



Julia Alvarez Vallero

| LinkedIn:

<https://www.linkedin.com/in/julia-alvarez-vallero-666a59139> |

● ABOUT ME

I graduated as electronic engineer at the Universidad Nacional de Cordoba, Argentina, and I have a Master's degree in Renewable Energies, Climate Change and Sustainability from the Universidad de Santiago de Compostela, Spain. I am passionate about space and education, that is why i created MELIORA, a project that seeks to encourage youth to follow the space path.

● WORK EXPERIENCE

01/03/2021 – 31/03/2024 San Carlos de Bariloche, Argentina

POWER DESIGN ENGINEER INVAP SE

02/02/2017 – 29/02/2024 Córdoba, Argentina

UNIVERSITY TEACHING ASSISTANT NATIONAL UNIVERSITY OF CÓRDOBA

11/02/2022 – 10/04/2024 Santiago de Compostela, Spain

RESEARCH ENGINEER CENTRO SINGULAR DE INVESTIGACIÓN EN TECNOLOGÍAS INTELIXENTES

01/09/2021 – 29/02/2024 Córdoba, Argentina

POWER SUBSYSTEM ENGINEER SPACEBEE TECHNOLOGIES

● EDUCATION AND TRAINING

01/03/2016 – 29/03/2021 Córdoba, Argentina

ELECTRONIC ENGINEER National University of Córdoba

Website <https://www.unc.edu.ar/>

05/09/2022 – 20/02/2024 Santiago de Compostela, Spain

MASTER IN RENEWABLE ENERGIES, CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT

University of Santiago de Compostela

Website <https://www.usc.gal/es/admision/master>

● LANGUAGE SKILLS

Mother tongue(s): **SPANISH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C1	C1	C1	C1
FRENCH	A1	A1	A1	A1	A1
GERMAN	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Outlook | Microsoft Word | Microsoft Excel | Facebook | Microsoft Powerpoint | Microsoft Office

● **PUBLICATIONS**

2021

[Diseño de una plataforma ADC de alta velocidad con intercalador de frecuencia](#)

The advancement of optical communications, and growing market demand, have favored an increase in transmission speeds for large volumes of data. We observe that, although the optical fiber is capable of handling this information without major inconveniences, the electrical stage has some limitations. The conversion from the analog domain to the digital domain and vice versa, requires conversion devices ADC and DAC capable of processing these volumes of information and with high speed conversion rates. The evolution of converters, thanks to parallel architectures, like timing interleaved, have obtained substantial improvements in terms of conversion speed, however, no improvements in bandwidth are observed, since, to promote the increase in speed, the parallelism had to be increased. Against this background, the use of the FI technique is proposed, the application of which would be possible in both transmitting and receiving devices FI-ADC and FI-DAC. This pre-processing in receivers (and post-processing in transceivers), makes it possible to increase the general system bandwidth, utilizing converters with less BW.

This work presents the simulation of a proof platform for the application of the FI-ADC technique, and the performance results obtained from it, within the framework of the doctoral research of Engineer Leandro Passetti. For the proof of concept of this technic, it have been made the selection of componentes, design of the PCB, basic mesurements of performance and co-simulations of the electronic board to implement.

Alvarez Vallero, Julia

2023

[An interdisciplinary approach to spatial design at the university level](#)

My experience as a graduate student and, now, as young professional, was full of challenges, events, and congresses. I strongly believe these events are a key part in every persons career, because they do not only imply an enhance in knowledge and information, but, also, they are an excellent opportunity to harden the soft skills every professional needs in its daily job: proactiveness; ability to think and work within a group of people, and to accept different points of view. That is the reason why, once I got a position as an assistant professor in my home University, I decided to offer my students my best effort both to replicate these experiences in my classes and, more importantly, to share with them any information related to the different trainings I heard about. But, considering that I have a special interest in the aerospace sector, I have always dreamed to organize a project integrating different areas of knowledge. My idea was that during the whole academic year, the interested students could have the chance to design either a rover or a space module. I have also considered the possibility of working together with other colleagues from University of C´ordoba, who have been working on related topics. The idea is quite revolutionary in my country, where projects this size are not very common, particularly, in huge universities such as mine. But it is also revolutionary in the sense that it congregates students from no technical areas. This is something that is strongly highlighted from space agencies and industries, but is hardly ever perceived from undergraduates during their career. The broadcasting of the project is crucial, to ensure the impact on the university community, and as I see things, it will require a couple of months to assure it. The second step, will be to choose, after a predefined selection process, the students that would start the project. The schedule of the activities should be designed by the professors in charge of the project, with a close support of a committee of experts from the argentiniean industry that will give both support and founding

to the project. The committee should be formed by authorities from INVAP, Skyloom, CONAE, University of La Plata, University of Córdoba and any other institution related to the aerospace sector in Argentina. It would also be a plus for the project to have the occasional intervention of worldwide experts

Alvarez Vallero, Julia

● CONFERENCES AND SEMINARS

30/09/2023 – 06/10/2023 Bakú

International Astronautical Congress 2023

Link <https://www.iafastro.org/events/iac/iac-2023/>

28/09/2023 – 30/09/2023 Bakú

Space Generation Congress 2023

Link <https://spacegeneration.org/sgc2023>

12/12/2023 – 14/12/2023 Vienna

World Space Forum 2023

Link <https://www.unoosa.org/oosa/en/ourwork/world-space-forum/2023/world-space-forum-2023.html>

● PROJECTS

MELIORA

MELIORA is expected to encourage youth to follow the aerospace path by designing a space device throughout an academic year from an interdisciplinary approach. The program will be held within a superior education institute in collaboration with other organizations and industries.

Link <https://www.instagram.com/meliora.space/>

● HONOURS AND AWARDS

06/10/2023

Emerging Space Leader – International Astronautical Federation

Recognition of students and young professionals contributing to the space sector in emerging space countries.

Link <https://www.iafastro.org/news/the-iaf-is-proud-to-introduce-the-2023-iaf-emerging-space-leaders.html>

20/08/2023

Summer Course on Space Law and Policy – European Centre for Space Law

ESA/ECSL Summer Course on Space Law and Policy 2023

During the course, participants will attend intensive lectures and seminars given by leading university professors, space industry practitioners and technical experts concerning the international, regional and domestic legal and policy frameworks governing space activities and applications.

Link https://www.esa.int/About_Us/ECSL_-_European_Centre_for_Space_Law/ECSL_Summer_Course_on_Space_Law_and_Policy

Intern at FULGOR Foundation – FULGOR

We are a team of Argentines working with the mission of generating development and training opportunities in strategic areas for the future of the country.

Link <https://www.fundacionfulgor.org.ar/sitio/index.php>