Didier Luca Benoit

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SKILLS

- Hardware: Oscilloscope, multimeter, power supply, signal generator
- Software: MATLAB, Altium Designer, Python (MicroPython, CircuitPython), C++
- Microcontrollers: Raspberry Pi, Arduino, ESP32
- Simulation/Design: Multisim, LTspice

PROJECTS

EMG-CONTROLLED PROSTHETIC HAND

- Designed and programmed a 5-DOF prosthetic hand using Raspberry Pi Pico, PCA9685 servo driver, and MyoWare EMG sensor.
- Developed control logic in MicroPython to map muscle signals to servo actuation.

IEEE Research Paper — Accepted June 2025

Leveraging Airborne Wind Energy Systems (AWES) to Build Reliable Microgrids in Remote Regions

- Led simulation modelling in MATLAB to approximate the power output of AWES based on weather data compared to alternative energy sources.
- Collaborated closely with professionals and peers to complete extensive research and calculations to write a publishable research paper.

BENOIT L.; NAKAMORI M.; DE LORENZO F.; RODRIGUES Y. R.; "Leveraging Airborne Wind Energy Systems (AWES) to Build Reliable Microgrids in Remote Regions," IEEE PES/IAS PowerAfrica, Cairo – Egypt, 2025. (Accepted)

EDUCATION

Bachelor of Science, Electrical Engineering — Anticipated June 2026

Seattle Pacific University, Seattle, WA

- **GPA:** 3.9
- **Relevant Courses:** Circuits sequence, Electronics, Microgrids, Signals and Systems, Logic System Design

Associate of Science — September 2022 – June 2024

Cascadia College, Bothell, WA

- **GPA:** 3.9 (President's List)

PROFESSIONAL EXPERIENCE

CAS Research Assistant — June 2025 – Present

Seattle Pacific University, Seattle WA

- Maintain and organize electrical engineering parts inventory to support student labs and research projects.
- Assist faculty with lab preparation, ensuring equipment and materials are available and functional for classroom use.
- Collaborate with faculty to keep lab classrooms and storage areas clean, safe, and fully equipped.
- Perform minor equipment repairs and troubleshooting to minimize downtime during teaching and research activities.

Research and Development Intern — June 2025 – September 2025

Seattle Pacific University, Seattle WA

- Conducted research and development of a wearable hydration tracking device using ESP32 based on an experimental biosensing technique.
- Collaborated with faculty supervisor and research team to design, prototype, and test early-stage sensor integration.
- Analyzed sensor performance data to evaluate feasibility, accuracy, and reliability of hydration monitoring approach.