

The Don Difference Series  
Elizabeth Thompson

0:00-0:20 I'm an electrical engineering professor. I'm very heavily involved in teaching research and service activities. I just love the environment and the atmosphere here, and I've really always wanted to teach. And, um... I just love interacting with students and I like the intellectual stimulation of teaching and research.

0:21-0:37 I've worked with functional magnetic resonance imaging for awhile. I did some work in that, and then I kind of moved into magnetoencephalography which is MEG. It's similar to EEG, but it actually measures the magnetic field coming off your brain instead of the electric field.

0:38-1:03 When people have epileptic seizures, the doctors at this point have to do an invasive procedure to find the source of that epileptic seizure, and it's a very dangerous invasive procedure. So we're looking for non-invasive techniques that can accurately locate—pinpoint—that seizure before operating on it. It would have tremendous impact if they can do this non-invasively.

1:04-1:26 Students at IPFW have an advantage over students at a larger university in that we are very engaged with them—we know them. Um, we have relatively small class sizes, and we really know our students well. And, um, we know their capabilities. We've had some outstanding senior design projects and many of them are industry-sponsored, industry-proposed. So these are real-world, real applications.

1:27-1:45 The students are able to use all of the education that they've developed and learned, and transfer it into a real-world project. So, it's just interesting to see how that transformation occurs and always amazing to see their results. They do such a good job on their senior design projects. Very, very impressive.

1:46-2:04 The collaboration with area industries is mutually beneficial. It's beneficial to the industry because they are getting, like, highly-trained students. It's extremely beneficial to our students because they get real-world experience, they have a real project to work on, you know, they get a feel for what they'll actually be doing after they graduate.

2:05-2:27 Like I tell the students, if you're bored in your job, then it's your fault. (Laughs) You need to find something that you really have a passion for and that you're really interested in. And there are so many things that you can do with engineering. So many different things, and so many areas that you can pursue. So you really need to find something that you feel like you're making an impact and a difference, and that you find challenging.

2:28-2:31 (Music)

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