**John Michael Roberts** (575) 635-5454 | [iamjroberts@gmail.com](mailto:iamjroberts@gmail.com) Online portfolio: [iamjroberts.github.io](https://iamjroberts.github.io/)

**Summary**:

Lead Mechanical Design Engineer for 6 years at [RingIR Inc.](https://ring-ir.com/), I ensure cross-functionality of electrical, optical, and mechanical systems into cohesive and reliable mid-infrared Cavity Ring Down Spectrometer devices.

**Education**:

**B.S. Mechanical Engineering Technology- Major Concentration Renewable Energy Technology**

**New Mexico State University** **May 2018**

**Certifications/Achievements**:

United States Patent

* Vacuum Airflow Filtering For Biological Sensing No. US 11,630,056 B1 (April 18, 2023)
* Resonant, Multi-pass Cavity For Cavity Ring-down Spectroscopy No. US 11,346,780 B1 (May 31, 2022)

New Mexico Manufacturing Extension Partnership

* Lean Project Manager Training (November 2022)
* Fundamentals of Lean Manufacturing/Lean Manufacturing Basics (October 2022)

American Welding Society

* 6G Pipe GTAW- Mild, Stainless, and Chromoly Steel (March 2016)
* 3G + 4G GTAW- Aluminum (March 2016)

SolidWorks Associate Certificate

* Mechanical Design: C-YFFA8LG2CF (April 2014)

**Technical Skills:**

SolidWorks Solid Modeling and Drafting, Lean Manufacturing Management, Leadership and Project Management, Prototyping, 3D Printing, Welding

**Experience**:

**Mechanical Design Engineer @ Ring IR Inc. (*August 2018 - Present*)**

* Full system CAD design
* Machine part drafting
* Manage the integration of systems from other engineering teams
* Laboratory testing to ensure functionality and confidence checks
* Scientific test data collection in lab settings and remote field work
* Ensuring customer/contract requirements are met
* Part acquisition, logistics and quality control
* Short run manufacturing

**Prototyping Lab Technician @ Studio G - Arrowhead Center/NMSU (*August 2017- May 2018*)**

* Facilitate real world design practices for client entrepreneur's ideas/products
* Prototype design and testing of concept ideas through CAD modeling and 3D Printing
* Implemented a new-hire structure protocol fast tracking the process