

Jordi Vila

ELECTRICAL ENGINEER · TELECOMMUNICATIONS AND SPACE SYSTEMS FOCUS

Maryland. United States of America

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Experience

NASA Goddard Space Flight Center

Washington D.C. metro area, USA

ELECTRICAL PROJECT DEVELOPMENT LEADER FOR THE HIGH RESOLUTION MID-INFRARED SPECTROMETER (HIRMES)

Sep. 2017 - Present

As PDL, responsibilities include leading all electrical-related activities for a team of 30 engineers and scientists at Goddard Space Flight Center (GSFC), and coordinating deliverables and HIRMES electrical system integration between the GSFC team and teams from other collaborating NASA centers, private companies and universities.

SYSTEMS ENGINEER FOR THE BALLOON EXPERIMENTAL TWIN TELESCOPE FOR INFRARED INTERFEROMETRY (BETTII)

Oct. 2014 - Present

- After more than 3 years in the project, launched and operated the Balloon Experimental Twin Telescope for Infrared Interferometry (BETTII). Core team member during the two launch campaigns (Texas 2017 and New Mexico 2016).
- Electrical and Controls lead Engineer, mentoring several interns and graduate students.
- Developed the pointing and attitude control mechanisms during flight based on a Kalman filter algorithm embedded on a cRIO FPGA.
- Thermal dissipation and Power system design: power budget for the various voltages and current requirements across the payload.
- Electronics and software for the project: worked on the GPS system (NMEA), PCB Boards design, DC motors, energy consumption and temperature monitoring systems and software for super-sensitive star detectors, among others.

INTERNSHIP - MASTER THESIS

Apr. 2014 - Oct. 2014

- Developed the software and hardware infrastructures for the telemetry system used on the stratospheric balloon telescope BETTII. The protocol incorporated different frame sync packets, CRC error detection, and was bandwidth adjustable.
- Core team member during the deployment and operation of the Telemetry System during BETTII's launch and flight in June 2017. The infrastructure was used to store and download several hundreds GB of data from the telescope and to send commands to control and move the telescope at 135,000 feet.

ATOS - Tempos21

Barcelona, Spain

SOFTWARE ENGINEER

Feb. 2012 - Aug. 2012

- Working at the Research & Development department under the international project ADAPTA evaluating the feasibility for android mobile applications to work with Linked Data.

Skills

Programming Java, Android SDK, C/C++, Atmel AVR microcontrollers, git version control, i²c protocol.

Applications LabVIEW FPGA, Express PCB, atom, Eclipse, OMNeT++, Matlab, Photoshop, Slack.

Lab. Equipment Analog and Digital circuit design, oscilloscope, spectrometer, optical equipment, RF & Bluetooth communications.

Languages English, Spanish, French and Catalan. Italian (Beginner).

Education

Higher Institute of Aeronautics and Space (ISAE - SUPAERO)

Toulouse, France

AERONAUTICAL ENGINEERING. SUPAERO 3RD YEAR GRADUATE PROGRAM

Aug. 2013 - Mar. 2014

- Selective education establishment outside the main framework of the French university system, dependent of the Ministry of Defense.
- Field of study: Embedded Systems in airplanes. Specialization: Space communications, navigation and satellite networks.

Polytechnic University of Catalonia (UPC - ETSETB)

Barcelona, Spain

MSC TELECOMMUNICATIONS ENGINEERING

Sept. 2011 - Jun. 2013

- **Master Thesis with Honors (9.5/10):** Telemetry System of the Balloon Experimental Twin Telescope for Infrared Interferometry (NASA Goddard Space Flight Center).

Polytechnic University of Catalonia (UPC - ETSETB)

Barcelona, Spain

BSC ELECTRICAL ENGINEERING

Sept. 2008 - Jun. 2011

- Focused on Signal Processing, Radio communications, Telematics, Internet of Things, Optical Communications and Antennas.

Volunteering & Writing

Horizon Horseback Safaris and Ishestar

South Africa, Botswana and Iceland

HORSEBACK SAFARI GUIDE

Summers 2009, 2010 & 2011

- Volunteering as a tourist guide on horseback trails in Iceland (2013), South Africa and Botswana (2011 and 2009).
- Training and preparation of more than 80 horses. Horse Guide for safaris at reserve of Lindani and Dinaka (South Africa) and Mashatu Valley (Botswana).

Ecuestre Horse Magazine & family-run business Equitur

Sahara Desert and African Savanna

ENDURANCE PROGRAM TESTER AND FREELANCE JOURNALIST

2008-2012

- Tested endurance horseback trails in the Sahara Desert (Tunisia) as well as in the African Savanna's remote areas (South Africa, Botswana and Zimbabwe) and did equestrian reports published in various specialized magazines in Spain and Mexico.
Click to read : [El Mundo del Caballo](#) and [Ecuestre](#)

Union Bank of Switzerland (UBS)

Barcelona, Spain

MARKET ANALYST

Aug. 2008

- Conducted a comprehensive study on the cost and quality of life in Barcelona city for UBS Magazine.

Committees

2016 **SPIE**, Member of the International society for optics and photonics.

Washington D.C.

2013 **EUROAVIA**, Member of the European association of aerospace students.

Toulouse

2011 **Aucoop**, University association dedicated to cooperation and development of technology in rural areas. Participating in a project to install Wi-Fi repeaters in México and Bolivia.

Barcelona

2010 **Student Organization**, Member of the of Academic Committee of Evaluation of the Telecommunication Engineering School.

Barcelona