DOCTORAL PROGRAM IN ELECTRICAL AND INFORMATION ENGINEERING

General informations

The Doctoral Program in Electrical and Information Engineering, under the current coordination of Prof. Alfredo Grieco, has been active in the Department of Electrical and Information Engineering of Polytechnic University of Bari (Italy) since many years. The 33rd cycle has been started since 1st November 2017. This PhD program is held in the framework of the Doctorate School of Polytechnic University of Bari. The PhD program in Electrical and Information Engineering allows the students to get an appropriate professional education as well as highly qualified scientific skills in the research topics of Electrical and Information Engineering. The PhD program includes the following research macro areas: "Converters, Electrical Machines and Drives", "Electrical and Electronic Measurements", "Electrical Systems for Energy", "Electronics", "Electromagnetic Compatibility and Electromagnetic Fields", "Electrotechnics", "Industrial Automation", "Information Systems" and "Telecommunications". In general, the international subject categories involved in this PhD program include:

1) Automation and Control Systems
2) Computer Science
3) Electrical and Electronic Engineering
4) Instruments and Instrumentation
5) Optics
6) Telecommunications

The main objective of this program is to educate PhD researchers which can be trained, working in a number of different positions, such as:
- researchers in public or private research centres, or italian or foreign Universities;
- researchers in Consortia for development of innovative technologies for SME;
- professional consultants in specific research areas;
- qualified experts in the realization of hi-tech systems operating in the global market in the field of Electrical and Information Engineering;
- qualified experts in research areas involved in European Union research projects, in particular in Key Enabling Technologies (i.e., Micro and Nanoelectronics, Nanotechnology, Photonics);
- contract lectures and professors in italian and foreign Institutions.
The PhD qualified experts of the PhD program can: 1) promote the application of research activities in the areas of advanced technologies of Electrical and Information Engineering to meet the specific local needs of Southern Italy; b) disseminate the techniques and processes of advanced research in the Industry as a product added value;
c) disseminate the culture principles of technology innovation; d) promote the technological progress and economic growth in strategical production sectors for local or/and national economy; e) contribute to the increasing competitiveness of social and production systems in local and national scenarios.

Coordinator of Doctoral Program

Surname	Name	Title	Scientific macro area
GRIECO	*Alfredo*	*Associate Professor*	*ING-INF/03*

Board of Doctoral Program

n.	Surname	Name	Title	Scientific macro area
1.	*ADAMO*	*Francesco*	*Assistant Professor*	*ING-INF/07*
2.	*ANDRIA*	*Gregorio*	*Full Professor*	*ING-INF/07*
3.	*ATTIVISSIMO*	*Filippo*	*Full Professor*	*ING-INF/07*
4.	*BOGGIA*	*Gennaro*	*Associate Professor*	*ING-INF/03*
5.	*CAMARDA*	*Pietro*	*Full Professor*	*ING-INF/03*
6.	*CARPENTIERI*	*Mario*	*Associate Professor*	*ING-IND/31*
7.	*CIMINELLI*	*Caterina*	*Associate Professor*	*ING-INF/01*
8.	*CUPERTINO*	*Francesco*	*Full Professor*	*ING-IND/32*
9.	*DE LEONARDIS*	*Francesco*	*Assistant Professor*	*ING-INF/01*
10.	*DE TUGLIE*	*Enrico*	*Associate Professor*	*ING-IND/33*
11.	*DICORATO*	*Maria*	*Assistant Professor*	*ING-IND/33*
12.	*DI NOIA*	*Tommaso*	*Associate Professor*	*ING-INF/05*
13.	*DI SCIASCIO*	*Eugenio*	*Full Professor*	*ING-INF/05*
14.	*DOTOLI*	*Mariagrazia*	*Associate Professor*	*ING-INF/04*
15.	*D'ORAZIO*	*Antonella*	*Full Professor*	*ING-INF/02*
16.	*FANTI*	*Maria Pia*	*Full Professor*	*ING-INF/04*
17.	*GIAQUINTO*	*Nicola*	*Associate Professor*	*ING-INF/07*
18.	*GRIECO*	*Luigi Alfredo*	*Associate Professor*	*ING-INF/03*
19.	*LANZOLLA*	*Anna Maria*	*Assistant Professor*	*ING-INF/07*
20.	*LA SCALA*	*Massimo*	*Full Professor*	*ING-IND/33*
21.	*MAIONE*	*Guido*	*Assistant Professor*	*ING-INF/04*
22.	*MASCOLO*	*Saverio*	*Full Professor (Director of Department)*	*ING-INF/04*
23.	*MESCIA*	*Luciano*	*Associate Professor*	*ING-INF/02*
24.	*NASO*	*David*	*Associate Professor*	*ING-INF/04*
25.	*PASSARO*	*Vittorio*	*Associate Professor*	*ING-INF/01*
26.	*PETRUZZELLI*	*Vincenzo*	*Associate Professor*	*ING-INF/02*
27.	*PRUDENZANO*	*Francesco*	*Associate Professor*	*ING-INF/02*
28.	*RUTA*	*Michele*	*Associate Professor*	*ING-INF/05*
29.	*TROVATO*	*Michele Antonio*	*Full Professor*	*ING-IND/33*
30.	*TURCHIANO*	*Biagio*	*Full Professor*	*ING-INF/04*
31.	*BARAKAT*	*Chadi*	*Assistant Professor (France)*	*ING-INF/03*
32.	*CURTIN*	*William Whelan*	*Professor (Eire)*	*ING-INF/02*
33.	*DAGENS*	*Beatrice*	*Assistant Professor (France)*	*ING-INF/02*
34.	*DALLET*	*Dominique*	*Professor (France)*	*ING-INF/07*
35.	*FERRERO*	*Roberto*	*Professor (UK)*	*ING-INF/07*

36.	GERADA	Chris	Professor (UK)	ING-IND/32
37.	GIRARD	Sylvain	Professor (France)	ING-INF/02
38.	LESAGE	Jean-Jacques	Professor (France)	ING-INF/04
39.	LI	Kang	Professor (UK)	ING-INF/04
40.	NAZABAL	Virginie	Assistant Professor (France)	ING-INF/02
41.	NIGMATULLIN	Raoul	Professor (Russia)	FIS/01
42.	TORRES	Luis	Professor (Spain)	ING-IND/31
43.	TSAREV	Andrei	Assistant Professor (Russia)	ING-INF/01
44.	YANO	Tetsuji	Professor (Japan)	ING-INF/02

Some international collaborations of Doctorate Board

n.	University	Country	Collaboration areas
1.	CERN LABORATORY AT GENEVA	Switzerland	Electronics and optoelectronics
2.	INRIA AT SOPHIA ANTIPOLIS	France	Telecommunications
3.	UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA)	USA	Automation systems
4.	UNIVERSITY OF DELFT	The Netherlands	Antennas and electromagnetic compatibility
5.	UNIVERSITY OF GLASGOW	United Kingdom	Optoelectronics and photonics
6.	UNIVERSITY OF KLAGENFURT	Austria	Control systems
7.	UNIVERSITY OF MASSACHUSETTS AT BOSTON	USA	Optoelectronics and photonics
8.	UNIVERSITY OF NOTTINGHAM	United Kingdom	Electrical machines and converters
9.	UNIVERSITY OF PARIS 6 MARIE CURIE	France	Automation systems
10.	UNIVERSITY OF SOUTHAMPTON	United Kingdom	Optoelectronics and photonics
11.	UNIVERSITY OF TEXAS AT ARLINGTON	USA	Automation and optimization
12.	UPPSALA UNIVERSITY	Sweden	Automation systems
13.	UNIVERSITY OF WURZBURG	Germany	Automation systems

Teaching Activities of Doctorate Program

Activity	Short description
Language	Language courses (english, german, chinese) at the Language Laboratory.
Informatics	Computer courses at Department of Electrical and Information

	Engineering.
Knowledge of research and funding systems	*Preparation of research projects in the framework of the Doctorate School.*
Valorization of research results and intellectual property	*Short courses for valorization of research results in the framework of the Doctorate School.*
Teaching courses	*A number of teaching courses are organized by the Doctorate School on topics of general interest for the PhD students, such as Mathematical and numerical methods, Optimal control, MATLAB applications, Data acquisition and processing, Probability and statistics.*

Available Laboratories, Library and Services

Tipology		Short description
Laboratories		*The Department of Electrical and Information Engineering includes more than 20 scientific laboratories and research groups involved in the research areas of the Doctoral program, with a large number of hardware and software equipment.*
Library	books	*The Department is equipped with a large Library focused on all research areas of Doctoral program, including more than 20,000 books (the most number in english version). The University has also a central Library with more than 46,000 books.*
	journals	*The Library of Department has actually 167 scientific journals and magazines in the field of Electrical and Information Engineering.*
E-resources	Database	*Since many years the Department has had direct online access to ScienceDirect and IEEExplore, allowing the download of IEEE papers published in journals and conference proceedings.*
	Specific software	*Some available software licenses include: MATLAB, COMSOL Multiphysics, CADENCE, OptiBPM, Optisystem, FIMMWAVE, L-edit for the macro area of "Electronics", RSoft and COMSOL licenses for the area "Electromagnetic Fields"; MATLAB/Simulink licenses for the area "Telecommunications", "Numerical Analysis", "Industrial Automation", Labview licenses for the area "Measurements", licenses C/C++ for the area "Information Systems".*

List of Research Groups and Laboratories of the Department

A large number of research groups operate in the Department of Electrical and Information Engineering, as:

1) Aeflab
2) Automation and Robotics Lab

3) [Control and Automation](#)
4) [Control of Computing and Communication Systems Lab](#)
5) [Decision and Control Laboratory](#)
6) [Design of Electronic Integrated System Laboratory](#)
7) [Distributed Systems and Applications](#)
8) [Electrical and Electronic Measurements](#)
9) [Electrical Machines and Drives](#)
10) [Electronic Devices](#)
11) [Electronic For Signal Processing Laboratory](#)
12) [ELEDIGILAB Laboratorio di Elettronica dei Sistemi Digitali](#)
13) [Energy Factory Bari](#)
14) [Informatica Industriale (In2Lab - Industrial Informatics Laboratory)](#)
15) [Information Systems](#)
16) [Microelectronics](#)
17) [Microwave & Optical Engineering](#)
18) [nPEG-NanoPhotonics and Electromagnetics Group](#)
19) [Optoelectronics Laboratory](#)
20) [Photonics Research Group](#)
21) [Power Electronics](#)
22) [SSTlab - Signals and Systems for Telecommunications](#)
23) [Telecommunications Electronics](#)
24) [Telematics](#)

Detailed information on research topics developed in this Doctoral Program can be found at the WEB personal pages of Doctorate Board members or research groups WEB pages. A public selection, that is usually held in September of each year, has to be passed to be admitted to the Doctoral Program. Further details on application can be asked to the Coordinator by e-mail.

<u>Contact</u>

For any question, please contact the Coordinator:

Prof. Alfredo Grieco
E-mail: alfredo.grieco@poliba.it
URL (Department): http://dee.poliba.it/DEI-it/index.html