

João Pela

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EDUCATION

IMPERIAL COLLEGE LONDON

PHD IN EXPERIMENTAL PHYSICS

RESEARCH

Expected Dec 2015 | London, UK

INSTITUTO SUPERIOR TÉCNICO

M.S. IN ENGINEERING PHYSICS AND TECHNOLOGY

Oct 2010 | Lisbon, PT

Final grade: 90% (Excellent)

B.S. IN ENGINEERING PHYSICS AND TECHNOLOGY

Oct 2010 | Lisbon, PT

Final grade: 70% (Good)

SKILLS

GRADUATE

Data Analysis

Data Reduction

Real Time Monitoring

Statistical Analysis

Error Estimation

UNDERGRADUATE

Data Analysis

Instrumentation

Programming

Simulation

PROGRAMMING

Over 5000 lines:

C++ • Python • Shell • JavaScript

Java • PHP • \LaTeX • VHDL

Over 1000 lines:

C • CSS • Assembly • MySQL

Fortran • Mathematica

Familiar:

Matlab • XML

LANGUAGES

Portuguese: Native

English: Bilingual proficiency

French: Full professional proficiency

Spanish: Professional working proficiency

EXPERIENCE

IMPERIAL COLLEGE LONDON | PH.D. STUDENT AT THE CMS

EXPERIMENT AT THE LHC

Jan 2012 - Dec 2015 | London, UK

- Development of data analysis methods to isolate signal events of extremely large and noisy datasets.
- Development of hardware and software algorithms for data reduction while keeping high efficiency of signal collection.
- Analysis and quantification of systematic errors associated with the choice of a specific model for interpreting data.
- Participation in data collection operations as field manager and expert on call.

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN) |

CMS L1T DATA QUALITY MONITORING COORDINATOR

Jul 2012 - Jun 2014 | Geneva, Switzerland

- Coordination of a group of 5 people with the task of maintaining high operational standards the the CMS Level 1 Trigger system (hardware data reduction system).
- Responsible for the real time monitoring of a mission critical system.
- Responsible for the data quality certification for physics usage.

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN) |

ENGINEER/PHYSICIST FOR THE CMS EXPERIMENT AT THE LHC

Feb 2011 - Dec 2011 | Geneva, Switzerland

- Design and implementation of the real time monitoring for high rate, multi-million input hardware data reduction system (CMS L1 Trigger System).
- Participation in data collection operations as expert on site.

LABORATORY FOR INSTRUMENTATION AND EXPERIMENTAL

PARTICLE PHYSICS (LIP) | JUNIOR RESEARCHER FOR THE CMS

EXPERIMENT AT THE LHC

2007 - 2010 | Lisbon, Portugal

- Development of data analysis methods to isolate signal events of extremely large and noisy datasets.
- Local responsible for a CMS collaboration wide exercise to test global data collection and analysis capability.
- Participation in data collection operations as expert on site.

CENTRO FOR NUCLEAR FUSION (CFN) | EXPERIMENTAL PHYSIST

2003 - 2004 | Lisbon, Portugal

- Design and test of an electronics board for the slow control of a nuclear fusion reactor.

AWARDS

- 2015 IC London, FoNS, Prize for Excellence in the Support of Teaching & Learning
- 2015 IC London, Physics 1st Year Laboratories, Best Demonstrator Award
- 2012-15 IC London, Development of Excellence in Sport Scholarship (Judo)

SOCIETIES

- 2014-15 Men Team Captain Imperial College London Judo Club
- 2006-10 Activity Organizer NFIST - IST Physics Students Association