Juan Antonio Robledo

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Atlanta, GA. United States.

EDUCATION

Ph.D. Robotics

Georgia Institute of Technology
2022-Present

B.S. Mechatronics Engineering

Tecnologico de Monterrey
2016-2021 (GPA 3.75)

LANGUAGES

- Spanish
- English
- Japanese (basic)

SKILLS

Coding

- Python
- MATLAB
- C

Prototyping

- FDM, SLA, DLP 3D printing

Tools

- SolidWorks
- Arduino
- Raspberry Pi
- Linux

SITES

https://github.com/JuanRobledo12

https://www.linkedin.com/in/jarobledo

https://www.researchgate.net/profile/Juan-Robledo-Lara

EXPERIENCE

Research Technician

IPICYT Research Institute · Mexico · August 2021 - July 2022

- Developed an **air quality monitoring system (AQMS)** that measures carbon dioxide, volatile organic compounds, and particulate matter by integrating low-cost sensors and a Raspberry Pi.
- Calibrated the AQMS sensors using **time series and regression analysis** of a reference instrument data.
- Implemented wireless communication architectures in the AQMS by connecting over 17 devices to a web server using the **MQTT** and **HTTP** protocols.

Research Trainee

Harvard Medical School · Boston, MA · June 2019 - January 2020

- Developed a portable **3D Digital Light Processing printer** that uses commercial resins and a range of hydrogel-based inks to produce small 3D models for tissue engineering applications.
- Developed **low-cost paper-based devices** for in vitro tissue modeling using extrusion-based hydrogel bioprinting.
- Supported the writing and literature review for **original research** and **review articles**.

RELEVANT COURSES

Control Engineering, Mechanical Design, Electronics, Industrial Networks, Industrial Robotics, Computer Drawing, Mechatronic Instrumentation, Actuators, Circuit Analysis.

SELECTED PUBLICATIONS

- Li, W., Wang, M., Mille, L. S., **Robledo, J. A.**, Huerta, V., Uribe Velázquez, T., Cheng, F., Li, H., Gong, J., Ching, T., Murphy, C. A., Lesha, A., Hassan, S., Woodfield, T. B. F., Lim, K. S., Zhang, Y. S., A Smartphone-Enabled Portable Digital Light Processing 3D Printer. Adv. Mater. 2021, 33, 2102153. https://doi.org/10.1002/adma.202102153
- Li, W., Mille, L. S., **Robledo, J. A.**, Uribe, T., Huerta, V., Zhang, Y. S. Recent Advances in Formulating and Processing Biomaterial Inks for Vat Polymerization-Based 3D Printing. Adv. Healthcare Mater. 2020, 9, 2000156. https://doi.org/10.1002/adhm.202000156

HONORS AND AWARDS

Georgia Institute of Technology

- ECE Fellowship - 2022.

Tecnologico de Monterrey

- Honorific Mention (Top 10% best scores of the 2021 Class) - 2021.
- 2021 Mechatronics Class Leader (Voted by the 2021 Class) - 2021.
- Student Development Diploma in Leadership - 2021.
- Academic Excellence Recognition - 2019, 2020.
- Academic Scholarship - 2016.

VOLUNTEERING

Robotics Teacher

Kidbotics · Mexico · March 2022 - June 2022

- Taught basic automation topics to elementary school children to spark their interest in robotics using sensors, actuators, Arduino, and Scratch.

Online High School Tutor / Tutor's Coordinator

PREP@NET· Mexico · August 2017 - November 2018

- Supervised tutors' performance in terms of the support quality they gave to the online high school students.
- Provided quantitative and qualitative feedback to online students in their Mathematics and English assignments.