Describe your overall duties/ responsibilities as a Sr. Laboratory Engineer:

The laboratories at Hubbell Power Systems perform high-voltage testing of our company’s and customer’s power and utility products, such as insulators and flashback arresters. I seek to be the subject matter expert in both the design of our experiments and the underlying physics observed during product testing in extremely high-voltage environments.

What advice would you give to students who are considering majoring in Aerospace Engineering?

Mike Rowe from the TV show “Dirty Jobs” once gave new graduates his advice: ‘Don't follow your passion; instead follow opportunities and bring your passion with you.’ I recommend considering this advice. Personally, I work hard to create for myself as many opportunities as I can, then pick the best one. Throughout my career - by taking a good opportunity and keeping an open mind - I have had amazing experiences including building a piece of a dark matter detector, implementing IoT to modernize automobile manufacturing, witnessing a universe of chemical reactions inside of a jet engine, and probing the effects of 100kA of electric current flowing through a semiconductor.

Explain the skills/abilities that are required for being successful in your role:

I need to have a solid grasp on proper laboratory techniques. That means safety first; and it also means understanding the purpose of taking a measurement, how to take a measurement, and how to estimate uncertainty of a measurement. I also need to understand the fundamentals of electrical engineering. I need to apply Ohm’s and Kirchoff’s Laws, understand the physics of things like transformers and diodes, and know how resistors, capacitors, and inductors will affect AC and impulse electromagnetic fields.