

GROUP NAME	PI	CONTACT EMAIL	DEPARTMENT	RESEARCH LINES	GROUP WEBSITE
ELEKTRIKER	Albizu Florez, Igor Fernandez Herrero, Elvira	igor.albizu@ehu.eus elvira.fernandezh@ehu.eus	Electric engineering	<ol style="list-style-type: none"> 1. Application of the dynamic line rating to the power system congestion management. 2. Dynamic line rating monitoring systems. 3. Dynamic line rating forecasting. 4. Simulation of the power system operation using DigSILENT PowerFactory 	-----
SIGNAL PROCESSING AND RADIOCOMMUNICATIONS	Angueira Buceta, Pablo	pablo.angueira@ehu.eus	COMMUNICATIONS ENGINEERING	<ol style="list-style-type: none"> 1. Characterization of the Low Voltage grid as propagation medium for communications: noise, emissions, access impedance and transmission losses. 2. Empirical measurements of propagation parameters in lab and in the LV grid. Design and implementation of measurement systems and software to automate and process measurement recordings 3. Development of methods and algorithms to characterize noise, emissions and communication signals both in time and frequency domains 4. Analysis of PLC (Power Line Communications) and BPL (Broadband PLC) transmission technologies in different propagation conditions. Effects of both channel response and coding techniques on the performance of communications. 	http://www.ehu.es/tsr_radio/
ADVANCED CONTROL GROUP	Barambones Caramazana, Oscar	oscar.barambones@ehu.eus	Systems Engineering and Automation	<ol style="list-style-type: none"> 1. Design and implementation of smart grids frequency control. 2. Real time validation of the new control schemes. 3. Teal time control test bench design and implementation. 4. More than 15 papers published in this topic. 5. European and US patent applied for in this topic. 	https://www.ehu.es/es/web/gca/aurkezpena
EKOPOL	Barcena Hynojal, Iñaki Bizente	inaki.barcena@ehu.eus	Political Science and Administration	<ol style="list-style-type: none"> 1. Ecological-energy transition and circular economy 	https://ekopol.eus/
GROUP OF SIGNAL AND COMMUNICATIONS	Gutierrez Ruiz, Jose Julio	josejulio.gutierrez@ehu.eus	COMMUNICATIONS ENGINEERING	<ol style="list-style-type: none"> 1. Network intelligence through automatic analysis of the waveform recorded by the protection relays for troubleshooting and fault characterization in medium voltage networks. 	https://www.ehu.es/en/web/gsc/home
QUALITY OF LIFE IN ARCHITECTURE. CAVIAR	Hernández Minguillón, Rufino Javier	rufinogaviera.hernandez@ehu.eus	ARCHITECTURE	<p>Smart Urban Electrical Grids:</p> <ol style="list-style-type: none"> 1. Progressive implementation of renewable energy sources and smart smart grids, at a building, urban, peri-urban and regional scale. 2. Development of smart local energy networks for electric self-consumption, which link renewable generation, efficient consumption and storage in dynamic mode. 3. Optimization of energy efficiency in the management of electrical building networks in the district through a high degree of sensorization, development of data analysis algorithms and artificial intelligence. 4. Intelligent management of generation and consumption nodes, through LoRaWAN-type IoT networks. 	https://www.ehu.es/en/web/caviar/
ENEDI (Energy in Buildings)	Martín Escudero, Koldobika	koldobika.martin@ehu.eus	ENERGY ENGINEERING	<p>The design, simulation and experimental evaluation of active systems for the thermal conditioning of buildings. Any kind of heating, domestic hot water and refrigeration installation are considered, along with the integration of different domestic technologies such as boilers, heat pumps, thermal solar systems, micro-cogeneration, etc. Most of these technologies have to be implemented into the Smart Grid system, which can lead to an optimization of the energy use. In this sense, the main activities of EnediSYST are focused on the experimental characterization of energy conversion systems and its modelling for the subsequent development of advanced operation strategies. The main activities of the research team include:</p> <ol style="list-style-type: none"> 1. Steady and dynamic characterization of thermal production equipment by experimental analysis. 2. Development of individual and integral models for the simulation of thermal plants in domestic applications and small tertiary sector. 3. Development of operative and control strategies of the optimal operation of these kind of installations by advanced control techniques. 4. Experimental analysis of the operation and integration of micro-cogeneration units in the residential sector. 5. Application of Thermoconomics in the sizing and operation of the thermal production systems and their operation within the installation. 	https://www.ehu.es/en/web/enedi/enedi-group
APPLIED ELECTRONIC RESEARCH TEAM (APERT)	Martín González, Jose Luis	joseluis.martin@ehu.eus	Electronic Technology	<ol style="list-style-type: none"> 1. "Power and control circuits for Energy Converters". This research line is oriented to the design and study of power converters for electric power generation, conversion, storage and transmission. In this line, we work on new control algorithms and power converters for the smart grid. We have had projects in the past in this area and now we have a research project with Iberdrola. In addition, we participate with other institutions and companies in the Global Smart Grids Innovation Hub promoted by the Iberdrola Group. 	https://www.ehu.es/en/web/apert/start