



Pietro Nannipieri

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PROFILE

I am a graduate Electronic Engineer and I am currently working on my thesis within the Electronic Engineering Master's degree at the University of Pisa. I love international environments and new experiences as well; indeed I participated in the Erasmus program by attending the third year of my bachelor degree at the University College of London. I am very interested in space applications, in fact I took part in the Rexus Program with PHOS team and with U-PHOS Team. I am also inclined to work in group and I love to take part into new challenges, going beyond my limits.

EDUCATION

- **UNIVERSITÀ DEGLI STUDI DI PISA, PISA, ITALY - 2013 / PRESENT**

Master's degree in Electronic Engineering

I expect to get my degree from April to June 2016, with a grade of 110 cum laude/110.

Title of thesis: Design and verification of a Spacefibre interface Integrated Circuit on a STMicroelectronics 65nm rad-hard technology.

Abstract: Design of a Spacefibre interface IC: the steps on which the thesis focuses are requirements definition and consolidation, architecture definition, RTL description (VHDL), verification (Modelsim), FPGA (Xilinx) prototyping and synthesis (Synopsys).

- **UNIVERSITÀ DEGLI STUDI DI PISA, PISA, ITALY - 2010 / 2013**

Bachelor's degree in Electronic Engineering

Graduation Grade: 110 cum laude / 110

Weighted Average Grade: 29.3 / 30

Title of thesis: Development of a scanning thermal microscope and applications thereof.

Abstract: Design of a Scanning thermal Microscope (SThM) on an AFM in order to obtain 2D maps of the temperature variation of the surface of a polymeric sample. Design of hardware and software necessary to use the AFM for nanolithography.

- **LICEO SCIENTIFICO "ULISSE DINI", PISA, ITALY - 2005/2010**

Grade: 95/100

JOBS AND EXPERIENCES

- **TEAM LEADER – U-PHOS TEAM, REXUS PROGRAM, EUROPEAN SPACE AGENCY – 2015/PRESENT**

- *Project manager:* Project management, group coordination, work organization, Outreach, Industry collaboration

- **ELECTRONIC ENGINEER, TEST RESPONSIBLE – PHOS TEAM, REXUS PROGRAM, EUROPEAN SPACE AGENCY – 2014/2015**

- *Data acquisition system :* temperature and pressure data are to be read from sensors, saved in a local memory and sent from space to earth

- *Heating and power subsystem:* Batteries, power and heat transfer management

- **ERASMUS STUDENT – UNIVERSITY COLLEGE OF LONDON – 2012/2013**

I spent my third year studying at the University College of London, as part of the Erasmus Exchange Program. I attended several courses, I took part in many project and I passed all the exams with the grade A.

SCIENTIFIC PUBLICATIONS

- Creatini F., Guidi G.M., Belfi F., Cicero G., Fioriti D., Di Prizio D., Piacquadio S., Becatti G., Orlandini G., Frigerio A., Fontanesi S., Nannipieri P., Rognini M., Morganti N., Filippeschi S., Di Marco P., Fanucci L., Baronti F., Manzoni M., Mameli M., Marengo M., **PHOS EXPERIMENT: THERMAL RESPONSE OF A LARGE DIAMETER PULSATING HEAT PIPE ON BOARD REXUS 18 ROCKET**, 22nd ESA PAC Symposium, 7-12 June 2015, Tromsø, Norway.
- Creatini F., Guidi G.M., Belfi F., Cicero G., Fioriti D., Di Prizio D., Piacquadio S., Becatti G., Orlandini G., Frigerio A., Fontanesi S., Nannipieri P., Rognini M., Morganti N., Filippeschi S., Di Marco P., Fanucci L., Baronti F., Manzoni M., Mameli M., Marengo M., **PULSATING HEAT PIPE ONLY FOR SPACE: RESULTS OF THE REXUS 18 SOUNDING ROCKET CAMPAIGN**, XXXIII UIT Congress, 22-24 June 2015, L'Aquila.

- Creatini F., Guidi G.M., Belfi F., Cicero G., Fioriti D., Di Prizio D., Piacquadio S., Becatti G., Orlandini G., Frigerio A., Fontanesi S., Nannipieri P., Rognini M., Morganti N., Filippeschi S., Di Marco P., Fanucci L., Baronti F., Manzoni M., Mameli M., Marengo M., ***THERMAL RESPONSE OF A PULSATING HEAT PIPE ON BOARD THE REXUS 18 SOUNDING ROCKET: PHOS EXPERIMENT CHRONICLES***, UK Heat Transfer Conference, 7-8 September 2015, Edinburgh (UK) .
- Creatini F., Guidi G.M., Belfi F., Cicero G., Fioriti D., Di Prizio D., Piacquadio S., Becatti G., Orlandini G., Frigerio A., Fontanesi S., Nannipieri P., Rognini M., Morganti N., Filippeschi S., Di Marco P., Fanucci L., Baronti F., Manzoni M., Mameli M., Marengo M., ***LARGE DIAMETER PULSATING HEAT PIPES ON BOARD THE ESA REXUS 18 SOUNDING ROCKET***, 10th International Topical Team Workshop on Two-Phase Systems For Ground And Space Applications. September 14-17, 2015, Kyoto, Japan.

COMPUTER SKILLS

- *Operating Systems*: Windows, Linux.
- *Programming languages*: VHDL, SystemVerilog, Verilog, C, C++, ATMEL assembly Matlab scripting.
- *Engineering Software*: Matlab, PSpice, NI Multisim , AVR, Labview, Code::Blocks, Xilinx ISE, Quartus II, Comsol Multiphysics.

LANGUAGE SKILLS

- FLUENT ENGLISH (Writing, Speaking, Listening)
 - *CERTIFICATE IN ADVANCED ENGLISH (C1)* – University of Cambridge, 2013
Grade: B
- LANGUAGE ABROAD EXPERIENCES
 - Montreal (Canada) , July 2007 – Upper intermediate class and certificate
 - Fort Lauderdale (Florida), July 2008 – Advanced Class and certificate
 - San Diego (California), July 2009 – Advanced Class and certificate
 - London (United Kingdom), September 2011 – Advanced Class and certificate
 - BASIC FRENCH (Writing, Speaking, Listening)

UNIVERSITY PROJECTS

- Design of a system to be non-destructively attached to a phone line that would be able to give as an output the phone number called. (AtMega, Matlab – UCL, London, 2012)
- Design and realization of an egg timer that has two buttons. One to choose the length of time for hard, medium or soft boiled. The current mode of operation should be indicated using three LEDs. The other button should start the timer, when finished the timer should alert the user by flashing all three LEDs. (Arduino – UCL, London, 2013)
- Design and create a one player PONG like game that uses a potentiometer to control the position of a single paddle using an Arduino Connected to a standard LCD screen. (UCL, London, 2013)
- Schematic design, simulation and layout of a single-ended folded cascode amplifier. The circuit simulation has been performed on LTspice, the layout has been performed on Glade. (University of Pisa, 2014)
- VHDL Arctangent implementation using CORDIC algorithm under Xilinx ISE environment. (University of Pisa, 2014)
- Multiphysics simulation (Using COMSOL 3.5) of an electrical heater varying different supply voltages and different substrates. (University of Pisa, 2014)
- Developing a naval battle game in a LINUX environment following the client/ server paradigm. Client and server communicated through TCP socket. (University of Pisa, 2015)
- Design of a digital delay effect for audio signal using an Altera FPGA (Cyclone II) and a Developing Board (DE-2). (University of Pisa, 2015)
- FPGA implementation of a Smart Sensor Network. The project consisted in the creation of a smart sensor network on a SoC: the hardware necessary to handle the sensor plus an embedded processor (NIOS II) has been used in order to create a web server able to communicate the status of the parking lots connected to the system (available or not). Also a GUI on Linux has been developed. (University of Pisa, 2015)

OTHER EXPERIENCES

- September 2013 – Present Time : Scoutmaster (AGESCI)