

PERSONAL INFORMATION	Fabio Corti
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EDUCATION AND TRAINING

07/01/2020 – Present

Research Fellow

Consiglio Nazionale delle Ricerche (CNR)

Topic: "Analysis and Design of Electronic and Optoelectronic Systems for Frequency and Amplitude Stabilization of Laser Sources for Atomic Interferometry Applications"

01/11/2016 – 31/10/2019

Industrial Engineering PhD in collaboration with Magneti Marelli S.p.A.

Università degli Studi di Firenze, Italy

Thesis: "Wireless Charging of Electric Vehicles: Analysis, Design and Experimental Test of a Secondary Side Controlled System"

Keywords: Electric Vehicle Wireless Charging, Grid to Vehicle, Power Conversion Efficiency, Renewable Energy and EV.

25/03//2017

Winner of Renato Mariani Master Thesis Award

AEIT (Associazione Italiana di Elettrotecnica, Elettronica, Automazione, Informatica e Telecomunicazioni) wants to honour and reward master theses that make a significant professional and academic contribution to the field of electronics.

21/10/2014 - 20/10/2016

Master's degree in electrical and Automation Engineering

Università degli Studi di Firenze, Italy

Power Electricity, Electrical Systems and Circuits, Renewable Energy, Robotics, Automation control

Thesis: "Analysis, Design and Experimental Test of a Class-E Resonant Converter for Wireless Power Transfer"

Voting: 110/110 cum Laude and Academic Praise

04/2016 - 05/2016

Internship at Wright State University

Wright State University, Dayton, Ohio, USA.

Study and Design of Resonant Converter, at the Electrical Engineering Department (Prof. M. K. Kazimierczuk)

03/10/2014 – 19/09/2011

Bachelor's degree in Electronic and Telecommunications Engineering

Università degli Studi di Firenze, Italy

English, Mathematics, Physics, Computer Science, Digital

Thesis title: Design of a motor control board of a positioning system

Voting: 109/110

Thesis: "Design of a Motor Control Board for a Positioning System"

09/2004 –07/2011

Industrial and Technical Institute

I.T. I.S. Antonio Meucci, Firenze, Italy

Voting: 100/100

Attending to Numerous International Conference and Summer School

Attending and Presentation of Scientific Papers

- 20/05/2017 – 25/05/2017 European PhD School Power Electronics, Electrical Machines, Energy Control, Gaeta, Italy.
- 03/06/2017 – 09/06/2017: Summer School on Power Electronics and Applications, Roma.
- 06/06/2017 – 09/06/2017 17th International Conference on Environment and Electrical Engineering, Milano.
- 11/09/2017 – 11/13/2017: 3rd International Forum on Research and Technologies for Society and Industry, Modena.
- 07/05/2018 – 10/05/2018: 54th Industrial and Commercial Power System Technical Conference, Niagara Falls, Canada.
- 12/06/2018 – 15/06/2018: 18th International Conference on Environment and Electrical Engineering, Palermo.
- 26/05/2019 – 29/05/2019: International Symposium on Circuits and System, Sapporo, Japan.
- 09/09/2019 – 12/09/2019: 5th International Forum on Research and Technologies for Society and Industry, Firenze.

10/2018 – 06/2019 Coadjutor

Coadjutor of the course “Laboratorio di Conversione dell’Energia Elettrica”, major “Management Engineering” at University of Florence.

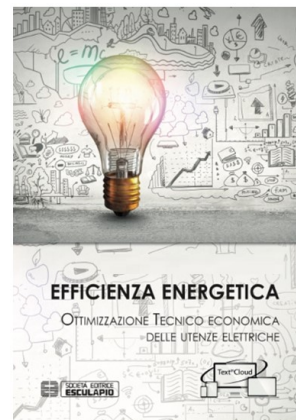
01/2019 - Member of the Organizing Committee of RTSI 2019 Conference

Web-Master and Exhibition co-chair: <http://rtsi2019.ieeesezioneitalia.it/>

03/2019 - Book Author

‘Technical Economic Optimization of Electric Utilities’ called “Efficienza Energetica: ottimizzazione tecnico economica delle utenze elettriche”, published in March 2019.

ISBN: 9788893851145
eISBN: 9788832533699



SCIENTIFIC PUBLICATIONS

[List of Conference and Journal Publications](#)

- O. Boutebba, S. Semcheddine, F. Krim, F. Corti, A. Reatti and F. Grasso, "A Nonlinear Back-stepping Controller of DC-DC Non Inverting Buck-Boost Converter for Maximizing Photovoltaic Power Extraction," *2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Madrid, Spain, 2020, pp. 1-6, doi: 10.1109/EEEIC/ICPSEurope49358.2020.9160634.
- H. P. Rimal *et al.*, "Protection from Indirect Lightning Effects for Power Converters in Avionic Environment: Modelling and Experimental Validation," in *IEEE Transactions on Industrial Electronics*, doi: 10.1109/TIE.2020.3013794.
- L. Pugi, A. Reatti, F. Corti and F. Grasso, "A Simplified Virtual Driver for Energy Optimization of Railway Vehicles," *2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Madrid, Spain, 2020, pp. 1-6, doi: 10.1109/EEEIC/ICPSEurope49358.2020.9160715.
- O. Boutebba, A. Laudani, G. M. Lozito, F. Corti, A. Reatti and S. Semcheddine, "A Neural Adaptive Assisted Backstepping Controller for MPPT in Photovoltaic Applications," *2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Madrid, Spain, 2020, pp. 1-6, doi: 10.1109/EEEIC/ICPSEurope49358.2020.9160518.
- A. Bartolini, F. Corti, A. Reatti, L. Ciani, F. Grasso and M. K. Kazimierczuk, "Analysis and Design of Stand-Alone Photovoltaic System for precision agriculture network of sensors," *2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Madrid, Spain, 2020, pp. 1-5, doi: 10.1109/EEEIC/ICPSEurope49358.2020.9160554.
- A. Reatti, L. Pugi, F. Corti and F. Grasso, "Effect of Misalignment in a Four Plates Capacitive Wireless Power Transfer System," *2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Madrid, Spain, 2020, pp. 1-4, doi: 10.1109/EEEIC/ICPSEurope49358.2020.9160627.
- E. Locorotondo, L. Pugi, F. Corti, L. Becchi and F. Grasso, "Analytical Model of Power MOSFET Switching Losses due to Parasitic Components," *2019 IEEE 5th International forum on Research and Technology for Society and Industry (RTSI)*, Florence, Italy, 2019, pp. 331-336, doi: 10.1109/RTSI.2019.8895562.
- H. Al-Baidhani, M. K. Kazimierczuk, T. Salvatierra, A. Reatti and F. Corti, "Sliding-Mode Voltage Control of Dynamic Power Supply for CCM," *2019 IEEE International Symposium on Circuits and Systems (ISCAS)*, Sapporo, Japan, 2019, pp. 1-5, doi: 10.1109/ISCAS.2019.8702628.
- A. Luchetta *et al.*, "MLMVNN for Parameter Fault Detection in PWM DC–DC Converters and Its Applications for Buck and Boost DC–DC Converters," in *IEEE Transactions on Instrumentation and Measurement*, vol. 68, no. 2, pp. 439-449, Feb. 2019, doi: 10.1109/TIM.2018.2847978.
- A. Ayachit, F. Corti, A. Reatti and M. K. Kazimierczuk, "Zero-Voltage Switching Operation of Transformer Class-E Inverter at Any Coupling Coefficient," in *IEEE Transactions on Industrial Electronics*, vol. 66, no. 3, pp. 1809-1819, March 2019, doi: 10.1109/TIE.2018.2838059.
- F. Corti *et al.*, "A Low-Cost Secondary-Side Controlled Electric Vehicle Wireless Charging System using a Full-Active Rectifier," *2018 International Conference of Electrical and Electronic Technologies for Automotive*, Milan, 2018, pp. 1-6, doi: 10.23919/EETA.2018.8493165.
- A. Reatti *et al.*, "Application of induction power recharge to garbage collection service," *2017 IEEE 3rd International Forum on Research and Technologies for Society and Industry (RTSI)*, Modena, 2017, pp. 1-5, doi: 10.1109/RTSI.2017.8065961.
- Corti, F.; Laudani, A.; Lozito, G.M.; Reatti, A. Computationally Efficient Modeling of DC-DC Converters for PV Applications. *Energies* 2020, *13*, 5100.
- Paolucci L., Abdollahi M., Grasso F., Reatti A., Corti F. (2020) Efficient Power Management Strategies for High-Energy-Demanding Industrial Plants. In: Zamboni W., Petrone G. (eds) ELECTRIMACS 2019. Lecture Notes in Electrical Engineering, vol 615. Springer, Cham. https://doi.org/10.1007/978-3-030-37161-6_21

PERSONAL SKILLS

Mother tongue(s)	Italian				
Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
	Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages				

Communication skills Good communications skills acquired during the university career. Good technical English thanks to the experiences gained during the PhD (conferences, presentations and internship).

Computer skills Knowledge of Microsoft Office™ tools.
Good knowledge of design software such as PSpice, LTspice PLeccs, and Matlab/Simulink. Experience in microcontrollers programming STM controller (CubeMX, Atollic).
Experience using Finite Element Software such as Ansys Maxwell and Comsol. Experience using PCB design software such as Altium and Cadence Allegro.

Driving licence B