

## João Carlos Arnauth Pela

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CONTACT INFORMATION	Trav. do Pregoeiro nº24, 3º Esq. 1600-588 Lisboa Portugal	Voice: (+351) 926357397 E-mail: joaopela@gmail.com WWW: <a href="http://www.nfist.pt/~pela">www.nfist.pt/~pela</a>
CITIZENSHIP	Portuguese	
RESEARCH INTERESTS	Particle Physics, High Energy Physics, Nuclear Fusion, Detector Physics, Instrumentation	
EDUCATION	<b>Instituto Superior Técnico</b> , Lisboa, Portugal M.S., Engineering Physics and Technology, Oct 2010 <ul style="list-style-type: none"><li>• With final grade of 18 (in 20)</li><li>• Thesis Topic: Multi-Lepton Final States in the Search for New Physics at the Large Hadron Collider</li><li>• Supervisor: <a href="#">Professor João Varela</a></li><li>• Co-Supervisor: <a href="#">Michele Gallinaro</a></li><li>• Area of Study: Experimental Particle Physics</li></ul> B.S., Engineering Physics and Technology, Feb 2009 <ul style="list-style-type: none"><li>• With final grade of 14 (in 20)</li><li>• Engineering specialization (emphasis on Instrumentation)</li></ul>	
COMPLEMENTARY EDUCATION	<b>Instituto Superior Técnico</b> , Lisboa, Portugal Level 1 Mechanical Workshop Course, Jun 2010 <ul style="list-style-type: none"><li>• Basic use and construction techniques with Mechanical Workshop tools and machines</li><li>• Allows for the use of the Instituto Superior Técnico Mechanical Workshop</li></ul>	
ACADEMIC EXPERIENCE	<b>Instituto Superior Técnico</b> , Lisboa, Portugal <i>Graduate Student</i> <b>Feb 2009 to present</b> <i>Undergraduate Student</i> <b>September 2002 to February 2009</b> <b>NFIST (IST Physics Students Association) Member September 2002 to present</b> <ul style="list-style-type: none"><li>• Development and implementation of School Registration Web Application for <i>Physics Week 11</i> and <i>Physics Week 12</i> at IST</li><li>• Development and implementation of Members Management Application for NFIST</li><li>• Development and implementation of an integrated system of mailing lists, library and forum</li><li>• Responsible for many activities over the years</li><li>• Responsible and developer of many activities Web Site (Social Activities, Outreach).</li></ul> <b>National Physics Students Meeting 2008</b> <ul style="list-style-type: none"><li>• Member of the organization committee</li><li>• Development and implementation of all the website's applications, including Student Registration, Forum, News Portal, etc</li></ul>	

## PUBLICATIONS

- CMS Exotica PAG: E. Barberis, O. Boeriu, J. Brooke, G. Bruno, J. Chen, J.P. Chou, K. F. Chen, A. De Roeck, S. Eno, M. Gallinaro, S. Harper, C. Hill, G. Landsberg, M. Mozer, J. Pela, S. Rappoccio, A. Rizzi, K. Rossato, P. Rumerio, A. Safonov, C. Shepherd-Themistocleous, “*Data Flow for the CMS Exotica Group for Early Running*” CMS AN - 2009/XX (Under Preparation)
- P. Ribeiro, M. Gallinaro, M. Kazana, J. Pela, J. Varela, “*Discovery potential for Universal Extra Dimensions in the four leptons final state in  $pp$  collisions at  $\sqrt{s} = 14$  TeV*” CMS AN - 2008/035 (Pre-approved waiting Review Committee Final Approval)

## CONFERENCE PRESENTATIONS

PASC Winter School 2008 - Discovery potential for Extra Dimensions in the four lepton final state at the LHC

## SCIENTIFIC PROFESSIONAL EXPERIENCE

**Laboratório de Instrumentação e Física Experimental de Partículas**, Lisboa, Portugal

*Junior Researcher for the CMS Experiment at the LHC* **2007 to present**

- Coordinator and developer of the EXOTrilepton Exercise for CMS Exotica group as a part of 2009 October Exercise with the objective of testing LHC Data Flow Model **Oct 2009**
- Worked on 16 shifts as CMS-ECAL Barrel, Endcaps and Safety Shifter, during the CRAFT 2009 (cosmics) program. **Aug 2009**
- Design and implementation of method for studying potential for Universal Extra Dimensions with a four lepton final state **Dec 2008 to present**
- Design and implementation of method for studying  $t\bar{t}$  in semileptonic and fully leptonic with hadronic  $\tau$  channels **Set 2007 to Dec 2008**

**Centro de Fusão Nuclear**, Lisboa, Portugal

*Experimental Physist* **2003**

- Helped to design a test PCB Board to implement the new system of slow control of the ISTOK Tokamak Fusion Reactor based in CAN technology

## OTHER PROFESSIONAL EXPERIENCE

- Web Designer, designed commercial web sites for 2 small companies
- Judo Teacher, during a period of 2 years in two separated schools
- Sysadmin, for a local sports club during 2 years
- Counselor in Summer Camp, during a single summer (also supported Judo classes in that camp)

## LANGUAGE SKILLS

Portuguese

- Native Speaker

English

- **IELTS Certification** at 30/Jan/2010 with scores: Listening 7.0, Reading 7.5, Writing 6.5, Speaking 7.0, Overall Band Score 7.0 (Good User)
- 1st language of choice during undergraduate studies (7 years of classes)
- Language used in work place for since 2007

French

- Generic comprehension of spoken and written language
- 2nd language of choice during undergraduate studies (3 years of classes)

Spanish

- Generic comprehension of spoken and written language

#### TECHNICAL SKILLS

Extensive hardware and software experience in networking and information technology

Programming: C, C++, JAVA, Fortran 95, Python, Mathematica, Assembler

Database: MySQL, SQL

Web Oriented: HTML, PHP, CSS, Javascript, XML

System Administration: Shell Scripting (Bash, SH Shell), CVS

Applications: L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, Open Office, and other common productivity packages for Windows and Linux platforms

Operating Systems: Linux (administration knowledge), Microsoft Windows XP/2000/Vista/7

Driver's Licence for motorcycle (all A class) and cars (B class)