

PERSONAL INFORMATION

Luigi Piegari



WORK EXPERIENCE

from May 2013

Associate professor

Politecnico di Milano, Department of Electronics, Information and Bioengineering

- Teaching (15 CFU - Macchine Elettriche, BSc in Ingegneria Elettronica, 5CFU; Electric Drives, MSc in Electrical Engineering, 10CFU)
- Research: the research activity focuses on three main topics: power electronics for renewable sources (wind and pv); power electronics for automotive (road vehicle traction drives, auxiliary converters); dynamic and ageing modeling of lithium batteries
- He was coordinator of several research projects and contract as detailed in the following
- He was author of paper as detailed in the following

Business or sector Power electronics, Electrical machines and drives - ING-IND/32

from December 2008 to April 2013

Assistant professor

Politecnico di Milano, Department of Electrical Engineering

- Teaching (Azionamenti Elettrici -8CFU- MSc in Ingegneria Elettrica and Elettronica di Potenza - 5CFU- BSc in Ingegneria Elettrica)
- Research: the research activity focuses on three main topics: power electronics for renewable sources (wind and pv); power electronics for dc microgrids and their control; dynamic and ageing modeling of supercapacitors.
- He was coordinator of several research projects and contract as detailed in the following
- He was author of paper as detailed in the following

Business or sector Power electronics, Electrical machines and drives - ING-IND/32

From February 2003 to December 2018

Assistant researcher

University of Naples Federico II, Department of Electrical engineering

- Research: the research activity focuses on three main topics: generator operation of induction machine, optimal energy management for renewables, supercapacitors applications in drives.
- He participated to some research projects.
- He was author of paper as detailed in the following
- **Business or sector** Power electronics, Electrical machines and drives - ING-IND/32

EDUCATION AND TRAINING

From November 1999 to February 2003

PhD in Electrical engineering

University of Naples Federico II, Department of Electrical engineering

- Thesis on Working principle of the induction machine as generator

From September 1993 to February 1999

MSc in Ingegneria Elettrica with laude

University of Naples Federico II

- Thesis on Electric drives for ropeways

From September 1988 to July 1993

Scientific high school with maximum score

Liceo Scientifico Statale G. Mercalli - Napoli

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PERSONAL SKILLS

Mother tongue Italian

Foreign languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	B1
10/1999 TOEFL, 520/670 – TWE 4/6					
Spanish	B1	B1	A2	A1	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills ▪ Very good communication skills obtained during teaching classes and certified by the teaching evaluation filled by students.

Organisational / managerial skills ▪ Research activity organization (at present he coordinates a 4 researchers team)
He was supervisor of several MSc final thesis and one PhD student

Job-related skills Very good knowledge of power electronics, electrical machines and drives. Deep knowledge of electrochemical storage systems, particularly for the electrical and ageing behavior.
Good knowledge to invent, design, study, model and build power electronics, and to program microcontrollers for electric drives.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient	Independent	Independent	Independent	Independent

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Sostituire con il nome dei certificati TIC

- Very good knowledge of Matlab/simulink
- Good knowledge of Maxwell (both 2D and 3D) for FEM simulations
- Good knowledge of Autocad
- Very good knowledge of Office

ADDITIONAL INFORMATION

Papers ▪ He is author/co-author of 1 book, 3 book chapters, 2 international patents, more than 30 papers on international journals and more than 100 papers on international conferences proceedings.

Bibliometric indexes ▪ **Scopus:** *h-index* = 19 – *citations* = 1439, **WOS:** *h-index* = 12 – *citations* = 746, **Google scholar:** *h-index* = 20 – *citations* = 1868

Research projects

- He is coordinator for Politecnico di Milano of the project **Autodrive** supported by the European community in the call **ECSEL-2016** (financed budget for the research unit **100k€**)
- He is coordinator for his Department in the project Heart, having Politecnico di Milano as principal proponent, financed in the call **H2020-EEB-2016-2017** (financed budget for the research unit **120k€**)
- He **participated** in two **PRIN** projects, the first in **2000-2001** about Active filters for industrial electric drives and the second in **2005-2007** for Control of distributed generation system based on solar source

Principal investigator for research contracts

Company	From	Month duration	Title	Support [k€]
Fondazione Politecnico (per LIGO)	07/2018	6	Optimization of Rotocord	12.7
RSE	10/2018	3	Logic selectivity in microgrid protection using a hybrid breaker	15
Fondazione Foresio	10/2017	24	Study and prototyping of an electrical drive for avionic application	45
ABB	07/2018	3	FEM simulation for measurement sensor arrays	8
RSE	12/2017	4	Electric safety in dc microgrids: design and realization of a hybrid dc breaker for low voltage dc grids	20
ABB	10/2017	8	Electric devices for advanced applications	13
Balance Systems srl	09/2016	15	Ring equilibrator	70
Fondazione Politecnico (per Manodya srl)	06/2015	6	Measurement and tests for efficiency assesment of "Manodya" system for batteries	30
Costruzioni meccaniche Antolini	03/2015	10	Hybridization of half-tracked vehicle	29
Fondazione Politecnico (per Manodya srl)	02/2015	4	Measurement and tests for efficiency assesment of "Manodya" system for batteries	17
Fondazione Politecnico (per Manodya srl)	12/2014	1	Measurement and tests for efficiency assesment of "Manodya" system for batteries	8
Balance Systems srl	07/2014	1	Wireless power transfer for rotating balancing systems	8
Università di Napoli	01/2012	18	Study of components and technology to save energy in railway systems	65

Editorial activities and conferences

- He is **associate editor** of the IEEE Journal of Emerging and Selected Topics in Industrial Electronics
- He is in the **editorial board** of the Journal of Electrical and Computer Engineering, edited da Hindawi
- He was **Technical Program Chair** for the editions from the 4^a to the 7^a of the *International Conference on Clean Electrical Power (ICCEP)*, with the technical co-sponsorship of IEEE Industrial Electronics Society in the years 2013, 2015, 2017 and 2019
- From 2006 è he is in the organizing committee of the *International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM)*, with the technical co-sponsorship of IEEE Industrial Electronics Society, IEEE Power and Energy Society, IEEE Power Electronics Society and the IEEE Industry Application Society
- He was in the Technical Program Committee for the 3^a and the 5^a edition of the International Conference on Renewable Power Generation (organized by IET) in 2014 e in 2016

Membership

- He is IEEE Member from 2004 and Senior member IEEE from 2013
- He is AEIT member from 2015

Reviewer

- He is reviewer for several journals in the fields of electrical engineering, power electronics, industrial electronics, power systems and renewable energy sources.