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About Me

I obtained my Ph.D. in Electronics Engineering from INAOE, Mexico, in 2022. My research primarily revolved around the development of 2D/3D hyperspectral imaging using a single pixel camera. In addition to this, I have gained valuable experimental expertise in tackling intricate problems in diverse domains. This includes working on FPGA applications, RF design, and electric vehicle design. Moreover, I possess a strong command of programming languages and proficiency in using EDA and CAD/CAM/CAE tools for software development and design.

Languages

Spanish	● ● ● ● ●
English	● ● ●

Skills

Electronic design	● ● ● ● ●
Optical design	● ●
PCB/Signal Integrity	● ● ● ●
MATLAB,Python	● ● ● ●
CUDA, C/C++	● ● ● ●
FPGA,GPU,DL/ML	● ● ●

Work experience

2023	**Postdoctoral Research | Computer Science** — INAOE-Mexico
	Intelligent rescue system based on DL for UAVS.
2018-2022	**Research | Ph.D. student** — INAOE-Mexico
	Development of hyperspectral vision system FPGA/GPU.
2017	**RF Design Engineer** — INAOE-Mexico
	Development of embedded systems FPGA/DSP for communication and astrophysics.
2005-2015	**Research Assistant** — Simon Bolivar University-Venezuela.
	Nuclear Physics group, design electronic, energy renewable , electric Car, communication and astrophysics.
2012	**Research and Development Engineer** — INFN - Laboratori Nazionali di Legnaro-Italy.
	Control systems design for stage a particle filter for a particle accelerator Wein fourth-generation SPES project.

Education

2018-2022	**Electronic Engineering,Ph.D** — INAOE-Mexico.
	Doctorade's thesis: "Three-dimensional hyperspetral camera based on near-infrared single-pixel imaging".
2015-2017	**Space Science and Technology,M.Sc.** — INAOE-Mexico.
	Master's thesis: "Design and generation of a system detection of signal for applications in MINI-RADAR SAR (Synthetic Aperture RADAR)".
2012-2015	**Electronic Master.** — Simon Bolivar University-Venezuela.
	Master's thesis: "Design and implementation of an electronic system charging LIPO Batteries for a hybrid vehicle".
2015	**Diploma of Higher Education in Mobile Communications.** — UPEL-IPMJMSM-Venezuela.
	Diploma's thesis: "State-of-Art antenna using in the spacecrafts".
2003-2009	**Electronic Engineer** — Simon Bolivar University-Venezuela.
	Bachelor's thesis:"Acquisition card design for a solar-powered vehicle with Labview MMI interface".
1999-2003	**Diploma of Higher Education Electronics.** — I.U.T. Dr.Federico Rivero Palacios-Venezuela.
	Diploma's thesis:"Designed an electricity consumption of virtual monitoring system based on DSP".

Certifications

Opencv Computer Vision I (Python), Opencv Computer Vision I (C++), Opencv Deep Learning with PYTORCH, Zemax OpticStudio, Space Mission Design and Operations, Catia V5R21, Systems based on Machine Vision Inspection using IMAQ, Certificate Linux Network Administrator (ARCL), Computer and Communications Security, Network Management and Services, Synchrotron Light Sources and their Applications (ICTP), Terahertz Optics and Photonics (ICTP),Ansys Computer Aided Engineering (CAE), Ansys HFSS,Ansys Maxwell,Nvidia Fundamentals of Accelerated Computing with CUDA Python, Nvidia Fundamentals of Accelerated Computing with CUDA C/C++,Remote Sensing Applied to Ocean Color(CONAE), SAR Remote Sensing (CONAE),Optical Remote Sensing (CONAE).

Publications and Patents

Journals	AIP Publishing, IEEE,OSA, MDPI,Elsevier	(10)
Proceeding	SPIE,OSA, ASME, IEEE	(23)
Patents	3D-NIR enlarged creation image system and method,MX/a/2022/016091, Hybrid 3D imaging system,MX/a/2020/012197	(2)