

## PERSONAL INFORMATION

Carlos, Cruz de la Torre

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💬 Skype charlicruz

Sex Male | Date of birth 10/04/1977 | Nationality Spanish

JOB APPLIED FOR  
POSITION  
PREFERRED JOB  
STUDIES APPLIED FOR

Engineer. Design, specification and supervision of electronic systems. Contributing to R&D.

## WORK EXPERIENCE

April 2012 - Onwards

**Detector Engineer**

European Synchrotron Radiation Facility ([ESRF](#)) - France and [Alba CELLS](#) Synchrotron - *Spain*  
Working for the Detector and Electronic group at the ESRF during the first two years

- Provide consulting, support and development capabilities in the area of X-ray detectors and diagnostics, including assistance to the selection, specification and characterisation of commercial detectors as well as the development of beamline specific detector systems.

October 2010 – April 2012

**Electronics Engineer. Chief Engineer**

Spanish National Research Council ([CSIC](#)). Institute of Applied Physics. Serrano 141. Madrid (Spain).

- R&D in advanced systems for aircraft on “Eco\_Efficiency” system of Airbus Company. Development of a complete LabVIEW data acquisition system for an electronic nose. Development of multi-sensor systems using different detection principles for application in various fields.

March 2009 - October 2010

**Electronics Engineer**

Structure of Matter Institute ([CSIC](#)). Serrano 113bis – Madrid.

- Contributing to R&D in European projects in experimental nuclear physics. Testing and maintenance of gamma and charged particle detectors, the related electronics and the acquisition system. Design a testbed to house different combination of detectors. Responsible of the electronic setup and testing during experiments carried out at different International Facilities.

February 2007 – March 2009

**Computer Science Technician**

Service Centre and Data Communications Networks ([CSIRC](#)). University of Granada.

- Providing advice of services available in the University such as scientific data networks, support in the matters of security for computer science systems and use of scientific applications.

November 2006 - July 2007

**Technical sales**

Panasonic. S.A. I advised and assisted clients on the product of the mark.

March 2006 – September 2006

**Teacher. Computer Science Technician. Proctor**

Examination Centre of the TOEFL® iBT (TOEFL iBT Site 105413). System assembly for each test.

- Training professional Access, Excel data base for companies in Granada (Spain).

## EDUCATION AND TRAINING

January 2001 – June 2007

**Electronics Engineering (5 years full-time degree). Bachelor's Degree in Engineering with Master's Degree in Electronics.**

Sciences Faculty. University of Granada (Spain).

- Signal processing and transmission, Project, Electronics Circuits and Component Design.  
Final project: Design and Implementation of Digital Spectrum Analyzer. Defended February 2006.  
Theory of Signal and Communications Group. Qualification: Excellent.

October 1996 - 2001

**Physics.** Four subject to finish. University of Granada (Spain).

## PERSONAL SKILLS

Mother tongue(s) Spanish

Other language(s) English: B2 level. Certificate in Advanced English.

French: B1 level. Courses with B1 Level.

Communication and Organisational skills

- Analytical and organized. Good leadership. Rapid response and teamwork.
- Teacher Training (CAP) at the University of Granada.

Job-related skills

- Experience in detector development and maintenance, the set-up of data acquisition systems and the management of laboratory instrumentation. Expertise in experimental laboratory tools (digital oscilloscopes, testers, etc.). Maintenance of nuclear instrumentation and assembled data acquisition systems. Knowledge of bus Data Transfer (VME, PCI, PCI Express, etc).
- Communications Systems Development: Systems A/D, D/A. Programming microcontrollers, design and testing of electronic circuits (sch & pcd). Proven skills using analog simulators software Pspice, Tango, Proteus and Orcad capture, MATLAB and Simulink. Certificated courses with Design, production of circuit form PCB and Analysis and Design of Electronic Circuits using Pspice. Digital design with LogicWorks and LASI. Simulation of digital electronic circuits with VHDL. Frequently used and excellent knowledge from my work and studies.
- Development of processors in FPGAs. Certificated course in Embedded Hardware Processors.
- Automation and Control: Software Systems Electronic Control, PLC systems, fuzzy control. Certificated course in Automatic with Programmable Control. 300 hours.  
Activity: Assembly and nano-robots programming (logo), software profibus, Simatic step5 and 7. Internship as a commercial technician in Industrial Distributions Company. Sale of equipment and services for Electronics with numerous contacts with the Industry.
- Mechanical modelling: Design of a vacuum chamber for experiments with the nuclear experimental group. Shielding design for germanium detectors using tools such as Solidworks.

Computer skills

- Operating systems: All Windows systems, Linux, Mac OS X.
- Certificated courses in advanced grid and parallelization, shell script programming, advanced administration in Linux and technical database administration MS SQL SERVER 2000.
- Programming languages: C, Python, Tcl/tk, PVM, LabVIEW, The MathWorks Matlab/simulink.
- Management system in scientific environments: Upgrade services for networks, data backup, Web design: Develop of the webpage [Spanish Network of Micro & Nano Systems](#).
- Use of tools for calculation and simulation data analysis: Paw, Geant4, ImageJ.

Driving licence

- I am a holder of a Spanish drivers licence. Category B vehicle.

## ADDITIONAL INFORMATION

Others

- Scientific and technological [publications](#).
- Participation in different Research Projects, Scientific and Technological European Congresses.
- Contribute to the proposal, design, simulation and commissioning of new instruments.
- Active role in (nuclear and atomic) activities performed at international and national research activities where I have been the responsible for electronic assembly in experiments at CERN (Geneva), GANIL (Caen), ESRF (Grenoble), ITN (Lisbon) and CMAM (Madrid) or GSI (Darmstadt).

References

- [Dra. M<sup>a</sup> José García Borge](#). Physics Group Leader of ISOLDE- CERN. +41 22 76 761 11 ext. 75825
- [Dr. Thierry Martin](#). Head of detector Unit at the ESRF. Tel: +33 47 688 20 52
- [Dr. Olof Tengblad](#). Head of Experimental Nuclear Physics Dep. Tel: +34 91 561 68 00