

Danilo Santoro

Personal information

🇮🇹 Nationality:

🎂 Born:

🏠 Address: 🚗 Driving License: A, B

📱 Cell:



Summary about me

I am a Ph.D. student of the Department of Architecture and Engineering of the University of Parma, Italy. I received my bachelor's degree in *Computer, Electronic and Communications Engineering* and my master's degree in *Electronic Engineering* at University of Parma, Italy.

In collaboration with the power electronics research group of the University of Parma, I currently work on the development of smart nanogrid devices. My background ranges from power electronic converters design, thermal analysis, numerical modelling, microcontroller programming.

Education

1 Nov. 2018	🎓 Ph.D. in Information Technology University of Parma	🔗
present	Dept. of Architecture and Engineering <i>Via delle Scienze, 181/a, 43124, Parma (PR), Italy</i>	
18 Nov. 2019	🏢 Internship University of the Basque Country - UPV/EHU Applied Electronics Research Team (APERT)	🔗
10 Mar. 2020	Electronics Technology Department, Engineering Faculty <i>Universidad del País Vasco, Ingeniero Torres Quevedo Plaza, 1, 48013, Bilbao, Spain</i>	
9 Jan. 2017	🎓 M.Sc. in Electronic Engineering University of Parma Dept. of Engineering and Architecture <i>Via Università 12, 43121, Parma (PR), Italy</i>	🔗
12 Oct. 2018	Thesis title: Thermoelectric analysis and simulations of a Triple-Active-Bridge (TAB) for a DC nanogrid architecture Grade: 110 cum laude/110	
3 Apr. 2018	🏢 Internship University of Kassel Electrical Engineering Department <i>Universität Kassel, Mönchebergstraße, 19, 34127 Kassel, Germany</i>	🔗
20 Sep. 2018	Winner of the Erasmus Plus Study Award in the context of the convention between the University of Parma and Barilla G. & R. S.p.A. A.A. 2017/2018	
4 Oct. 2013	🎓 B.Sc. in Computer, Electronic and Communication Engineering University of Parma Dept. of Information Engineering <i>Via Università, 12, 43121, Parma (PR), Italy</i>	🔗
16 Dec. 2016	Thesis title: Design of a logic interface board for GaN based DC-DC power converters Grade: 110/110	

3 Mar. 2016	🏢 Internship University of Kiel	8
15 Sep. 2016	Electrical Engineering and Information Technology <i>Christian-Albrechts-Universität zu Kiel, Christian-Albrechts-Platz, 4, 24118 Kiel, Germany</i> Winner of Erasmus Plus Program for mobility.	
Sep. 2008	🏛️ Head technician industrial graduation: electronics and telecommunications Industrial Technical Institute "ITIS Leonardo Da Vinci"	
Jul. 2013	Grade: 98/100 <i>Via Toscana, 10, 43122, Parma (PR), Italy</i>	
Jul. 2012	🏛️ Training Course "Summer Camp IV ed." Telecom Italia and Consel - Consorzio ELIS <i>Via Sandro Sandri, 99, 00159, Roma (RM), Italy</i>	
Jun. 2007	🏛️ Conservatory Examination, Inferior Performance Conservatory "Arrigo Boito"	
Jul. 2011	<i>Strada Conservatorio, 27a, 43121, Parma (PR), Italy</i>	

Work Experience

1 Nov. 2018	PhD R&D: Power Electronics University of Parma	8
present	Dept. of Engineering and Architecture <i>Parco Area delle Scienze, 181 A, 43124, Parma (PR), Italy</i> The objective of this work is to develop smart nanogrid architecture devices. Power electronic converters such a Triple Active Bridge (TAB), smart plugs, smart soiling sensor systems and thermal management are the main research activities.	
16 Jun. 2021	Affiliation to the National Institute of Nuclear Physics (INFN) INFN, University of Milano	8
present	<i>Via Giovanni Celoria, 16, 20133, Milano, Italy</i> The objective of this work is to design a boost converter for the DUNE photon detection systems sensors. The converter should be able to work at cryogenic temperatures and have a step-up ratio of 1 to 10.	
Jun. 2012	Electronic equipment assembler Issa Elettronica SRL <i>Via Nicolò Paganini, 22, 43017, San Secondo Parmense (PR), Italy</i>	

Memberships

24 Nov. 2012	Red Cross Volunteer Italian Red Cross - Local Committee of Pontetaro <i>Via Gramsci, 1, 43010, Fontevivo (PR), Italy</i> Volunteer of the Italian Red Cross in the fields of prevention and protection of health and life, response to emergencies and disasters, disaster risk reduction, adaptation to climate change, international cooperation, promotion of the development of young people and the culture of active citizenship and volunteering. Engaged in regional, national, and international activities for the Italian Red Cross. Delegate position in management and coordination at local and regional level. Board of Directors member of the Pontetaro Committee (PR) since January 2018.
	present Relevant experiences: <ul style="list-style-type: none">• Disaster management during Earthquake in Umbria/Marche 2016, as support to the Municipal Operative Center of San Severino Marche, Italy, November 2016;• International Red Cross and Red Crescent Cooperation event, Berlin-Rügen, Germany, June 2017;• International Red Cross and Red Crescent Cooperation event, Stuttgart, Germany, October 2017;• International Red Cross and Red Crescent Cooperation event, Berlin, Germany, April 2019;• Migration emergency management, Lampedusa, Italy, November 2020.










Job-Related Skills

O.S.	Productivity	Software	Programming Languages
<ul style="list-style-type: none">• Windows	<ul style="list-style-type: none">• L^AT_EX, L^AT_EX• Microsoft Office• OpenOffice	<ul style="list-style-type: none">• MATLAB, Simulink• Comsol Multiphysics• LTSpice• STM32Cube IDE	<ul style="list-style-type: none">• MATLAB• C++, C, C#

Personal Skills

Languages	Communication	Hobbies	Sports
<ul style="list-style-type: none">• Italian: mother tongue• German: mother tongue• English: fluent• French: beginner	<ul style="list-style-type: none">• Good speech ability to the public• Excellent ability to work in team• Propensity to play leadership roles• Good working autonomy• Good organizational skills• Emergency management skills	<ul style="list-style-type: none">• Travel• Photographs	<ul style="list-style-type: none">• Swimming• Cycling• Running• Football

Publications

1. M. Simonazzi, D. Santoro, M. Bernardoni, N. Delmonte, P. Cova and R. Menozzi, "Behavioral modelling of PROFET™ devices for system-level simulation of mission profiles in automotive environment applications," *Microelectronics Reliability*, in press, Oct. 2021 
2. S. Daniele, D. Spaggiari, D. Santoro, P. Cova and N. Delmonte, "FEM analysis of a HF coreless transformer for automotive applications," *Microelectronics Reliability*, in press, Oct. 2021 
3. D. Santoro, I. Kortabarria, A. Toscani, C. Concari, P. Cova and N. Delmonte, "PV Modules Interfacing Isolated Triple Active Bridge for Nanogrid Applications," *Energies*, vol. 14, p. 2854, May 2021 
4. A. Toscani, D. Santoro, N. Delmonte, P. Cova, C. Concari and A. Lanza, "CHARM facility remotely controlled platform at CERN: A new fault-tolerant redundant architecture," *Microelectronics Reliability*, vol. 115, Dec. 2020 
5. N. Delmonte, D. Cabezuelo, I. Kortabarria, D. Santoro, A. Toscani and P. Cova, "A method to extract lumped thermal networks of capacitors for reliability oriented design," *Microelectronics Reliability*, vol. 114, Nov. 2020 
6. M. Simonazzi, G. Chiorboli, P. Cova, R. Menozzi, D. Santoro, S. Sapienza, C. Sciancalepore, G. Sozzi and N. Delmonte, "Smart soiling sensor for PV modules," *Microelectronics Reliability*, vol. 114, Nov. 2020 
7. P. Cova, D. Santoro, D. Spaggiari, F. Portesine, F. Vaccaro and N. Delmonte, "CFD modeling of additive manufacturing liquid cold plates for more reliable power press-pack assemblies," *Microelectronics Reliability*, vol. 114, Nov. 2020, **BEST PAPER AWARD** 
8. S. Sapienza, G. Sozzi, D. Santoro, P. Cova, N. Delmonte, G. Verrini and G. Chiorboli, "Correlation between OCVD carrier lifetime vs temperature measurements and reverse recovery behavior of the body diode of SiC power MOSFETs," *Microelectronics Reliability*, vol. 113, Oct. 2020 
9. D. Santoro, N. Rocchi, S. Sapienza, M. Simonazzi, G. Sozzi, P. Cova, G. Chiorboli, R. Menozzi, N. Delmonte and R. Guilly, "Development of a PV modules soiling monitoring system for smart maintenance," *XXXIV Conference on Design of Circuits and Integrated Systems, DCIS 2019*, Bilbao, Spain, November 20-22, 2019
10. P. Cova, N. Delmonte and D. Santoro, "Power GaN FET boards thermal and electromagnetic optimization by FE modeling," *Microelectronics Reliability*, vol. 100-101, Sep. 2019 
11. N. Delmonte, P. Cova, D. Santoro, A. Toscani and G. Buticchi, "Development of a GaN Based Triple-Active-Bridge for DC Nanogrid," *2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe)*, pp. P.1-P.9, Sep. 2018 