

## PERSONAL INFORMATION



### Lucia-Andreea El-Leathey

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Sex Female | Date of birth 01/10/1987 | Nationality Romanian

## WORK EXPERIENCE

November 2015 – Present

### Scientific Researcher

National Institute for Research and Development in Electrical Engineering ICPE-CA  
Department of Efficiency in Energy Conversion and Consumption  
Laboratory of Renewable Energy Sources and Energy Efficiency  
313 Splaiul Unirii, District 3, Bucharest, 030138, Romania

- Research activities in the following fields: power engineering, renewable energy sources (photovoltaic systems, wind turbines), Smart Grid, energy efficiency, power quality in electrical systems, distributed grid-connected PV integration;
- Scientific researcher, specializing in the area of renewable energy sources and photovoltaic systems (PV), respectively. Research activities and dissemination by leading projects, publications and presentations, providing the background for the implementation of results;
- Project management activities for the following national projects: Nucleu Project no. 16110105/2012 “The Impact of Photovoltaic Power Plants on the Power Quality within Low Voltage Distribution Grids” (project responsible); Ctr. 39/2012 “Power Generation System which Uses a Double - Effect Wind Turbine in Order to Ensure the Energy Autonomy in Specific Applications” (Assistant project manager);
- Nucleu Project no. 16110105/2012: The developed activities have consisted in testing the photovoltaic power plant for various operating conditions, as well as in registering and analysing the power quality indicators when feeding low power consumers with linear or non-linear behaviour. The main focus was on the in-situ efficiency investigation of several technologies of solar cells (monocrystalline, polycrystalline and thin-film). Also, the deliverables of the project have included an energy management system that can be used in order to prioritize the supply of end users from PV systems and the electric public grid.

**Business or sector** Research and Development

01.04.2011 – 01.11.2015

### Assistant Scientific Researcher

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- Research activities in the following fields: power engineering, renewable energy sources (photovoltaic systems, wind turbines), Smart Grid, Energy Efficiency, power quality in electrical systems, distributed grid-connected PV integration;
- Project management activities for the following national project: Nucleu Project no. 0935/2009 “Energy optimization of lighting systems”.

**Business or sector** Research and Development

## EDUCATION AND TRAINING

10.2012 – 01.2016 **PhD**

University POLITEHNICA of Bucharest (UPB) - Faculty of Power Engineering, Electrical Power System

Thesis title: *The Interconnected Operation of a Microgrid with the National Power System*  
 The PhD thesis addressed aspects related to the implementation of a new power supply system based on renewable energy sources, by applying the microgrid concept. Thus, there were considered the following elements: microgrid components (generation sources - photovoltaic systems and wind turbines, storage equipment and end users), operating scenarios, reliability, economic efficiency, minimization of risks, acceptability, in scope of developing a replicable design and simulation methodology for DC/AC hybrid microgrids. There was achieved the mathematical modelling of photovoltaic panels, wind turbines and batteries, followed by the implementation of the mathematical models into a hybrid microgrid, by using the LabVIEW software.

10.2010 – 07.2012 **Master Studies**

University POLITEHNICA of Bucharest (UPB) - Faculty of Power Engineering, Electrical Power System

10.2006 – 07.2010 **Bachelor of Science**

University POLITEHNICA of Bucharest (UPB) - Faculty of Power Engineering, Electrical Power System

## PERSONAL SKILLS

Mother tongue Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	C1	C1
Professional Certificate for English Language					
French	B2	B2	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

Organizational skills and competences

- Coordinator and collaborator in several national and international research projects;
- Participation to numerous international and national conferences and symposiums, connected to area of interest. As a reference:
  - ✚ The 8<sup>th</sup> International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, May 23-25, 2013, Bucharest, Romania;
  - ✚ The 12<sup>th</sup> WEC CENTRAL & EASTERN EUROPE REGIONAL ENERGY FORUM - FOREN 2014, June 22-26, 2014, Bucharest, Romania;
  - ✚ The 25<sup>th</sup> DAAAM International Symposium on Intelligent Manufacturing and Automation, 26-29th November 2014, Vienna, Austria;
  - ✚ The Union of Scientists - Ruse Sixth International Conference, Ruse-Bulgaria, 11-12 November 2015;
  - ✚ The 15<sup>th</sup> International Multidisciplinary Scientific GeoConference & Expo SGEM 2015, 18-24 June 2015, Albena, Bulgaria;
  - ✚ The 16<sup>th</sup> International Multidisciplinary Scientific GeoConference & Expo SGEM 2016, 28 June – 6 July 2016, Albena, Bulgaria;
  - ✚ The 2016 4<sup>th</sup> International Symposium on Environmental Friendly Energies Applications (EFEA), 14-16 September, 2016 Belgrade, Serbia;
  - ✚ The 10<sup>th</sup> International Symposium on Advanced Topics in Electrical Engineering March 23-25, 2017, Bucharest, Romania.

## ADDITIONAL INFORMATION

### Most relevant scientific papers

- **L.A. El-Leathy**, A. Nedelcu, R.A. Chihaia, G. Oprina, S. Nicolaie, D. Marin, “*Efficiency Assessment of an Urban Area Grid Connected PV Power Plant*”, The 10th International Symposium on Advanced Topics in Electrical Engineering March 23-25, 2017, Bucharest, Romania, DOI: 10.1109/ATEE.2017.7905152, Publisher: IEEE.
- E. Chițanu, L. Pîslaru-Dănescu, **L.A. El-Leathy**, D. Marin, R.A. Chihaia, ș.a., “*Improvement of Polycrystalline Solar Cells Operation Under Low Solar Radiation Conditions by Using ZnO Nanostructured Materials*”, The 10th International Symposium on Advanced Topics in Electrical Engineering March 23-25, 2017, Bucharest, Romania, DOI: 10.1109/ATEE.2017.7905074, Publisher: IEEE.
- L. Pîslaru-Dănescu, E. Chițanu, R. A. Chihaia, D. Marin, **L.A. El-Leathy**, s.a., “*New Harvesting System Based on Photovoltaic Cells with Antireflexive ZnO Nanoparticles Coatings and DC/DC Isolation Conversion*”, Proceedings of the 2016 4th International Symposium on Environmental Friendly Energies Applications (EFEA), Belgrade, Serbia, Sept. 14-16, 2016.
- **Mituleț (El-Leathy) L.A.**, Nedelcu A., Nicolaie S., Chihaia R.A., “*LabVIEW Design and Simulation of a Small Scale Microgrid*”, UPB Sci. Bull., Series C, Electrical Engineering and Computer Science, Vol. 78, Iss. 1, 2016, ISSN 2286-3540, pp. 235-246.
- Pîslaru-Dănescu L., Lipan L.C., **El-Leathy (Mituleț) L.A.**, “*Microgrids Smart Structures Used for Back-up Power Supply*”, Electrotehnică, Electronică, Automatică (EEA), nr. 3/2016, pp. 68-74, ISSN 1582-5175.
- **Mituleț (El-Leathy) L.A.**, Nicolaie S., Chihaia R.A., Oprina G., “*Technical Economic Analysis of a Small-Scale Microgrid for a Specific Location*”, Electrotehnică, Electronică, Automatică (EEA), nr. 3/2016, pp. 134-140, ISSN 1582-5175.
- **El-Leathy L.A.**, Pîslaru-Dănescu L., Nicolaie S., Chihaia R. A., Nedelcu A., “*Assessment of Wind Energy Density Probability by Using the Weibull Distribution Function. A Study Case*”, 16th International Multidisciplinary Scientific GeoConference & Expo SGEM 2016, 28 iunie – 6 iulie 2016, Albena, Bulgaria, pp. 147 – 154, ISBN 978-619-710-63-6, ISSN 1314-2704.
- **Mituleț (El-Leathy) L.A.**, Oprina G., Chihaia R.A., Nicolaie S., Nedelcu A., Popescu M., „*Wind Tunnel Testing for a New Experimental Model of Counter-Rotating Wind Turbine*”, Procedia Engineering, Volumul 100, pp. 1141-1149, 2015, DOI: 10.1016/j.proeng.2015.01.477.
- Popescu M., Oprina G., **Mituleț (El-Leathy) L.A.**, Nicolaie S ș.a., “*Aspects Regarding the Application of Electric Generators to Wind Energy Conversion Using Counter Rotating Turbines*”, The 8th International Symposium on Advanced Topics in Electrical Engineering, May 23-25, 2013, Bucharest, ISSN: 2068-7966, ISBN: 978-1-4673-5978-8, IEEE Catalog Number CFP1314P-CDR.
- Oprina G., **Mituleț (El-Leathy) L.A.**, Nicolaie S., Cîrnaru R., Cuciureanu D., „*Comparative Analysis of a Counter Rotating Wind Turbine Testing Results*”, 15th International Multidisciplinary Scientific GeoConference & Expo SGEM 2015, 18-24 iunie 2015, Albena, Bulgaria, pp. 115-122, ISBN 978-619-7105-38-4, ISSN 1314-2704.
- Chihaia R.A., **El-Leathy L.A.**, Oprina G., Nicolaie S.,ș.a, “*Implementation Analysis of an Ecological Transport System in Călărași - Silistra Border Area*”, Proceedings of the Union of Scientists - Ruse Sixth International Conference, Ruse-Bulgaria, 11-12 November 2015, ISSN 1311-9974, pp. 360-371.

### Additional information

- Author / co-author of more than 30 articles and scientific papers in national and international publications, out of which 10 ISI articles;
- 1 Registered RO patent (OSIM A/00297/17.05.2017) in the field of PV generation: “*Photovoltaic power generation system with antireflective coating*”, Authors: L. Pîslaru-Dănescu, E. Chițanu, **L.A. El-Leathy**, C.A. Băbuțanu, D. Marin, A.M. Morega, M. Morega, N.C. Popa.

### Technical skills and competences

- Technical skills in the field of PV generation developed by contact with practice and experience in several fields: testing of photovoltaic modules and electric power plants. Project supervisor.

February 2018