior Member IEEE, Oct. 2012; I received „Certificate of Excellence” from Romanian National Commission for UNESCO, 30 Oct. 2012; I received from Elsevier – Journal of Applied Energy - APEN „Outstanding Reviewer of 2012 Awarded to Horia Andrei for Exceptional Contribution to the Quality of the Journal of Applied Energy-APEN”, „APEN-Certificate of Reviewing-awarded April, 2015” ; Applied Energy (IF 7.182) – Awards of Best Reviewers (2016), Springer Nature Award „Energy, Ecology, Environment Applied Energy – 2018 Outstanding Reviewers for Exceptional Contributions of their Reviews to the Journal”.

- *Co-Guest Editor* of Special issue of *Energy Journal* (ISI Web of Science, ISSN 0360-044) dedicated to a selection of scientific papers presented at the 8th World Energy System Conference (WESC), Targoviste, 2010.

I. Publications - most important articles/papers in Journals and Conference Proceedings in the last 10 years total: 73 (indexed by ISI Web of Science total: 45; indexed by other international databases BDI – SCOPUS, IEEEExplore - total: 28):

- Ri1.** C.A. Badea, **H. Andrei**, *Optimization of Energy Consumption of an Wastewater Treatment Plant by Using Technological Forecasts and Green Energy*, IEEE-Int Conferecne on Environmnet and Electrical Engineering - EEEIC, 7-10 June, 2016, Florence, Italy, paper #054, pp. 167-171, ISBN 978-1-5090-2319-6/ IEEE Catalog number CFP 16511-CDR@2016, indexed by [ISI Web of Science](#).
- Ri2.** C.A. Badea, **H. Andrei**, A. Gonciaruc, E. Rus, *Predictive method to increse energy efficiency in Processes of Wastewater Treatment*, IEEE-Int Conf. Electronics, Computers and Artificial Intelligence – ECAI, 30 June-2 July, 2016, Ploiesti, Romania, paper #8-POS2, ISSN 1843-2115m IEEE Catalog number CFP 1627U-ART, indexed by [ISI Web of Science](#).
- Ri3.** G.Oprea, **H. Andrei**, *The optimization of energy consumption of an industrial consumer*, IEEE-Int Conf. Electronics, Computers and Artificial Intelligence – ECAI, 30 June-2 July, 2016, Ploiesti, Romania, paper #52-POS15, ISSN 1843-2115 IEEE Catalog number CFP 1627U-ART, indexed by [ISI Web of Science](#).
- Ri4.** Adela Husu, M.F. Stan, N. Fidel, C Cobianu, **H. Andrei**, *Analysis of economic and energy efficiency for the grid-connected PV systems*, IEEE-Int Conf. Electronics, Computers and Artificial Intelligence – ECAI, 30 June-2 July, 2016, Ploiesti, Romania, paper #54-POS16, ISSN 1843-2115m IEEE Catalog number CFP 1627U-ART, indexed by [ISI Web of Science](#).
- Ri5.** G.Oprea, **H. Andrei**, *Power analysis of industrial company based on data acquisiion system, numerical algorithms and compensation results*, IEEE-Int Symposium of Fundamentals of Electrical Engineering – ISFEE, 30 June-1 July, 2016, Bucharest, Romania, paper #148-POS15, indexed by [ISI Web of Science](#).
- Ri6.** I. Vasile, **H. Andrei**, M. Ardeleanu, V. Vasile, *Data acquisition system and biosignal analysis of cardio parameters by using photoplethysmography method*, ECAI, 25-26 June, 2015, Bucharest, Romania, vol. 7, no. 3/2015, pp. 67-71, IEEE Catalog number CFP 1527U-ART, ISSN 1843-2115, indexat [ISI Web of Science](#).
- Ri7.** G. Oprea, **H. Andrei**, *Measurement Data Analysis of Power Quality for Industrial Loads*, IEEE-Advanced Topics in Electrical Engineering - ATEE, 7-9 May, 2015, Bucharest, Romania, paper SIMOP P8, ISSN 2068-7966, indexed by [ISI Web of Science](#).
- Ri8.** Gh-I. Nicolaescu, **H. Andrei**, S. Radulescu, *DVR with Auxiliary DC Voltage Source Provided by a High Power Diode Based Rectifier Used in MV Connection Substations*, IEEE-Advanced Topics in Electrical Engineering - ATEE, 7-9 May, 2015, Bucharest, Romania, paper POWEL 8, ISSN 2068-7966, indexed by [ISI Web of Science](#).
- Ri9.** Gh-I. Nicolaescu, **H. Andrei**, S. Radulescu, *Improving the Electricity Distribution Services DVR with Auxiliary DC Voltage Source Provided by a High Power Diode Based Rectifier Used in MV Connection Substations*, IEEE-Int Conference on Environment and Electrical Engineering - EEEIC, 10-13 June, 2015, Roma, paper #373, indexed by [ISI Web of Science](#).
- Ri10.** **H. Andrei**, P.C. Andrei, G. Oprea, B. Botea, *Basic Equations of Linear Electric and Magnetic Circuits in Quasi-stationary State Based on Principle of Minimum Absorbed Power and Energy*, Proc. IEEE-ISFEE, Bucharest, 28-29 Nov, 2014, pp. 1-6, 138, CFP1493Y-ART ISBN: 978-1-4799-6820-6, indexed by [ISI Web of Science](#).
- Ri11.** Mazza A, Chicco G, **Andrei H**, Rubino M, *Determination of the Relevant Time Periods for Intra-Day Distribution System Minimum Loss Reconfiguration*, International Trans. on Electrical Energy Systems, Vol. 25, Issue 10, pages 1992–2023, October 2015, doi: 10.1002/etep.1941, indexed by [ISI Web of Science](#).
- Ri12.** **Andrei, H.**, Andrei, P.C. , Mantescu G., *Matrix Formulation of Minimum Absorbed Energy Principle and Nodal Method of Magnetic Circuits Analysis*, Proc. of IEEE-14th International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2014, 22-24, May, Brasov, pp. 59-64, ISBN 978-1-4799-5183-8/14, indexed by [ISI Web of Science](#).
- Ri13.** Nicolaescu, Gh., **Andrei, H.**, Radulescu, St. *Modeling and Simulation of Dynamic Voltage Restorer for Voltage Sags Mitigation in Medium Voltage Networks with Secondary Distribution Configurations*, Proc. of IEEE-14th International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2014, 22-24, May, Brasov, pp. 52-68, ISBN 978-1-4799-5183-8/14, indexed by [ISI Web of Science](#).
- Ri14.** Gh. Nicolaescu, **H. Andrei**, S. Rădulescu, *Dynamic Voltage Restorer Response Analysis for Voltage Sags Mitigation in MV Networks with Secondary Distribution Configuration*”, in Proc. of the IEEE-EEEIC, Krakow, 10-12 May 2014, indexed by [ISI Web of Science](#).
- Ri15.** Spertino, F., Sumaili, J., **Andrei, H.**, Chicco, G., *PV Module Parameter Characterization From the Transient Charge of an External Capacitor*, IEEE Journal of Photovoltaics, vol. 3, no. 4, Oct. 2013, ISSN 2165-3381, IJPEEG 8, pp. 1325-1333, indexed by [ISI Web of Science](#).
- Ri16.** Diaconu, E. **Andrei, H.**, Predusca, G., Pencioiu, P., Ursu, V., Hanek, M. Andrei P.C., Constantinescu, Luminita, *Modelling the charging characteristics of storage batteries for PV power systems*, Proc. of IEEE - Int. Conf. Electronics, Computers and Artificial Intelligence – ECAI, 27-29

June, 2013, Pitesti, Romania, vol. 5, no. 1/2013, ISSN 1843-2115, pp. 15-21, IEEE Catalog number CFP 1327U-ART, ISBN 978-1-4673-4937-6, indexed by SCOPUS, IEEEExplore.

Ri17. Ghita, M.R., **Andrei, H.**, Marin, Oana, *Modelling of wind resource to the turbine hub height*, Proc. of IEEE - Int. Conf. Electronics, Computers and Artificial Intelligence – ECAI, 27-29 June, 2013, Pitesti, Romania, vol. 5, no. 2/2013, ISSN 1843-2115, pp. 53-59, IEEE Catalog number CFP 1327U-ART, ISBN 978-1-4673-4937-6, indexed by SCOPUS, IEEEExplore.

Ri18. **Andrei, H.**, Andrei P.C., *Matrix Formulations of Minimum Dissipated Power Principles and Nodal Method of Circuits Analysis*, IEEE-Advanced Topics in Electrical Engineering - ATEE, 23-25 May, 2013, Bucharest, Romania, paper ELCI 1, ISBN 978-1-4673-5978-9, IEEE Catalog number CFP 1314P-CDR, indexed by [ISI Web of Science](#).

Ri19. Diaconu, E., **Andrei, H.**, Puchianu, D., Predusca, G. *Advanced software system for optimization of car parking services in urban area*, IEEE-Advanced Topics in Electrical Engineering - ATEE, 23-25 May, 2013, Bucharest, Romania, paper SIMOP 8, ISBN 978-1-4673-5978-9, IEEE Catalog number CFP 1314P-CDR, indexed by [ISI Web of Science](#).

Ri20. **Andrei, H.**, Nicolaescu, G., Radulescu, St., Andrei, P.C. *New Approach of PV Cell Efficiency*, IEEE- International Conference on Environmental and Electrical Engineering - EEEIC, 5-8 May, 2013, Wroclaw, Poland, paper 44, ISBN 978-1-4673-3058-9, Catalog number CFP 13511-CDR, indexed [ISI Web of Science](#).

Ri21. **Andrei, H.**, Ivanovici, T., Andrei, P.C., Diaconu, E., Ghita, M.R., Marin, O., *Analysis and Experimental Verification of the Sensitivity of PV Cell Model Parameters*, IEEE-International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design - SMACD, 19-21 September, 2012, Sevilla, Spain, pp. 129-132, ISBN 978-1-4673-0684-3, Catalog number CFP 12105-CDR, indexed by SCOPUS, IEEEExplore.

Ri22. **Andrei, H.**, Ivanovici, T., Predusca, G., Andrei, P.C., Diaconu, E. *Curve Fitting Method for Modeling and Analysis of Photovoltaic Cells Characteristics*, Proceedings of IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics – AQTR 2012 (THETA 18), 24-27, May, Cluj Napoca, IEEE Catalog Number CFP12AQ-CDR, ISBN 978-1-4673-0703-1, indexed by [ISI Web of Science](#).

Ri23. **Andrei, H.**, Ivanovici, T., Predusca, G., Andrei, P.C., Diaconu, E. *Irradiance Sensitivity of the Model Parameters of Photovoltaic Cells*, Proceedings of IEEE-13th International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2012, 24-26, May, Brasov, pp. 893-898, ISBN 978-1-4673-1653-8/12, indexed by SCOPUS, IEEEExplore.

Ri24. **Andrei, H.**, Marin, Oana, Ghita, M.R., Ivanovici, T., Nicolaescu, Gh., Nastase, L. and Andrei, P.C., *Measurement Data Analysis of Power Quality and Energy Efficiency for Residential Loads Sector*, Proceedings of IEEE - International Conference on Power and Energy Systems (ICECPS), Hong-Kong, China, 12-13 April, 2012, published in Lectures Notes in Information Technology-LNIT journal, vol. 13, 2012, pp. 156-164, ISSN 2070-1918, indexed by [ISI Web of Science](#).

Ri25. Kadri, R., **Andrei, H.**, Gaubert, JP., Ivanovici, T., Champenoise, G., Andrei, P., *Modelling Of The Photovoltaic Cell Circuit Parameters For Optimum Connection Model and Real-Time Emulator With Partial Shadow Conditions*, Energy, Elsevier, vol. 42, issue 1, June 2012, pp. 57-67, ISSN 0360-5442, indexed by [ISI Web of Science](#).

Ri26. Puica Nitu, **H. Andrei**, and G. Chicco, *Editorial WESC 2010 for Energy*, Elsevier, vol. 42, issue 1, June 2012, pp. 2, ISSN 0360-5442, indexed by [ISI Web of Science](#).

Ri27. **Andrei, H.**, Ivanovici, T., Ghita, M.R., Cepisca, C., Andrei, P.C., *Analysis of the PV Panels Connections Using the Four-Terminal Parameters Equations*, Proceedings of IEEE-PowerTech, Trondheim, June 19-24, 2011, pp. 230-237, ISBN 978-82-519-2808-3, indexed by [ISI Web of Science](#).

Ri28. **Andrei, H.**, Marin, O., Spinei, F., Cepisca, C., Andrei, P.C., *Topological Algorithm for Linear Multi-Port Network Functions Determination*, Proceedings of IEEE-CSAE, Shanghai, June 10-12, 2011, vol. 2, pp. 20-25, ISBN 978-1-4244-8725-7, indexed by [ISI Web of Science](#).

Ri29. **Andrei, H.**, Nastase, L., Diaconu, E., Cepisca, C., Grigorescu, S.D., Andrei, P.C., *Contributions on Sensitivity Analysis for the Analog Two-Port Networks in Non-sinusoidal Regime*, IEEE-EUROCON 2011 International Conference on Computer as a Tool - ConfTele 2011, 27-29 April, 2011, Lisbon, Portugal, IEEE Catalog Number: CFP11EUR-CDR, ISBN 978-1-4244-7485-1, indexed by [ISI Web of Science](#).

Ri30. **Andrei, H.**, Cepisca, C., Grigorescu, S.D., Andrei, P.C., *Sensitivity Analysis of the Multiple FeedBack Filter in Non-sinusoidal Regime*, 2010 Xlth IEEE-International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design - SM2ACD, 4-6 October, 2010, Gammarth, Tunisia, 05-29-04, IEEE Catalog Number:CFP1068J CDR, ISBN 978-1-4244-6815-7, indexed by SCOPUS, IEEEExplore.

Ri31. **Andrei, H.**, Spinei, F., Cepisca, C., Andrei, P.C., *Mathematical Solution to Solve the Minimum Power Point Problem for DC Circuits*, IEEE-AQTR Conference, May, 28-30, Cluj Napoca, 2010, pp.322-328, IEEE Catalog Number:CFP10AQ-PT, ISBN 978-1-4244-6722-8, indexed by [ISI Web of Science](#).

Ri32. **Andrei, H.**, Cepisca, C., Grigorescu, S.D., Andrei, P.C., Silaghi, M. *Sensitivity Analysis of the*

Linear Networks in Non-Sinusoidal Regime, IEEE-AQTR Conference, May, 28-30, Cluj Napoca, 2010, pp.322-328, IEEE Catalog Number:CFP10AQT-PRT, ISBN 978-973-662-562-6, indexed by [ISI Web of Science](#).

Ri33. Andrei H., Spinei, F., Cepisca, C., Andrei, P., Vasile, N., *Modelling of the Power Factor for AC Linear Circuits under Non-sinusoidal Conditions*, Proceedings of 15th IEEE Mediterranean Electromechanical Conference-MELECON, April 26-28, 2010, Valetta, Malta, pp. 353-358, IEEE Catalog Number:CFP10MEL-CDR, ISBN 978-1-4244-5794-6, indexed by [ISI Web of Science](#).

Ri34. Andrei H., Spinei, F., Andrei, P., Rohde, U., Silaghi, M., Silaghi, H., *Evaluation of Hilbert Space Techniques and Lagrange's Method for the Analysis of Dissipated Power in DC Circuits*, Proceedings of European Conference on Circuit Theory and Design-ECCTD'09, August 23-27, Antalya, Turcia, pp. 862-865, IEEE Catalog Number:CFP09ECC-CDR, ISBN 978-1-4244-3896-9, Library of Congress: 2009900553, indexed by [ISI Web of Science](#).

Ri35. Andrei, H., Cepisca, C., Dogaru, V., Ivanovici, T., Stancu, L., Andrei, P.C., *Measurements Analysis of Advanced System for Reducing the Energy Consumption of Public Street Lighting Systems*, Proceedings of IEEE-PowerTech, Bucharest, June 26-July 2, 2009, pp. 684-690, IEEE Catalog number: CFP09815-CDR, ISBN 987-1-4244-2235-7, Library of Congress: 2008901840, indexed by [ISI Web of Science](#).

Ri36. Andrei, H., Cepisca, C., Jula, N., Andrei, P.C., Stancu, L., *Contributions Concerning the Sensitivity Analysis of the Analogue Two-Ports for Communications*, Proceedings of the European Computing Conference (ECC'09) & 3-rd International Conference on Computational Intelligence (CI'09), Tbilisi, Georgia, June 26-28, 2009, published by WSEAS Press, pp.197-202, ISSN 1790-5117, ISBN 978-960-474-088-8, indexed by [ISI Web of Science](#).

Ri37. Cepisca, C., Andrei, H., Dogaru, V., Stancu, L., Darie, E., *Experimental Analysis of Advanced System for Reducing the Energy Consumption of Public Street Lighting Systems*, Proceedings of the European Computing Conference (ECC'09) & 3-rd International Conference on Computational Intelligence (CI'09), Tbilisi, Georgia, June 26-28, 2009, published by WSEAS Press, pp.160-164, ISSN 1790-5117, ISBN 978-960-474-088-8, indexed by [ISI Web of Science](#).

Ri38. H. Andrei, F. Spinei, I. Caciula, P.C.Andrei, *Systematic analysis of the electric power and magnetic energy for linear electric and magnetic circuits with modifiable parameters*, IEEE-EUROCON2009, St. Petersburg, May 18-23, ISBN 978-1-4244-3861-7, IEEE catalog Number CFP09EUR-CDR, pp.216-223, indexed by [ISI Web of Science](#).

Ri39. Cepisca, C. Andrei, H., Grigorescu, S.D., Perpelea, M., Stancu, I. Dogaru,V., *Computerized Expert System for Lighting Grids*Proceedings of the 7th WSEAS International Conference on Circuits, Systems, Electronics, Control and Signal Processing (CSECS 08), pp.133-138, Puerto de la Cruz, Tenerife, Spain, December 15-17,2008, Electrical and Computer Engineering Series, WSEAS Press, ISSN 1790-5117, ISBN 978-960-474-035-2, indexed by SCOPUS.

Ri40. Andrei, H., Spinei, F., Jula, N., *The Principle of Minimum Dissipated Power and Minimum Energetic Principle-Two general Theorems of the Linear Electric and Magnetic Circuits in Stationary Regime*, Proceedings of 8th WSEAS In. Conference on Systems Theory and Scientific Computation – ISTASC'08, Rodos Island, Greece, August 20-22, 2008, pp. 75-87, ISSN 1769-2790, ISBN 978-960-6766-96-1, indexed by SCOPUS.

Ri41. Cepisca, C., Macrea, D., Andrei, H., *Calculation of the required energy for a stretch reducing mill*, 10th WSEAS International Conference on Automatic Control, Modelling and Simulation, Istanbul, Turkey, May 27-30, 2008, ACMOS '08, Proc. of 10th WSEAS Int. Conf. on Automatic, Control, Modelling and Simulation, Book Series: Electrical and Computer Engineering Series, pp. 317-320, indexed by [ISI Web of Science](#).

Ri42. Andrei, H., Chicco, G, *Identification of the radial configurations extracted from the weakly meshed structures of electrical distribution systems*, IEEE Transactions on Circuits and Systems, regular papers, May 2008, vo. 55, number 4, pp. 1149-1158, ISSN 1549-8328, indexed by [ISI Web of Science](#).

Ri43. Andrei, H., Chicco, G, Spinei, F, Cepisca C, *Minimum energy principle for electric and magnetic circuits in quasi-stationary regime*, Journal of Optoelectronics and Advanced Materials, vol. 10, No. 5, May 2008, 1203-1207, ISS 5-2008, indexed by [ISI Web of Science](#).

Ri44. Andrei, H., F. Spinei, C. Cepisca, I. Caciula, P.C. Andrei, *The Systematic Analysis of the Absorbed Power in D.C. Networks with Modifiable Parameters Using a New Mathematic Algorithm*, IEEE-AQTR Conference, May, 22-25, Cluj Napoca, 2008, IEEE catalog number CFP08AQT-PRT, pp. 121-124, ISBN 978-1-4244-2576-1, indexed by [ISI Web of Science](#).

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- Ri73.** Andrei, H., Spinei, F., Cepisca, C., Popa, M., Silaghi, M., Grigorescu, S.D. *Computational Method of the Sensitivities for Steady State Two-Ports Circuits Using the Relative Values*, WSEAS Transactions on Circuits and Systems, Issue 3, vol. 5, March 2006, pp. 332-338, ISSN 1109-2734, indexed by SCOPUS.

II. National (PN - 12) and international (PI - 5) projects most important in the last 10 years:

- PN1.** Monitoring system for advanced aerial and ground inspection of critical infrastructures-SMIATIC, POC 2014-2020, Priority Axe 1 - Research, technological development and innovation (CDI) for economic competitiveness and business development, senior researcher.
- PN2.** Qualification, Adaptation, Performance – for a better life, POSDRU/182/2.3/5/152783, 2015-2016, project manager.
- PN3.** Continuing vocational training in electrical and computer qualification, 2010-2011 POS-DRU project 24/2.3/G/17727, course director.
- PN4.** Opportunities for the unemployed through training courses in the electrical domain - 2007-2008 PHARE project, human resource development, promotion of human capital Phare/2004/016-772.04.02 Budget reference line 02, head of trainer team.
- PN5.** Sustainable resource management system for monitoring and assessing environmental risks to prevent the negative effects and manage the crisis situations – MEMDUR, 2007-2009 PNCDI program D11-037/18.09.2007, researcher.
- PN6.** Methods and equipments for testing longitudinal profiles under dynamic traffic roads - 2007-2009 PROLOG, PNCDI 5 Innovation program, 123/2007, responsible of the project.
- PN7.** Intelligent equipment for street lighting control systems-INTIL, 2008-2010 PNCDI program 5 Innovation, 56/2007, project manager.
- PN8.** Labor productivity growth through continuing education programs in electrical - 2006-2007 PHARE project, human resource development, promotion of human capital Phare/2004/016-772.04.02 Budget reference line 02, head of trainer team.
- PN9.** Guiding the formation of solidification structure by electromagnetic field-SOLID, 2006-2008 CE-EX program P-PD 300/2006, project manager.
- PN10.** Enhancing active measures for employment by supporting job training in the electrician, 2005-2006 PHARE project, program for economic and social / active labor market measures - budget line Phare/2003/005 -551.05.03.02, assistant project coordinator.
- PN11.** Electromagnetic processes of reconstruction of the defects forms -MAGNED, 2005-2008 CE-EX program P-PD 79/2005, responsible of the project.

PN12. Using spatial database management systems public utility, to align with EU standards, 2004-2007 AMTRANS program 7A10 / 09.09.2004, researcher.

PI1. Leonardo da Vinci Transfer of innovations project 2012-1-Gr1-LEO05-10057 „Enhance Attractiveness of Renewable Energy Training by Virtual Reality” – AVARES, 2012.

PI2. Leonardo da Vinci LLP-LdV/Tol/2008/RO/010 „Mobile E-Novative Use of Elearning Technologies” - MENUET, 2008, local responsible

PI3. URBACT II Greening SMEs 2008-2009, local coordinator

PI4. Leonardo da Vinci RO/2006/97029-EX „Continuous Training Programme in the Field of Non-Destructive Technologies and Equipments for Structural Integrity Evaluation of Advanced Materials”, manager of „sending organization”, 2006-2007.

PI5. Advanced devices for micro and nano-scale manipulation and characterization (ADMAN), PN-II-RU-TE-2011-3-0299, 2011-2012, Professor-tutor (mentor).

III. Books (8) and Chapters (7) inside the international books most important in the last 10 years:

1. **H. Andrei**, P.C. Andrei, Marilena Stanculescu, E. Cazacu, Luminita Constantinescu, R. Beloiu, *Electrical Power Systems*, pp.3-48, chapter 1 of the book *Reactive Power Control in AC Power Systems*, editors Mahdavi Tabatabaei, N., Jafari Aghbolaghi, A., Bizon, N., Blaabjerg, Springer, 2017, ISBN 978-3-319-51118-4, 631 pages

2. **H. Andrei**, P. C. Andrei, Marilena Stanculescu, E. Cazacu, *Fundamentals of Reactive Power in AC Power Systems*, pp.49-116, chapter 2 of the book *Reactive Power Control in AC Power Systems*, editors Mahdavi Tabatabaei, N., Jafari Aghbolaghi, A., Bizon, N., Blaabjerg, Springer, 2017, ISBN 978-3-319-51118-4, 631 pages

3. C. Fluerașu, Corina Fluerașu, Dorina Popovici, P.C. Andrei, **H. Andrei**, *Numerical Algorithms and Applications in Electrical Engineering*, ed. Printech, București, 2016, ISBN: 978-606-23-0661-8, 160 pag.

4. **H. Andrei** (coordinator), C. Fluerașu, Elena Virjoghe, Corina Fluerașu, Diana Enescu, Dorina Popovici, Adela Husu, P. C. Andrei, G. Predusca, E. Diaconu, *Metode numerice, modelari si simulari in ingineria electrica / Numerical Methods, Modelling and Simulation in Electrical Engineering* - in Romanian and English, ed. Electra, Bucuresti, 2011, ISBN: 978-606-507-060-8, 620 pag.

5. **H. Andrei**, G. Chicco, F. Spinei, *Minimum Dissipated Power and Energy - Two General Principles of the Linear Electric and Magnetic Circuits in Quasi-Stationary Regime*, pp. 130-205, chapter 5 of the book *Advances in Energy Research: Distributed Generations Systems Integrating Renewable Energy Resources*, editor N. Bizon, Nova Science Publishers, New York, 2011, ISBN: 978-1-61209-991-0, 620 pag.

6. C. Cepisca, G. Seritan, C. Banica, **H. Andrei**, N. Asimopoulos, S. Ganatsios, *Principles of analog signal conditioning*, pp. 190-237, chapter 4 of the book *Selected Topics in Applied Electrotechnics*, Ed. IWN , Atena, 2012, ISBN: 978-960-508-052-5.

7. V. Dogaru Ulieru, C. Cepiscă, **H. Andrei**, T. Ivanovici, *Data Acquisition in Photovoltaic Systems*, pp.213-230, chapter 10 of the book *Renewable Energy - Trends and Applications*, edited by Majid Nayeripour and Mostafa Kheshti, InTech, Viena, 2011, ISBN 978-953-307-939-4, 250 pag.

8. **H. Andrei**, C. Cepisca, S.D.Grigorescu, *Power Quality and Electrical Arc Furnaces*, pp. 55-100, chapter 2 of the book *Power Quality*, editor Andreas Eberhard, InTech, Viena, ISBN 978-953-307-180-0, 2011, 570 pag. – **the chapter has reached 14000 downloads (July, 2016)**

<http://www.intechopen.com/account/login>

9. **H. Andrei**, *Minimum Dissipated Power and Energy - Two General Principles of the Linear Electric and Magnetic Circuits in Quasi-Stationary Regime*, pp. 141-165, Chapter 5 of the book *Complex Behaviour of the Distributed Generation System Intelligent Management of the Renewable Energy Resources for assuring the DG System Power Quality and a Sustainable Development*, editor N. Bizon, Publishing House of University of Pitesti, 2010, ISBN 978-606-560-128-4 (hardcover), ISBN 978-606-560-129-1 (e-book), 564 pag.

10. **H. Andrei**, Fl. Stan, *Electrical Engineering: Electrotechnics and Electromechanical Converters (in Romanian: Inginerie Electrică Modernă. Electrotehnică și Conversoare Electromecanice. Teorie și aplicații)*, vol. 1, 2, Ed. Bibliotheca, Targoviste, 2010, 900 pag., ISBN 978-93-712-563-7, ISBN 978-973-712-565-1.

11. Suduc, A.M., Bizoi, M., Virjoghe, E., Gorghiu, G., Stan, M. Fl., **Andrei, H.**, *CAD for electrical networks (in Romanian:Proiectarea asistata de calculator a retelelor electrice)*, Ed. Bibliotheca, Targoviste, 205 pg., 2009, ISBN 978-973-712-498-2.

12. Dogaru-Ulieru, V., **Andrei, H.**, *Introduction in Electrcial Engineering (In Romanian: Elemente de inginerie electrica)*, Ed. Printech, Bucuresti, 2009, 260 pg., ISBN 978-606-521-297-8.

13. Stan, M.Fl., Vrăbiescu, L., **Andrei, H.**, Gorghiu, G., *Visual Studio. Net C++. Applications (in Romanian: Visual studio.Net-C++ Aplicații software pentru structuri termopan)*, Ed.Bibliotheca, Targoviste, 185 pg., 2008, ISBN 978-973-712-375-6.

14. **Andrei, H.**, Fluierașu, C., Badea, A.C., Caciula, I.V., Stan, Fl. *Numerical Methods in Electrical*

Engineering. Applications in C++ and Turbopascal (in Romanian and French: Metode numerice în ingineria electrică. Aplicații în C++ și TurboPascal. Methodes de calcul numerique en ingenierie electrique. Applications en C++ et TurboPascal), Ed. Bibliotheca, Targoviste, 2008, 142 pag., ISBN 978-973-712-376-3.

15. Andrei, H., *Fundamentals of Electrotechnics. Electrical Circuits. Theory and Applications* (in Romanian: *Bazele Electrotehnicii. Circuite Electrice. Teorie si aplicatii*), Editura Bibliotheca, Targoviste, 2006, 303 pg., ISBN 973-712-095-7.

IV. Citations of my articles indexed by ISI Web of Science/Scopus in articles published in Journals and Conference Proceedings indexed by ISI Web of Science and in other Int DataBase (BDI): total 398 - most important WoS (116) in the last 10 years are:

a) – Cited article: Cepișca, C., **Andrei, H.**, Dogaru-Ulieru, V. *Evaluation of the parameters of a magnetic hysteresis model*, Journal of Materials Processing Technology, volume 181, issue 1-3, year 2007, pp. 172 – 176, indexed **ISI Web of Science**, **impact factor 2,041**.

- Articles which cite:

a1) Khosroshahi, M.E., Ghazanfari, L., *Synthesis and functionalization of SiO₂ coated Fe₃O₄ nanoparticles with amine groups based on self-assembly*, Materials Science and Engineering C, , volume 32, issue 5, year 2012, pp. 1043 – 1049, indexed **ISI Web of Science**, **impact factor 2,736**.

a2) Huang, J., Li, X.. *Contactless OLTC system based on dynamic model*, Electric Power Automation Equipment 31 (8), pp. 52-57, 2011, indexed **SCOPUS**.

a3) Salas, R.A., Pleite, J. *Accurate modeling of voltage and current waveforms of nonlinear inductors with finite elements* IEEE International Symposium on Industrial Electronics , art. no. 5213146, pp. 1630-1633, 2009, indexed **SCOPUS**, **IEEEExplore**.

a4) Pop N. C.; Caltun O. F., *Jiles-Atherton Magnetic Hysteresis Parameters Identification*, ACTA PHYSICA POLONICA A Vol. 120, Issue 3, 2011, pp. 491-49, indexed **ISI Web of Science**, **impact factor 0,6**.

a5) Salas R. A.; Pleite J., *Accurate modeling of voltage and current waveforms with saturation and power losses in a ferrite core via two-dimensional finite elements and a circuit simulator*, JOURNAL OF APPLIED PHYSICS, Vol. 107, Issue 9, May 2010, indexed **ISI Web of Science**, **impact factor 2,185**.

b) – Cited article: **Andrei, H.**, Dogaru-Ulieru, V., Chicco, G., Cepișca, C., Spertino, F., *Photovoltaic applications*, Journal of Materials Processing Technology, volume 181, issue 1-3, year 2007, pp. 267 – 273, indexed **ISI Web of Science**, **impact factor 2,041**.

- Articles which cite:

b1) *Analysis of the junction temperature and thermal characteristics of photovoltaic modules under various operation conditions*, Jiang, J.-A., Wang, J.-C., Kuo, K.-C., Su, Y.-L., Shieh, J.-C., Chou, J.-J. Energy, volume 44, issue 1, year 2012, pp. 292 – 301, **indexată ISI, factor impact 4,16**

b2) *A maximum power point tracking technique based on bypass diode mechanism for PV arrays under partial shading*, Murtaza, A., Chiaberge, M., Spertino, F., Boero, D., De Giuseppe, M. Energy and Buildings, volume 73, issue, year 2014, pp. 13 – 25, **indexată ISI, factor impact 3,254**

b3) *Wireless Monitoring and Remote Control of PV Systems Based on the ZigBee Protocol*, V. Katsioulis, E. Karapidakis, M. Hadjinicolaou, A. Tsikalakis, Springer, Technological Innovation for Sustainability, IFIP Advances in Information and Communication Technology Volume 349, 2011, pp 297-304, Series ISSN 1868-4238, **indexed ISI, IF 0.75**.

b4) *Uncertainty analysis of degradation parameters estimated in long-term monitoring of photovoltaic plants*, Carullo, A., Ferraris, F., Vallan, A., Spertino, F., Attivissimo, F. Measurement, volume 55, issue , year 2014, pp. 641 – 649, **indexed ISI, Impact Factor: 1.526**

b5) *On evaluating the effects of the incident angle on the energy harvesting performance and MPP estimation of PV modules*, Jiang, J.-A., Wang, J.-C., Kuo, K.-C., Su, Y.-L., Shieh, J.-C., International Journal of Energy Research, 12/2013; 38(10). DOI: 10.1002/er.3146, **indexed ISI, Impact Factor: 2.74**

b6) *Analysis of Solar Irradiance and Solar Energy in Perlis, Northern of Peninsular Malaysia*, I.Daut, Farhana Zainuddin, Y.M. Irwan, A.R.N. Razliana, Energy Procedia-Elsevier, Volume 18, 2012, Pages: 1421–1427, Terragreen 2012: Clean Energy Solutions for Sustainable Environment (CESSE), ISSN: 1876-6102, **indexat ISI**

b7) *Power conditioning units in grid-connected photovoltaic systems: A comparison with different technologies and wide range of power ratings*, F. Spertino, G. Graditi, Solar Energy, Volume 108, October 2014, Pages 219–229, ISSN: 0038-092X, **indexat ISI, Impact Factor: 3.541**

b8) *A LabVIEW Based Data Acquisition System for Electrical Impedance Tomography (EIT)*, Tushar Kanti Bera, J. Nagaraju, Proceedings of the Third International Conference on Soft Computing for Problem Solving Advances in Intelligent Systems and Computing, Volume 259, 2014, pp. 377-389, Springer, DOI 10.1007/978-81-322-1768-8_34, Print ISBN 978-81-322-1767-1, Online ISBN 978-81-322-1768-8, **indexat ISI**

b9) *On evaluating the effects of the incident angle on the energy harvesting performance and MPP*

estimation of PV modules, Joe-Air Jiang, Jen-Cheng Wang, Kun-Chang Kuo, Yu-Li Su, Jyh-Cherng Shieh, International Journal of Energy Research, Volume 38, Issue 10, pages 1304–1317, August 2014, ISSN: 1099-114X, Indexat ISI, Impact Factor: 2.737

b10) *Simulation of Bi-directional DC-DC Converter Using FPGA*, Karthigeyan, P., Raja, M.S., Kumar, T.S., Ganesh, S.R.S., Lavanya, J. Procedia Computer Science-Elsevier, volume 79, issue , year 2016, pp. 708 – 714, Indexat ISI, Impact Factor: 1.567

c) - **Cited article:** Kadri, R., **Andrei, H.**, Gaubert, JP., Ivanovici, T., Champenoise, G., **Andrei, P.**, *Modelling Of The Photovoltaic Cell Circuit Parameters For Optimum Connection Model and Real-Time Emulator With Partial Shadow Conditions*, Energy 42 (2012), pp. 57-67, indexed ISI Web of Science, **impact factor 2,337.**

- **Articles which cite:**

c1) *The application of dynamic modelling techniques to the grid-connected PV (photovoltaic) systems*, K.H. Lam, T.M. Lai, W.C. Lo, W.M. To, Energy 46 (2012)-Elsevier, ISSN 0360-5442, pp. 264-274, indexed ISI Web of Science, **factor impact 4,159.**

c2) *Characterization of PV panel and global optimization of its model parameters using genetic algorithm*, M.S. Ismail, M. Moghavvemi, T.M.I. Mahlia, Energy Conversion and Management – Elsevier, ISSN: 0196-8904, ISI Web of Science, Impact Factor 2.216, Volume 73, September 2013, Pages 10–25.

c3) *Experimental investigation of partial shading scenarios on PV (photovoltaic) modules*, Alberto Dolara, George Cristian Lazaroiu, Sonia Leva, Giampaolo Manzolinia, Energy, Volume 55, 15 June 2013, Pages 466–475, ISSN 0360-5442, indexed ISI Web of Science, **factor impact 4,159.**

c4) *New MPPT method for stand-alone photovoltaic systems operating under partially shaded conditions*, Bouilouta, A., Mellit, A., Kalogirou, S.A., Energy 55, pp. 1172-1185, 2013, ISSN 0360-5442, indexed ISI Web of Science, **factor impact 4,159**

c5) *Programmable energy source emulator for photovoltaic panels considering partial shadow effect*, Chen, C.-C., Chang, H.-C., Kuo, C.-C., Lin, C.-C, 2013, Energy 54, pp. 174-183, ISSN 0360-5442, indexed ISI Web of Science, **factor impact 4,159**

c6) *Energy harvesting from the PV Hybrid Power Source*, N. Bizon, 2013, Energy 52, pp. 297-307, ISSN 0360-5442, indexed ISI Web of Science, **factor impact 4,159**

c7) *Modeling and maximum power point tracking (MPPT) method for PV array under partial shade conditions*, Qi, J., Zhang, Y., Chen, Y., Renewable Energy, volume 66, issue , year 2014, pp. 337 – 345, ISSN: 0960-1481, indexed ISI Web of Science, **factor impact 3,361**

c8) *On-grid and off-grid batch-ED (electrodialysis) process: Simulation and experimental tests*, Uche, J., Cirez, F., Bayod, A.A., Martinez, A., Energy, volume 57, issue , year 2013, pp. 44 – 54, ISSN 0360-5442, indexed ISI Web of Science, **factor impact 4,159**

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