

## PERSONAL INFORMATION

Surnames / First name

Email

Website

Nationality

Date of birth

# Curriculum Vitae

**Lucas Rodríguez, Fernando**

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Spanish

February, 1982



## WORK EXPERIENCE

### **Design and development of the Detector Control System for TOTEM experiment**

From 2006-09-01

*CERN (European Organization for Nuclear Research)*

Coordinating and planning a team of up to 7 people working on different locations

Design of software architecture

Design of fieldbuses topology for sensors

Analysis of prototypes and response time

Agreements on the interactions among the DCS and other systems

Administration of central documentation and code repository

### **Computing systems administrator**

From 2006-01-15 to 2006-08-04

*Seria - Junta de Andalucía, Consejería de Innovacion, Ciencia y Empresa*

Physical installation, management and configuration of the 24x7 servers

Web servers, SAMBA and LDAP domains, DNS, proxies and all related network tasks

### **Software developer for instrumentation**

From 2005-06-01 to 2005-08-31

*NATO Air Base Moron de la Frontera*

Design and partial implementation of data acquisition application for VXI instrumentation devices on a calibration laboratory

### **Chairperson**

From 2005-01-15 to 2006-03-15

*IEEE Sevilla Student Branch*

Coordination of students activities

Interviewing with department directors

Funding requests

Managing debate sessions

Legal processes to become an official association in Spain

## EDUCATION AND TRAINING

### PhD degree on Industrial Informatics

2009-06-26

*University of Sevilla*

*Department of Computers Architecture and Technology*

PhD thesis on the Detector Control System for TOTEM experiment at CERN. Special emphasis on formal requirements definition and automation procedures for software development. It was awarded with the 'cum laude' and 'european' distinctions.

### Electrical Habilitation BC, BR.B2V, HC, H2V

2009-03-27

*Norisko*

Professional authorization for installing Low Voltage and High Voltage lines.

### Certificado de Adaptación Pedagógica

From 2005-10-15 to 2006-04-15

*University of Sevilla*

*Institute of Education Sciences*

A course to develop teaching skills specially focused on high schools.

### Computing engineer

From 2000-09-01 to 2005-09-15

*University of Sevilla*

*Higher Technical School of Computer Engineers*

The aim of those studies is to provide high skilled professionals for private/public sector, focusing in management and technical aspects while providing a strong theoretical background.

My master thesis was titled "Simulation of processes of quantum information and quantum cryptography", under scientific supervision of Dr. Adán Cabello Quintero.

## LANGUAGES

Mother tongue

Self-assessment

*Common European Framework of Reference (CEF)*

**English**

**French**

### Spanish

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
C2 Proficient user	C2 Proficient user	C2 Proficient user	C1 Proficient user	C2 Proficient user
B2 Independent user	B2 Independent user	B1 Independent user	B1 Independent user	B2 Independent user

## RESEARCH ACTIVITIES

Awards

My master thesis was awarded in 2006 as the best Research and Development project presented by an university student, as part of the "Information Society Prizes" organized by the government of Junta de Andalucía.

Professional and technological associations membership

Institute of Electrical and Electronics Engineers, Internet Society, Sociedad Española de Física, Dos Hermanas Wireless

Supervised students

Master thesis "Preprocessor for PVSS logical names, aliases and finite state machine"  
Sami Heikki Sakari Stockell, September 2009  
Savonia University of Applied Sciences

Project "Verification of serial numbers and firmware of ELMB and power supplies"  
Piotr Nikiel, Summer 2009  
CERN summer student

Other activities

### **Participation in the development of standards and in the International Telecommunication Union.**

Through the IEEE Society on issues related to computer networks and software technologies.

**Editor of IJACT** (International Journal of Advancements in Computing Technology).

### **Global Consciousness Project**

This is a project lead by Roger Nelson in Princeton University about the correlation of results obtained from dedicated hardware random number generators around the world correlating with global events.

## **PERSONAL SKILLS AND COMPETENCES**

Social skills and competences

Used to work in teams of many different kinds of people, with a wide range of interests and profiles. I interact well while proposing new ideas.

Organizational skills and competences

Ability to work in many tasks over the time. I have taken many times the role of coordinator, submitting proposals, preparing and following up the planning, dealing with deadlines and acting as contact-person.

Computer skills and competences

Networking

Ethernet and wireless, IPv4 and IPv6, firewalls, switches/routers managements, and all network services like mail, web, files, DNS, proxies,...

Programing

C, C++, C#, clipper, CORBA, delphi, fortran, HTML, java, lisp, mathematica, perl, PHP, prolog, python, SQL, Step7, SubVersioN, XML, UML, VHDL

Databases

MySQL, ADO, ODBC

Operating Systems

Windows, Windows CE, GNU/Linux

Real Time and Data Acquisitions Systems

GPIB, VXI, PVSS, CANbus, LabView, Xlink, OPC, PVSS, WinCC OA

Embedded devices

Smartcards, microcontrollers (PICs), VHDL, FPGA

Documents processing

OpenOffice, MS Office,  $\text{\LaTeX}$

## **HOBBIES**

Activity

Hiking, that not alpinism ;)

## **PUBLICATIONS**

Standards development

Participation in the balloting process of several IEEE standards

IEEE P802.11k - Standard for Information Technology - Telecommunications and information exchange between systems -Local and metropolitan area networks -Specific requirements- Part II: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications Amendment: Radio Resource Measurement of Wireless LANs

IEEE P802.11n - Information Technology - Telecommunications and information exchange between systems - Local and metropolitan area networks -Specific requirements- Part II: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Amendment 4: Enhancements for Higher Throughput

IEEE P1003.1 - Information Technology - Portable Operating System Interface (POSIX)

IEEE P1175.2 - Recommended Practice for Case Tool Interconnection - Characterization of Interconnections

IEEE P1363.1 - Standard Specification for Public-Key Cryptographic Techniques Based on Hard Problems over Lattices

## Indexed

Image color-discretization algorithms: implementation and comparison.

Imagen-A, 2005.

ISSN 1885-4508

Prospects for Diffractive and Forward Physics at the LHC.

CERN/LHCC 2006-039/G-124, 2007

The TOTEM Experiment at the CERN Large Hadron Collider.

JINST, 2008

Design, Development and Verification of the Detector Control System for the TOTEM experiment at the CERN LHC.

PhD thesis, Universidad de Sevilla, March 2009

The TOTEM Detector Control System.

In Proceedings of ICALEPCS 2009, Kobe, Japan, October 2009

The TOTEM on-line Radiation Monitoring System.

In Proceedings of ICALEPCS 2009, Kobe, Japan, October 2009