

Omar Addasi

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Hands on tinkerer with experience in the film industry, atmospheric and food science research, and electro-mechanical prototyping.

Employment & Research

2023-Pres. - Graduate Research Assistant, The Benjamin H. Levich Institute @ CCNY

- Responsible for the design and manufacture of a lab-scale roll refiner for research and visualization of chocolate pastes during the refining process.
- Incorporated various sensors to monitor system reactions, including multiple high speed cameras (Basler, Photron), force sensors, LVDT's, dynamic torque sensors, environmental sensors, linked to a custom GUI (Python/tkInter) for data acquisition and motor control.
- Sponsored by Mondelēz International (Cadbury), with P.I. Dr. Jeffrey Morris, and postdoc Dr. Michel Orsi.

2023-2025 - Graduate Research Assistant, Urban Fluid Dynamics Lab @ CCNY

- Designed a UAV quadcopter for low-cost air quality and atmospheric observations in the coastal-urban boundary layer.
- Prototyped pressure based anemometer arrays in wind tunnels.
- Established and maintained a network of air quality and weather stations in various indoor and outdoor locations in the NYC area, using both LoRaWAN based communications and commercial sensor API's.

2021-2023 - Undergraduate Research Assistant, Urban Fluid Observatory @ CCNY

- Responsible for the logistics, rigging, calibration and data stream of remote sensing devices including scintillometers, sonic anemometers, ceilometers, microwave radiometers, and radiosondes for various atmospheric science campaigns.
- *CUBE-TRACER*, a DOE and NSF funded experiment investigating the impact of the urban environment on the coastal urban boundary layer in conjunction with NOAA's ARM in Houston, Texas, 2022
- DOE funded experiment investigating indoor and outdoor air quality in public housing and low income areas in upper Manhattan and the Bronx, NY, 2020-2023

2016-2020 - Freelance Lighting Design & Fabrication

- Specializing in commercial work and technical fabrication, focusing on unusual rigging or lighting applications

2009-2016 - Electrician/Film Lighting Technician

- Responsible for the design, installation, and safety of temporary three phase power distribution on sound stages and on location, using portable generators or in-situ power tie ins.
- Managed hiring, scouting, equipment orders and maintenance on various films and TV shows in the New York Area.

Education

M.E., Mechanical Engineering, 2025 - The Grove School of Engineering at the City College of New York

B.E., Mechanical Engineering, 2023 - The Grove School of Engineering at the City College of New York

Skills, Software & Programming

- Experience with CAD modeling, FEA simulation software, including Fusion360, Solidworks, AnsysCFD.
- Experience with machine tools, including CNC Mill operation, CAD/CAM, manual lathe and mill operation.
- General fabrication and construction including electrical, woodworking, welding, fiberglass, 3D printing, laser cutting.
- Basic to intermediate proficiency with Python, Dash/Plotly, Matlab, Arduino-esque C++
- Visual and media software, including Adobe Photoshop, Premiere, DaVinci Resolve
- Conversational proficiency of Spanish
- Aerial Lift certified, OSHA 10, licensed driver

Volunteering & Teaching

- **CUNY Service Corps, Puerto Rico, 2018** - Roofing and framing carpentry in Barranquitas, P.R. after Hurricane Maria.
- **All Hands and Hearts, Oaxaca Mexico, 2019** - Electrical and construction work in Oaxaca, MX after the 2018 earthquakes.
- **Rapid Prototyping, CiPass @ CCNY** - Created and taught a rapid prototyping curriculum in our university's makerspace.
- **NOAA Hires Mentor, 2024** - Taught remote sensing & data analysis basics to high school students.