

## *CURRICULUM VITAE*

### **PERSONAL INFORMATIONS**

PANTALEO FRANCESCA ROMANA

Date and place of Birth: April 6th, 1984, Bari.

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### **EDUCATION AND TRAINING**

#### **Education**

- Present  
PhD RESEARCHER in Physics at University of Bari “Aldo Moro”, from November 3th, 2014 (cycle XXX), collaboration in LUNA Experiment (Laboratory for Underground Nuclear Astrophysics) to Gran Sasso National Laboratories (LNGS, Italy).  
Project Title: Misura della sezione d’urto della reazione  $^{18}\text{O}(p,\gamma)^{19}\text{F}$  (ciclo CNO) a LUNA.  
Supervisors: Dr Roberto Perrino, Dr Nicola Colonna.
  
- 2014  
MASTER DEGREE (curriculum Physical Innovative Technologies) (Department of Physics, Bari), marks 109/110.  
Thesis Title: “Misure di radioattività in campioni NORM: messa a punto di un apparato di spettrometria gamma”.  
Short summary of the Thesis’s work: Measurements of radioactivity in environmental samples “NORM” (naturally occurring radioactive materials) have been carried out using gamma spectrometry by a HPGe detector, having a thin window and high resolution. The results were generated by performing qualitative and quantitative analysis of radioisotopes present in two samples, i.e. zircon sand e lava stone, of building materials. The specific activities of natural radionuclides, the absorbed and the effective dose have been calculated to evaluate the risks caused by the exposition of ionizing natural radiations.  
Tutors: Prof. Ginevra D’Erasmus, Dr. Tommaso Maggipinto.
  
- 2010  
BACHELOR DEGREE IN PHYSICS (Department of Physics, Bari), marks 105/110.  
Thesis Title: “Tecniche di segmentazione di immagini digitali”.  
Short summary of the Thesis’s work: Automatic techniques of segmentation of digital images have been presented and applied to the fields of remote sensing, of medicine and of physics of high energy. The methods of automatic segmentation are instrumental and used to subdivide an image in significant, simple and useful regions for the statistic analysis of experimental data.  
Tutor: Prof. Roberto Bellotti.

#### **Training**

- STAGE of 200 hours during the Master Degree (INFN Department of Bari).  
Subject: Utilization of Acquisition’s system and data analysis managed by softwares: GammaVision32 and ANGLE3 produced by ORTEC. These software are been used in measurements of gamma spectrometry aimed to qualitative and quantitative analyses of environmental samples.
  
- STAGE of 75 hours during the Bachelor Degree (INFN, Department of Bari).

Subject: Implementation of algorithms for the de-blurring of medicals digital images in environment Matlab.

## PERSONAL SKILLS AND COMPETENCES

- **LANGUAGE SKILLS**: good reading, writing, listening and speaking in English.  
PET (Preliminary English Test) achieved in Bari, date 05/2002, via the University of Cambridge (Local Examinations Syndacate-International examinations).  
Study tours at Scote-ed Courses (Edinburgh) during the period July 26th, 2002-August 9th, 2002 and at Southbank (London) during the period July 23th, 2001-August 4<sup>th</sup>, 2001, with releases of attendance's certificates about the courses of English language.
- **TECHNICAL SKILLS AND COMPETENCES**: good knowledge of operative system Windows, Linux and of navigation system.  
Programs: Microsoft Office (Word, Excel, Power Point).  
Utilization of software to analyze data: Origin8, Root, PSpice.  
Utilization of programming environments: C, C++, Mathematica, Geant4.  
Utilization of electronic devices: HV power supply, oscilloscopes, klystron, detectors of gamma radiations (HPGe, NaI(Tl), BGO), etc...  
Ability to project electrical circuits.
- **COMUNICATIONS TO MEETING AND PROCEEDINGS**

SUBMITTED COMUNICATION TO THE RUSSBACH SCHOOL ON NUCLEAR ASTROPHYSICS, 6-12 MARCH 2016:

- ✓ *F. R. Pantaleo, A. Boeltzig, A. Best, G. Imbriani, M. Junker, R. Perrino, L. Schiavulli for the LUNA collaboration. Status of the direct measurements of  $^{18}\text{O}(p,\gamma)^{19}\text{F}$  cross section at energies of astrophysical interest at LUNA.*

COMUNICACION AND PROCEEDINGS TO THE VIII EUROPEAN SUMMER SCHOOL ON EXPERIMENTAL NUCLEAR ASTROPHYSICS (SANTA TECLA SCHOOL) SEPTEMBER 13-20, 2015:

- ✓ *A. Boeltzig, A. Best, M. Junker, G. Imbriani, F. R. Pantaleo for the LUNA collaboration. Status of the direct measurements of  $^{18}\text{O}(p,\gamma)^{19}\text{F}$  and  $^{23}\text{Na}(p,\gamma)^{24}\text{Mg}$  cross sections at astrophysical energies at LUNA.*

COMUNICACION TO THE 2015 ANNUAL FALL MEETING OF THE APS PRAIRIE SECTION, NOVEMBER 19-21, UNIVERSITY OF NOTRE DAME, SOUTH BEND, INDIANA (USA)

- ✓ *A. Best, A. Boeltzig, F. R. Pantaleo,  $^{18}\text{O}(p,\gamma)^{19}\text{F}$  and  $^{23}\text{Na}(p,\gamma)^{24}\text{Mg}$  at LUNA*

COMUNICACIONS TO 100° NATIONAL MEETING OF PHYSICS'S ITALIAN SOCIETY (PISA SEPTEMBER 22<sup>th</sup> -26<sup>th</sup>, 2014):

- ✓ *Pantaleo F.R., Biagi P.F., D'Erasmus G., Castriotta M.A., Lella E., Mossa V. Misure di radioattività in campioni NORM tramite analisi di spettrometria gamma. Atticon8282 IVa-C-5 (2014).*  
Contributo di partecipazione al convegno per Francesca Romana Pantaleo previsto il giorno 23 settembre 2014, ora: 9:00-13:00, Aula 241.

- ✓ *Mossa V., Biagi P.F., Paticchio V., Vitucci L., Monte C., Roselli G., Castriotta M.A., Lella E., Pantaleo F.R.* Misure di radon ambientale con camera a ionizzazione operante in atmosfera libera. Atticon8285 IVa-C-6 (2014).
- ✓ *Lella E., Biagi P.F., Paticchio V., Castriotta M.A., Mossa V., Pantaleo F.R.* Misura del fondo per uno spettrometro gamma in presenza di sorgente neutronica. Atticon8289 I-C-19 (2014).
- ✓ *Castriotta M.A., Biagi P.F., Schiavulli L., Lella E., Pantaleo F.R.* Datazione tramite termoluminescenza di reperti archeologici e possibili effetti di disequilibrio radioattivo sulla misura della paleodose. Atticon8286 Vb-C-4 (2014).

- **PAPERS**

- ✓ D. Trezzi et al. (LUNA Collaboration), *Big Bang  ${}^6\text{Li}$  nucleosynthesis studied deep underground*, submitted to Astroparticle Physics.
- ✓ F. Cavanna et al, *Three new low-energy resonances in the  ${}^{22}\text{Ne}(p, \gamma){}^{23}\text{Na}$  reaction*. Phys. Rev Lett., Published December 18<sup>th</sup>, 2015.

- **COURSES AND SEMINARS**

XII Seminar on Software for Nuclear, Subnuclear and Applied Physics (24-29 Maggio 2015, Porto conte Alghero, Italia);

TRAINING COURSE, Title: “Le radiazioni ionizzanti, aspetti normativi e radioprotezionistici”, (INFN, Department of Bari, December 2th, 2013).

*In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.*

Bari,  
18/01/2016

Signature:  
Francesca Romana Pantaleo