PERSONAL INFORMATION

Alessandro Palla

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Gender Male | Date of birth 4 January 1991

Nationality Italian

PROFILE

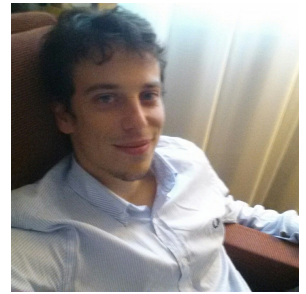Young professional qualified Electronic Engineer with excellent organizational and team-working skills. Ideal candidate for position requiring drive, initiative, responsibility and challenge.

ACTUAL WORK

2014 – Present

PhD in Embedded Systems Design

University of Pisa, Italy

Projects
- HoRNE: the aim of this project is to develop a DSP platform for Hearing Aid Application using State-of-the-Art audio algorithms and microelectronics technologies.
- RIMS: industrial project in collaboration with Thales. The goal is to develop a subsystem on a FPGA for the new European GPS Galileo.
- MMDMA: multi microphone array processing for speech enhancement, audio source localization and voice activity detection.
- RAPID: Robotic Arm empowering People wIth Disabilities. The goal of the project is to develop a robotic arm, mounted on a power wheelchair, in order to improve environmental interaction of people with motor skill impairments.
- BioBladder: bioimpedance based monitoring system for people with neurogenic dysfunction of the urinary bladder

Publications
- Kalman-based approach to bladder volume estimation for people with neurogenic dysfunction of the urinary bladder, *Alessandro Palla, Claudio Crema, Luca Fanucci, Paolo Bellagente*, ICCHP 2016, Linz, Austria
- Embedded Implementation of an Eye-in-Hand Visual Servoing Control for a Wheelchair Mounted Robotic Arm, *Alessandro Palla, Luca Sarti, Alessandro Frigerio, Luca Fanucci*, ICCSP 2016, Messina, Italy
- Speech Enhancement Demo exploiting MEMS Microphone Array for people with disabilities, *Alessandro Palla, Luca Sarti, Roberto Sannino, Luca Fanucci*, DATE 2015, Grenoble
- Wearable Speech Enhancement System based on MEMS Microphone Array for Disabled People, *Alessandro Palla, Luca Fanucci, Roberto Sannino, Mattia Settin*, DTIS (Design and Technology of Integrated Systems) 2015, Naples
- Wearable Speech Enhancement System for Motor Impaired People, *Alessandro Palla, Luca Fanucci, Roberto Sannino, Mattia Settin*, ApplePies 2015, Rome
- Voice Activity Detection System for Power Saving in Audio Wearable Devices, *Alessandro Palla, Luca Sarti, Luca Fanucci*, GE Conference 2015, Siena
- Bioimpedance based monitoring system for people with neurogenic dysfunction of the urinary bladder, *Alessandro Palla, Stefano Rossi, Luca Fanucci*, AAATE Conference 2015, Budapest

Teaching	— VHDL, Sensors and MEMS teaching for the course of Computer Architecture And Digital Systems, MSc in Embedded Computer System & Bionics Engineering, University of Pisa and School of Advanced Studies Sant'Anna, 2016

— Short seminar on Embedded System Design using CPU, MSc in Computer Engineering & Embedded Computer System, 3-4 December 2014
— Coordinator and supervisor in various MSc & BSc Thesis.

PREVIOUS WORK EXPERIENCE

April 2014 – November 2014 — Application Engineer Intern in ST Microelectronics

Design and implementation of a human-machine interface based on microphone array.

July 2013 – September 2013 — Application Engineer Intern in Dialog Semiconductor

— Design of a new methodology for PMIC (Power Management IC) efficiency measurement using current pulse with low duty cycle to avoid chip heating and efficiency loss.
— Characterization of different inductors using impedance meter.
— Design of a python GUI which shows chip temperature in various work phases.

EDUCATION AND TRAINING

2012 – 2014 — MSc Degree in Electronic Engineering   Eval: 110/110

University of Pisa, Italy

Thesis: Design and implementation of a human-machine interface based on microphone array for speech enhancement.
Microphone array structure has been exploited to perform a selective filtering of input audio. State-of-the-art algorithms have been used (beamforming, echo canceling, voice activity detection), improving reliability of commercial speech recognition software even in noisy environments.

2009 – 2012 — BSc Degree in Electronic Engineering   Eval: 110/110

University of Pisa, Italy

Thesis: Embedded Video Systems for Driving Assistance
Analysis of embedded Hardware/Software architecture for Traffic Signs Recognition. Software design and implementation using Matlab.

PERSONAL SKILLS

Mother tongue   Italian

Other languages

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English
C1	C2	C1	C1	B2
French
A1	A2	A2	A1	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

| Communication skills | – Team work: I have worked in various teams during my previous work experiences. In particular, during my PhD, I've also coordinated and supervised various industrial projects, BSc and MSc thesis. |
| | – Intercultural skills: I am experienced at working and travel in a European dimension such as being in the Executive Committee of DATE16 Conference (Design, Automation and Test in Europe) |

Computer skills	– High knowledge of programming languages, C, C++, Java, Python for both software and firmware programming.
	– High knowledge of VHDL and Verilog for FPGA (Xilinx, Altera, Microsemi) and ASIC (Synopsis Design Compiler)
	– Deep knowledge of both Matlab, Scilab and Labview.
	– High knowledge of Cadence OrCAD and Altium Designer.
	– Highly proficient with most Microsoft Office programs.
	– Experiences with Soldiworks and 3D CAD.
	– Experience with ROS (Robotic Operating System) and OpenCV

Practice & Instrumentation Skills	– High knowledge of laboratory instrumentation: Oscilloscope, Multimeter, Signals Generator, SMU, Impedance Meter and Spectrum Analyzer.
	– Soldering Experience for both through hole and SMD components.
	– Hardware and software design, analysis and debugging.

Other skills	– Playing Guitar
	– Cooking
	– Photo Editing
	– Driving

| Driving licence | A1, B, car owner |

ADDITIONAL INFORMATION

| DATE16 | Member of DATE(Design, Automation and Test in Europe) 2016 Conference Executive Committee. Role: Support of General Chair |

| AsTech | Member of AsTech(Assistive Technology) laboratory inside Italian national counsel of informatics (CINI: consorsio interuniversitario nazionale per l'informatica) |

| Abroad experiences | France, Spain, England, Germany, Belgium, Netherlands, USA, South Africa, Turkey, Malta, Portugal, Hungary, Sweden, Denmark, Austria, Ireland |