



Alberto R. Fernández Guijarro

Engineering and Applied Physics
(Madrid)

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02/02/1980



Professional Experience

More than 8 years of experience in the Engineering industry: Industrial Consumer Goods and Aeronautics.



March 2016-current date
Electrical Engineer-A400M Aircraft
Sogeti-Airbus DS (Madrid)

- Focused into system design and definition of Cargo Hold Low Brightness System (to fulfill dark adaptation for night operations in the A400M).
- Equipment development according Airbus DS V&V process.
- Electrical normative evaluation and analysis of equipments pending to be installed in the A400M in order to be compliant with AMD24 (usually deviations from MIL-STD-704 or ABD100.1.8).
- Use different customer tools (SeeXP, CATIA V5, EPD and SNT) to define Cargo Hold Lights system and consult different A400M versions.
- Extended knowledge about A400M Electrical Architecture (PDMT and PDMF) and its electrical protection devices (RCCBs, SSPDCs and CBs).
- Perform electrical load analysis for different equipment configurations (ELAN tool).
- Intermediate knowledge about DDD's generation and software loading.



December 2015-March 2016
Electrical Engineer-A400M Aircraft
Sogeti-Airbus DS (Madrid)

- A400M Electrical architecture design (Electrical Design Office at Airbus Defence and Space).
- Involved in design and definition of Cargo Hold Low Brightness System (ordered for OCCAR).
- Perform electrical load analysis for different equipment configurations.
- Technically analyze electrical requirements to be compliant with AMD24 and other normatives (DO-160, RTCA/DO-254, RTCA/DO-178 and MIL-STD-810).
- Use different customer tools (SeeXP, EPD, ELAN, ELCOREP) to define and consult different A400M versions.



February 2014-December 2015
Electrical Engineer-Light&Medium Aircrafts
Sogeti-Airbus DS (Madrid)

- Electrical generation and distribution design (wiring and routing definition) of power systems (Electrical Analysis Department at Airbus Defence and Space Electrical Design Office).
- Provide and support electrical (ATA-24) and lightning (ATA-33) solutions to different aircraft versions: NC-212, CN-235 and mostly to C-295.
- Perform electrical load analysis for different equipment configurations.
- Support to certification department: justify affected regulations paragraphs in the FAR/CS normative.
- Technically analyze electrical requirements to be compliant with different normatives (MIL-STD-704, DO-160, RTCA/DO-254, RTCA/DO-178 and MIL-STD-810).
- Use different customer tools (SeeXP, EPD, GD, SNT, SIDIE) to develop and define different C-295 patrol and basic versions.
- Eventual support to FT4B project to implement "Fly By Wire" philosophy in the C-295 Prototype 1.
- Direct supervision of the Sogeti team in Airbus (6 people).



August 2012-February 2014
Electrical Engineer-A400M
Sogeti-Airbus Military (Madrid)

- Provide and support solutions about development problems in the electrical system: Variable Frequency Generator (VFG) Auxiliary Generator (APU Gen) and Emergency Generator (RAT). In addition the GGPCU, an electronic controller for these units.
- Technically analyze and discuss the compliance between equipment and different normative (AMD24, RTCA/DO-160, RTCA/DO-254, RTCA/DO-178 and MIL-STD-810).
- Perform electrical/electronic testing in Airbus Military laboratories and in supplier rig to develop equipment qualification.
- Organize supplier meetings to follow up all the activities, manage units for laboratories and aircrafts development, write technical documentation and review it and visit supplier facilities.



June 2010-January 2012
Electrical Engineer
Aeroconseil Iberica-Airbus Operations (Madrid)

- Provide and support solutions about In-Service problems occurred during real flights in the Auxiliary Generator (APU Gen) and Emergency Generator (CSM/G).
- Analyze and discuss technically unwanted or abnormal behaviours for these equipments with different suppliers with different tools (FRACAS, 8-D reports, External Memos).
- Organize supplier meetings to follow up all the activities and problems in the manufacturing chain and during flights.



June 2008-July 2009
Electrical Engineer
General Electric (Madrid)

- Product Design and Development in project Tandem (magnetic-thermal device).
- Testing for mechanical components and mechanical system (with different kind of pieces: plastic and metallic). Focus on the lifetime of the device.
- Testing of electrical components, seeking solutions for: temperature rise, vibrations, short-circuit at 6KA, electrical endurance.
- Support the development of Tandem thermal system (bimetal) and magnetic system (coil).
- Design the thermal system for multipole devices (two-three-four thermal system devices).
- Identify and solve mechanical problems with tripping force or switch-off required to disconnect the device (measuring and fitting force vs displacement curves).
- Provide continuous reports to NPI (New Product Introduce) leaders.
- Homologue successfully the Tandem's project.
- Building experience about energy generation and distribution sector.
- Expertise with electrical devices (residential and controls). Participating in various projects (photovoltaic inverters, home automation, contactors and engine starters).

Educational Background

Constantly learning and applying it to my jobs.

- **2013-(present):** PhD in Nuclear Physics and Technology. ETSI Polytechnics University, Madrid.
- **2009-2010:** Interuniversities MS in Nuclear Physics. Complutense University, Madrid. Autonomous University, Madrid. Autonomous University, Barcelona. University of Sevilla.
Thesis: Gain vs Thermal Characterization in a SiPM device (Nuclear-Medical applications).
- **2006-2007:** MS in Applied Physics. Complutense University, Madrid.
Thesis: Electrical Measurements Simulation in a Silicium mid-band Titanium Implanted Cell. (Third Generation Solar Cells applications).
- **2006:** BS in Physics (specialization in Physics Devices). Complutense University, Madrid.

Other courses:

- Nanotechnology (30 hours). ETSI/ICAI. Madrid
- Android programming (40 hours). Sogeti, Getafe.
- Matlab programming (40 hours). Sogeti, Getafe.
- Robotics and Automatics Control (120 hours). SEAS-Avila University.
- Basic Maintenance Electricity (80 hours), AICAD Business School. Madrid,
- November 2007-June 2008: Scholarship holder in the Technology Department of General Electric Power Controls.
- February 2006-June 2006: Scholarship holder in the Nuclear Department, teaching Vectorial Calculus to university students. University Complutense, Madrid

Languages

- 🗣 Spanish: Native
- 🗣 English: Negotiation. C1
- 🗣 German: Elementary. A1

Computer Skills

- OFFICE Suite (Excel, Access, Power Point, Office, Microsoft FrontPage).
- CATIA V5
- SeeXP
- Airbus Tools: SIDIE, SNT, ESDCR, Product View, Primes System Extended, ICC, AIRNAV, EPD-Vault, DOORS and DMS.
- Maths programming softwares: MATLAB.
- Programming languages: Java & C++.
- VHDL. PLC's / FPGA's / PIC programming.

Other information

- Collegiate Member Physics Official College
- Driving license B1, own vehicle
- Very proactive, results-oriented, responsible and organized. Always willing to learn and assume new responsibilities.

Interests

- ✓ Sailing and water sports
- ✓ Rugby & Tennis
- ✓ Arduino
- ✓ Nuclear physics
- ✓ Richard Feynman & Enrico Fermi
- ✓ Nikola Tesla fan