

João Pela

joaopela@gmail.com | +44 7919533220

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

Feb 2009 | Lisbon, PT

Final grade: 70% (Good)

SKILLS

GRADUATE

Data Analysis

Data Reduction

Real Time Monitoring

Machine Learning

Statistical Analysis

Error Estimation

UNDERGRADUATE

Data Analysis

Instrumentation

Programming

Simulation

PROGRAMMING

Over 10000 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

REFERENCES

Available upon request

EXPERIENCE

IMPERIAL COLLEGE LONDON (IC) | PH.D. STUDENT WORKING ON THE CMS EXPERIMENT AT THE LHC

Jan 2012 - Present | London, UK

- Developed data analysis methods to isolate signal events in extremely large and noisy datasets.
- Developed hardware and software algorithms for data reduction while keeping high signal collection efficiency.
- Analysed and quantified systematic errors associated with the choice of a specific model for interpreting data.
- Participated 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

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

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN) | ENGINEER/PHYSICIST ON THE CMS EXPERIMENT AT THE LHC

Feb 2011 - Dec 2011 | Geneva, Switzerland

- Designed and implemented a real time monitoring system for a high rate, multi-million input channel hardware data reduction system.
- Participated in data collection operations as on site expert.

LABORATORY FOR INSTRUMENTATION AND EXPERIMENTAL PARTICLE PHYSICS (LIP) | JUNIOR RESEARCHER ON THE CMS EXPERIMENT AT THE LHC

2007 - 2010 | Lisbon, Portugal

- Developed data analysis methods to isolate signal events in extremely large and noisy datasets.
- Responsible for group participation in a CMS collaboration wide exercise to test global data collection and analysis capability.
- Participated in data collection operations as on site expert.

CENTRE FOR NUCLEAR FUSION (CFN) | EXPERIMENTAL PHYSIST

2003 - 2004 | Lisbon, Portugal

- Designed and tested an electronics board for the slow control of a nuclear fusion reactor.

AWARDS

2015 IC, Faculty of Natural Science, 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's Team Captain Imperial College London Judo Club

2006-10 Leader of Activities NFIST - IST Physics Students Association