Most Exciting Work
What makes the study of wildland fire so exciting is its complexity. You have to know information from many topics, such as fluid dynamics, heat transfer, chemistry, plant biology, and physiology.

When did you know you wanted to be an engineer?
I was always curious about how things worked. It wasn’t until college that I realized mechanical engineering provided a physical understanding of the world that I’ve always wanted. It is such a broad field that I could really do anything with my career.

Important Engineer Characteristics:
It’s hard to do research without being curious. The desire to know “why?” is what really drives research forward and allows for new discoveries.

Example of a simple question I have tried to answer: How do wildland fuels ignite, or start? How long do wildland fires burn? The goal of my research is to understand how wildland fire actually spreads. Surprisingly, we still don’t know the details.

Technology or equipment used in my work:
Our goal is to understand wildland fire in a completely new way, so we design and build a lot of our own equipment. For example, we built an electric heater that heats air up to flame temperatures. This invention helps us understand the role of hot gases in the fire starting process.