José Ogalde

Curriculum Vitae

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Personal Statement

Persistence and passion is what has guided me since I was a kid watching the night sky in the north of Chile to now as an engineer working in research laboratories for science and technology. A lot of my experience comes from working to develop the first Cubesat in Chile, and now working in the ALMA telescope. I have specialized in digital systems for instruments and now I am looking to open my field and learn more about astrophysics and space engineering. My interests are with space technology, telescopes, interferometers, digital systems, embedded systems, among others. I believe that challenges help us to grow stronger and let us contribute to build a better society.

Education

2016 - 2019 **M. Sc. Eng. mention in Electrical Engineering**, *University of Chile*.

2014 - 2019 **Professional Degree in Electrical Engineering**, *University of Chile*.

2013 - 2014 **Minor in Computer Sciences**, *University of Chile*, Santiago, Chile.

2010 - 2014 **B. Sc. in Electrical Engineering**, *University of Chile*.

Work Experience

Atacama Large Millimeter/submillimeter Array (ALMA)

Nov 2019- Present **Electronic Engineer** Maintenance support for operations of the ALMA telescope, specialized in the Baseline Correlator (12m x 64 antennas), the ACA Correlator (7m x 12 & 12m x 4 antennas), and for the BackEnd systems (Central LO and Digital Transmission System of the antennas).

Spatial Planetary Exploration Laboratory (SPEL, University of Chile)

2014 - 2019 **M.Sc.Eng thesis project:** Build an experiment inside of a 1U Cubesat to study the statistical properties for the power fluctuations of a dissipative electronic system in a low earth orbit environment, specifically when driven to an out-of-equilibrium state with an Orstein-Ulhenbeck forcing (see thesis, SUCHAI mission and SPEL website).

Radio Astronomical Instrumentation Group (RAIG, University of Chile)

2013, 2016, 2017 **Student projects** Working as student and teacher assistant for projects in Electromagnetic Waves, Microwaves and Antenna Theory courses (see RAIG website).

Teacher Assistance Experience (University of Chile)

2011-2018 Experimental Methods, Digital Systems, Microwaves, Advanced Digital Communications, Awareness of Architecture in Programming, Applied Electromagnetism, Computer Architecture, Introduction to Engineering I y II (University of Chile).

Computer Skills

Languages Python, C, Java, `bash`, MATLAB, LaTeX.

OS Linux (Ubuntu*, Debian, RHE), Microsoft Windows.

Scientific Python, CASA, MATLAB/Simulink, LabView.

Tools Vivado, PetaLinux, FreeRTOS, Raspberry Pi, Zynq, Microblaze, Eagle, MPLAB.

Others `git`, GitHub, Atlassian Products (BitBucket, Jira, Confluence), VirtualBox, Google Products.

Languages

English IELTS: 7.0, Operational command of the language (test report here).

Spanish Native.

Personal Skills and Qualities

Oral Good communication and social skills. Capable of working in a multidisciplinary environment, keep conversations and do video conferences in English.

Organization Good group management and self taught capacity for working in challenging projects.

Honours and awards

2020 Ramón Salas Edwards prize awarded by the national Institute of Engineers of Chile for SUCHAI Cubesat project as the best scientific project of the year.

2019 Graduate of Master's program with maximum distinction (100%).

2019 Professional degree in Electrical Engineering with maximum distinction (100%).

2010, 2015 Outstanding student recognized by University of Chile.

List of Publications

1.- Ogalde, J., Falcón, C., Díaz, M. Injected power fluctuations for a non-equilibrium electronic disspative system in space

2.- Ogalde, J., Dıaz, J., Azurdia-Meza, C., Gonzalez, J., Ehijo, A., & Prapinmongkolkam, P. Device-to-Device Communication for the 5G era: a Survey.

*User since 2012.