

Transcript of Catherine Tsouvaltsidis, Head of Research & Development

The coolest thing about my job is... working at Canada's largest radio telescope!

At the Algonquin Radio Observatory, I'm the Head of Research and Development. I get to try out new technologies at the observatory and see if we can place them in with the existing technologies here, as well as maintain and document everything that is in use. The Algonquin Radio Observatory is the most accurately mapped location in Canada. We're mapped to one millimetre against the galactic plane. The current research that we're doing here is based on pulsars. So pulsars are very tightly packed neutron stars, and are very different than anything we've seen on the planet Earth. Why do we care about pulsars? Well because they're so different, and we have a curious nature, we want to explore them, and understand them, and see what they have to do with us in the universe. The most remarkable fact that I've learned about pulsars is that one teaspoon of pulsar material would weigh more than Mount Everest here on planet Earth. It's amazing to be able to work with researchers from around the world, and to be one of the main dish operators. I love tracking things, and working with the computer systems or manually tracking things, and having to judge distances and speeds with my brain. It's a lot of fun, and it keeps me on my toes. Deep space communications are when we use a ground station like this to communicate with other planets or objects in our solar system, basically machinery, or satellites in orbit, or even landers on other planets.

I have always struggled with Mathematics, but I didn't let it stop me from pursuing my dreams. I worked on my homework every day, studied extra hard, and plowed through that problem, and I think if you work hard, you can achieve whatever you want. My advice for girls is to follow your heart and your passions. I think if you follow your heart and your passions throughout your lifetime you'll be happy, you'll enjoy everything that you do and that you put your mind to!