MicroDERLab has **2 PhD positions** open for working on topics related to instrumentation for future power systems with cell-based structure and low inertia.

Topics of interest:

- Model approximation,
- synchronized measurements for dynamic and quasi-steady state characterization
- new generation of smart metering with PQ capabilities
- information correlation for WAMCS applications.

The applicants should be graduates of electrical engineering master studies with strong mathematical background. Attractive financial support can be provided following the involvement in one or more running research projects see www.microderlab.pub.ro

for further information please contact **Prof. Mihaela Albu** albu@ieee.org

The admission of Romanian candidates and of candidates from European Union countries to doctorate studies is organized in two sessions:

Session I: 26.06 – 30.06.2017: enrollment period; 03.07-5.07: the examination for PhD studies admission in session I

Session II: 28.08-20.09: enrollment period; 21.09-22.09: the examination for PhD studies admission in session II

Useful information for potential candidates: http://www.electro.pub.ro/doctorat/

Relevant running projects (MicroDERLab):

- **NobelGrid is** a H2020 project (2014-2018) wih the aim to develop, deploy and evaluate advanced tools and ICT services for energy DSOs cooperatives and medium-size retailers, enabling active consumers involvement –i.e. new demand response schemas – and flexibility of the market – i.e. new business models for aggregators and ESCOs. Through the dual-use of telecommunication networks, and validating the integration of renewable generation presence and demand response systems, NOBEL GRID will offer advanced services to all actors in the retail markets of the electricity system in order to ensure that all consumers will benefit from cheaper prices, more secure and stable grids and low carbon electricity supply. With a duration of 42 months and 21 partners from industry, academia and utilities, the project started in 2014. UPB team leader: dr. Mihaela Albu

- **ITCity (ERA Net LAC 2016), 2017-2020, is a project which** aims to build an intelligent ICT platform for smarter, inclusive and sustainable city needs, as energy components of ecosystem, to improve city services and quality of life by the means of high share of renewable energy sources (RES) and distributed energy resources (DER) integration and citizen involvement. The proposed solutions will take part in active power management of energy consumption, including prosumer active role in operation strategy and will contribute to social challenges tackling through a multidisciplinary approach, including multiple fields of application at city level. UPB team leader is dr. Ana Maria Dumitrescu.

- **H2020 Storage4Grid:** a H2020 project (2016-2019) which aims at boosting the uptake of **storage technologies** between the distribution grid level and the end-user level, by developing a novel, **holistic methodology** for **modelling, planning, integrating, operating and evaluating distributed Energy Storage Systems**. The Storage4Grid methodology encompasses storage at user premises and storage at substation level, Electrical Vehicles, innovative energy metering and energy routing technologies. A Decision Support Framework (DSF) tool suitable to analyse, monitor and plan (MV and LV) grid scenarios. The main goal of the tool is to evaluate and estimate the **technical and business feasibility and sustainability** of MV and LV scenarios where storage solutions and EV charging solutions are installed. UPB team leader: dr. Mihai Sănduleac
- **FISMEP (ERA Net Smart Grids Plus), 2017-2020:** Coordinated by RWTH Aachen University, Germany, the project aims to unlock Smart Grid Technologies and Services by means of a standardized software platform that can support interoperability. Based on the results of the FINESCE EU Project, performed towards a cloud-based, service-oriented, open-source middleware platform, the Smart Energy Platform is capable of supporting business models of different Smart Energy actors. While this platform has been demonstrated in 7 field tests within FINESCE, main goal of FISMEP is to expand the experience by adding results obtained in new operational conditions and grid infrastructures from Romania and Sweden for demonstrating the feasibility of grid monitoring using an open-source platform, where measurement data from different sources can be intelligently aggregated in order to support future innovative services. UPB team leader is dr. Mihaela Albu.
- **H2020 RESERVE**: a H2020 founded project (2016-2019) that aims to develop new techniques and solutions for the frequency and voltage control procedures as ancillary services in power systems and to adapt the pan-European unified network codes in the context or 100% share of generation from renewable energy sources. Near real-time control of the electrical network will be enabled by innovative 5G based ICT. Use case scenarios are developed as the basis for analysis. Performance characteristics of the new control mechanisms will be investigated through integration of energy simulations and live 5G communications. UPB team leader: dr. L. Toma

Prof. Dr. Mihaela M. Albu graduated from Politehnica University of Bucharest (UPB) in 1987 and holds the Ph.D. degree (1998) from the same university. Since 2002 she is a Professor (Habil.) of Electrical Engineering at UPB. Her research interests include wide area measurement systems as well as synchronized measurements and evaluation of the associated uncertainty considered in the state estimation algorithms; smart energy grids including optimal use of renewables and real time control; smart metering technologies; DC grids as an innovative solution for future intelligent grids; power quality and signal processing for power quality assessment, nonlinear phenomena in power systems; distributed and computer-controlled measurement systems, IEEE and IEC standards in power, power system protection, virtual and Internet-based laboratories. She is the founder of MicroDERLab and coordinates several research teams working on projects funded by national and international grants. Dr. Albu was spending a leave at Arizona State University as a Fulbright Fellow 2002 – 2003 and in 2010. She has been Vice-Chair of the Intellicis -Working Group 2: Reliable management and control of electric power systems (2009-2013). The professional service is highlighted by active membership in IEEE - IMS (member AdCOm), CIGRE (B5, SC6), VDE, IRE (www.ire.ro). She is actively working for standardization – as member of the IEEE-SA, IEC and ASRO (Romanian Standards Association).