Anthony Jr. La Santa Maldonado

Email: alasanta@uagm.edu

EDUCATION

Master of Science in Unmanned Systems **(**July 2024**)**
Embry-Riddle Aeronautical University, Worldwide Campus

Associate's Degree Instrumentation Technology/Technician **(**August 2017)
University of Puerto Rico, Bayamón Campus

Bachelor's Degree in Science, Major in Electronic Engineering Technology (June 2016)
University of Puerto Rico, Bayamón Campus

CERTIFICATIONS

Certified Fiber Optics Installer License Number: FOI245242 (Expires: 2/5/2025)
ETA International

TRAINING

NAV/COMM Equipment Service Training August 2023
Aircrafts Electronics Association (AEA)

Pitot-Static, Transponder, RVSM, and ADS-B: Testing & Inspection August 2023
Aircrafts Electronics Association (AEA)

Aircraft Electronics Technician Training with RCS and DNS Ratings April 2023
Ace Avionics

PROFESSIONAL EXPERIENCE

Multiannual Faculty January 2024 – Present
Department of Engineering and Aviation
Academic Division of Engineering, Design, and Architecture
Ana G. Méndez University, Carolina P.R.

Laboratory Technician of Applied Science November 2020 – January 2024
Department of Engineering and Aviation
Academic Division of Engineering, Design, and Architecture
Ana G. Méndez University, Carolina P.R.

- Responsible for the effective operation of the Engineering laboratories.
- Custody of laboratory equipment and materials and participate in inventory processes.
- Supervise the operation within the laboratory and ensure the proper use and care of the equipment.
- Keep the inventory of laboratory materials updated, recommend the purchase, and process the requisition, if necessary, in coordination with the School's Administrative Director.
- Coordinate with the corresponding areas the maintenance of laboratory applications and equipment, ensuring the operation of the equipment.
- Write and submit periodic progress reports related to the areas under my charge.
- Coordinate with the Department Director and the Teaching Staff the services to be offered in the Laboratories.
- Provide maintenance, and calibration to laboratory equipment, and make repairs to faulty equipment.

Laboratory and Skills Technician February 2018 – November 2020
Department of Engineering Technology and Aerospace Science
School of Science and Technology
Universidad del Este, Carolina P.R.

- Assist and advise students during laboratory experiments
- Custody of laboratory equipment and materials and participate in inventory processes.
- Supervise the operation within the laboratory and ensure the proper use and care of the equipment.
- Keep the inventory of laboratory materials updated, recommend the purchase, and process the requisition, if necessary, in coordination with the School's Administrative Director.
- Coordinate with the corresponding areas the maintenance of laboratory applications and equipment, ensuring the operation of the equipment.
- Write and submit periodic progress reports related to the areas under my charge.
- Coordinate with the Department Director and the Teaching Staff the services to be offered in the Laboratory.

Installation Technician December 2017 – January 2018
MULTI SERVICES AND SALES GROUP, INC.
Subcontracted by Honeywell HBS, Guaynabo P.R.
Professional Services at Baxter, Guayama P.R. and Janssen, Gurabo P.R.

- Installation and Testing of Fire Alarm equipment
- Installation and Testing of Access Control equipment
- Create access keys and access rights using Temaline
- Create access control database
- Write and submit periodic progress reports related to the areas under my charge.

Installation Technician December 19, 2016 – January 3, 2017
Security Telecommunications Francisco Bravo-Galan Raquel Y Adames
Subcontracted by Honeywell HBS, Guaynabo P.R
Professional Services at the University of Puerto Rico's Cancer Comprehensive Center

- Decibel measurements of sound produced by Speaker/Strobe when a Fire Alarm is active
- Place label to installed equipment and confirm the assigned address
- Inspection and testing of Fire Equipment (Pull Station, Smoke Detector, Tamper Switch, Speaker/Strobe)
- Inspection of Access Control Equipment (Door contact, Magna Lock)
- Installation and testing of Digital Voice Command (DVC)

Fire Alarm Systems Installation Technician August 31, 2016 – Nov 30, 2016
Internship at Honeywell International HBS, Guaynabo, PR
Edwin A. Rivera, Mentor | Email: edwin.rivera2@honeywell.com

- Use of Honeywell's XLS3000 Fire Alarm Control Panel (View list of trouble, node mapping, enable/disable of detectors or modules, view of active alarms)
- Use of Fire Fighter's Smoke Control Panel
- Installation of Honeywell's ACM/AEM-24AT Fire Alarm Annunciator
- Use of Verifire Tools to download the database to the Fire Panel, modify the existing database, and update the firmware of LCM
- Place label on installed equipment
- Make Redline to electrical and fire blueprints
- Download to PPS (Programmable Power Supply)
- Inspection sheet of installed fire equipment

- Inspection of Fire Alarm System (Elevator Recall, Shunt Trip, Fire phone jack, Pull station, tamper switch, Fire Smoke Damper, Smoke Detector, Heat Detector, Water flow Switch)
- Use of EBI R430, Quick Builder, and HMI Web Display Builder

TEACHING AND MENTORING EXPERIENCE

Part-Time Lecturer Professor October 2018 – December 2023

Department of Engineering and Aviation
Academic Division of Engineering, Design, and Architecture
Ana G. Méndez University, Carolina P.R.

- Offered Courses:
  - EETP 210 – Microprocessors
  - PHSC 208 – Physics Sciences Compendium
  - EETP 202 – Circuits Analysis I
  - EETP 216 – Electronic Circuits
  - EETE 220 – Introduction to DC/AC Circuits
  - EETE 220L – Introduction to DC/AC Circuits Laboratory
  - ENGI 201 – Wiring, Connectors, and Harness
  - ENGI 202 – Electronics Laboratory and Simulation Techniques
  - AETP 404 – Advanced Aircraft Navigation Systems
- Prepared lectures and laboratory experiments focusing on the course's objectives for undergraduate students, complying with current ABET standards.
- Created and graded course assessments to ensure the student understood the material and stayed on track.
- Presented case studies that occur in the industries to delve deeper into the course's units presented in the syllabus.

Mentor, SURE Summer Research Program June 2020, and June 2021

Ana G. Méndez University, Carolina P.R.

- June 2020 – December 2020: Mentored one student from ITEC Manatí developing a research titled "*Viability of a Cost-Effective 3D Printed Automated Prosthetic Arm using Electromyogram as a Sensor for Muscle Movements and Contractions*"
- June 2021 – July 2021: Mentored two students from Ana G. Méndez University, Carolina Campus developing a research titled "*Low Budget Pulse Circuit*" where they designed and constructed a Printed Circuit Board (PCB) for a variable pulse circuit.

Mentor, Universidad del Este MSEIP R3 STEM Program August 2018 – May 2019

Universidad del Este, Carolina P.R.

- Mentored nine undergraduate peer-mentor students of the MSEIP R3 STEM Program in the design of PCB boards, C programming language, soldering, and troubleshooting techniques of electronic circuits
- Guided the students on how to help the 52 high school students during the robotics course

Robotics Professor, Universidad del Este MSEIP R3 STEM Program August 2018 – May 2019

Universidad del Este, Carolina P.R.

- Teaches Robotics concepts to 52 high school students selected by the MSEIP R3 STEM Program
- Students are taught how to solder PCB boards and learn to identify each electronic components
- Vex EDR was used to teach C programming language and Scratch language
- Prepared lectures and class activities focusing on the analysis, design, and automation of robotics systems
- Guided the students in the assembly of different robots and the preparation and presentation of their Science Fair Board

Co-Mentor, Universidad del Este Summer Research Opportunities Program June 2018 – July 2018
Universidad del Este, Carolina P.R.

- Mentored two undergraduate students in the design and implementation of electronic circuits and microcontroller-based systems for an electrospinning device
- Guided the students in the preparation and presentation of their research findings

RESEARCH INTERESTS

Microcontrollers and Microprocessor-based Automation Systems for industry, pharmaceutical, farming, and home environments. Autonomous Uncrewed Systems for Industry and Indoor Applications.

RESEARCH EXPERIENCE

Research Student June 2012 - May 2016
University of Puerto Rico, Bayamon Campus
Ismael Sánchez Ríos, Mentor

- Automation of a lathe machine using PIC microcontroller (2015-2016)
- Development of XY machine using PIC microcontroller (2014-2015)
- Automation of an aquarium fish tank using a PIC microcontroller (2014-2015)
- Design, development and interfacing of sensors to mechanical objects using a PIC Microcontroller (2013-2014)
- Automation of a Milling Machine using a PIC microcontroller (2012-2013)

PUBLISHED WORKS

- González Sánchez, J. A., La Santa Maldonado, A., Díaz, Y. M., Rosario, L. C., Oliveras, O. P., & Diazgranados Jimenez, J. A. (2023). Controlled magnetic field assisted electrospinning for experiments on energy harvesting polymers. *2023 Argentine Conference on Electronics (CAE)*. https://doi.org/10.1109/cae56623.2023.10087010

TECHNICAL SKILLS

- ✓ Programming Languages (C, C++, JAVA)
- ✓ Use of DMM
- ✓ Use of Oscilloscope
- ✓ Use of Arbitrary Waveform Generator
- ✓ Use of Agilent Signal Generator
- ✓ Use of PPE (Personal Protection Equipment)
- ✓ Use of Agilent Spectrum Analyzer
- ✓ Microsoft Office
- ✓ Programmable Logic Controllers (PLC SLC 500, Micrologix 1100, RS Logix Software)
- ✓ PIC Microcontroller Programming

LANGUAGES

- Spanish: Fluent
- English: Writing Skills Fluent, Oral Skills Proficient

REFERENCES

Ismael Sánchez Ríos, Professor
Department of Electronic Engineering Technology and Instrumentation Technology
University of Puerto Rico at Bayamón
787-508-5633, ismael.sanchez@upr.edu

Juan Gonzalez Sánchez, Professor
School of Science and Technology
Ana G. Méndez University, Carolina P.R.
787-257-7373 Ext. 3217, jgonzalez252@suagm.edu

Jorge A. Diazgranados Jimenez, Director of Academic Program
Department of Engineering and Aviation
Academic Division of Engineering, Design, and Architecture
Ana G. Méndez University, Carolina P.R.
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