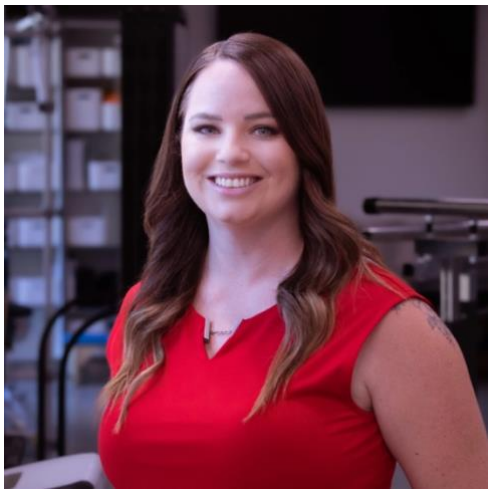
Just a Small Town Girl, Living in an Academic World:
Dr. Ashley Dalrymple's Journey to Finding a Faculty Position



A lot of people have different definitions for what it means to be first generation. For me, it means that not only was I the first in my immediate family to attend university, I was the first of my entire extended family (grandparents, aunts, uncles, and cousins). I come from a long line of hardworking labourers and trades workers. And yes, that's how I spell "labour," because I am Canadian. I grew up in a small town in Alberta. Looking back, it is remarkable to reflect on my transformation from my humble beginnings to where I am today as an Assistant Professor in the Departments of Biomedical Engineering and Physical Medicine & Rehabilitation, as well as Faculty in the Neuroscience Program and an Adjunct Assistant Professor in Electrical & Computer Engineering, at the University of Utah.

I always knew that one day, I would attend university. To me, it was an inevitability. I also had my heart set on forensic science. I even did a summer program, called Shad Valley, at a university that had a forensics program. That summer was the first time I was surrounded by fellow nerds. Being in a safe space where I could tell nerdy jokes and not get made fun of for being smart is where I truly bloomed. It was also where I discovered my aptitude for engineering.

But when it came time to do things like choosing a school, a program, and even figuring out how to enroll in classes, I was on my own to find solutions. It was also up to me to come up with a plan for how to finance my education because I grew up in a low-income household. At first, I relied on scholarships and student loans. However, I struggled during my first year. Like, 2.5 GPA struggled. Suffice to say, I relied solely on student loans and tips from my restaurant serving jobs to get by after that.

While I got off to a rough start, I eventually did very well in my undergraduate program. I chose Electrical Engineering with a Biomedical option at the University of Alberta. I knew I wanted to be a biomedical engineer, and the EE-BME was the program I could get into with my low first-year GPA. But it was also the one I wanted, because I thought I was going to specialize in MRI. Why MRI? Because I thought the images looked cool. Seriously. I didn't know better, and without a network that could give me advice, I went with my gut.

One imaging class made it clear to me that MRI was not going to be my thing. But through my coursework and an opportunity to attend a biomedical engineering conference, I discovered the field of electrical stimulation. I thought it was the perfect merging of electrical engineering and medicine, and I was hooked. I also knew that if I wanted to pursue this field further, I would have to go to graduate school.

I started as a master's student because, at the time, I wasn't sure if I wanted a career in industry or academia. I also wasn't aware of companies in Canada that used electrical stimulation methods, and I had no connections to help me navigate this field. We were also taught by professors that having a PhD would disqualify us from industry jobs. I now know this to be bad advice. But as I was doing my master's research through a Neuroscience program, I fell in love with my research project:

developing control strategies to produce walking by stimulating the spinal cord. Again, to me, this was a perfect merging of electrical engineering and medicine. I decided to stay for a PhD.

Looking back, there were many aspects to my graduate student experience that were made more difficult because I was a first-generation student. I never fought for better pay, or even annual inflation pay increases, because I didn't realize that this was something others got. I was completely naïve to the publishing process, that our research was funded by grants, how salaries were provided, the importance of networking, and what to expect beyond my PhD. I later came to know that this informal knowledge is often referred to as a *hidden curriculum*. I often felt shame for not *knowing* all of these things I was expected to know. I also did not have many peers who could relate — and did not find them until I was late into my program — contributing to my feelings of isolation, burnout, and impostor syndrome.

Another aspect to being first generation is that my family could not wrap their minds around what I did (was it school or work?). They looked down on me for being a perpetual student and not having kids yet. But, they also expressed pride in me for doing what I loved. Trying to explain a postdoc was even more confusing for them. The one who put in the most effort was my grandma. I lived with her when I was in undergrad. When I was in grad school, as we sat at her kitchen table playing games, she asked me to explain, in detail, the research that I did. So, I got a pen and paper and began drawing a spinal cord. During this discussion, she asked deep and insightful questions, despite being in her 90s and having a grade 8 education. She thought they were "dumb" questions, but they were actually similar to questions I was often asked at conferences. I was so proud of her, and she of me. I dedicated my doctoral thesis to her.

I did my undergraduate degree and PhD at the same institution, so I decided to do my postdocs abroad. My first postdoc was at the Bionics Institute in Melbourne, Australia. It was a short, sweet, and productive postdoc. It was also where I first began to heal from the severe impostor syndrome that I brought with me from my PhD. What made all the difference was that I had a mentor who encouraged me and provided frequent, genuine, positive feedback.

My second postdoc was at the University of Pittsburgh. I joined a multi-PI lab cluster, and this was one of the best training environments I have ever seen. At the time, I was the only female postdoc. I wasn't cured of my impostor syndrome yet (actually, I don't think it ever truly goes away — it just shifts into new things that you feel you aren't qualified for). Very quickly, many of the female students started coming to me for scientific advice and telling me how much it meant to have a female postdoc as a role model. Let me tell you, I was honoured but equally terrified of not meeting their expectations of me. This period in my life started to shape who I am as a mentor. I wanted to be very intentional, reflecting the positive traits of the mentors I'd had so far. I was also fortunate to have some wonderful faculty mentors in that lab, who provided both direct and indirect support.

It was a couple of months into this postdoc that COVID-19 caused the world to shut down. I was living alone in a foreign country, away from my fiancé who was doing his fellowship training in Canada. This was a dark time for most people, so I will just say that I went back to Canada for a short while, we made the difficult decision to indefinitely postpone our wedding, and then I returned to Pittsburgh in a panic due to concerns over bans of visa holders. I didn't see my fiancé for nine months after that — not until right before our wedding.

Also during this time, our lab moved down the street to Carnegie Mellon University. We all underestimated how much of a research interruption this would cause: from redoing ethics

protocols, transferring equipment and grant funds, to access issues at Pitt for our collaborative projects that were exasperated by COVID-19 lockdowns — we hit delay after delay.

Since I was to remain in Pittsburgh alone, I became hyper-focused. I was certain that I wanted to remain in academia, so I made a list of all the things that would make me competitive for a faculty position:

- publish, publish, publish
- present my research at conferences
- get a fellowship
- get my own grant (I wasn't eligible for a K99 or F32, so I got a pilot grant instead)
- mentor students
- guest lecture
- get training in education and pedagogy
- expand my network
- create an online presence
- become familiar with writing ethics protocols for human and animal research (I did both in Pittsburgh)
- contribute to the writing of a major grant
- receive society awards
- peer review papers

In addition to my academic work, I have also been heavily involved in outreach in STEM. Getting young people excited about science and engineering is a passion of mine and something I have done since undergrad. While it was challenging to continue outreach during COVID-19, our lab group found ways to teach programming workshops and other outreach activities safely. As a lab, we also went through personal growth together. We expanded efforts to make our field more diverse, promoting equity and inclusion through several initiatives that still thrive today. Leading DEI efforts is also how I became known to department and university leadership, and it provided me with insight into university governance. This was helpful as I prepared my faculty applications.

<u>As I checked off my postdoc list, I realized a few key things:</u>

1. Opportunities rarely happen spontaneously. You need to figure out what you want, do what it takes to get what you want, and let your network know what you want. This way, you make your own opportunities, and mentors will send opportunities your way.

2. As much as I had a list of academic milestones to achieve during my postdoc, there were no guarantees that they would result in me getting a faculty position. It's not like a degree, where you tick all the boxes, and you get a diploma. Some people get faculty positions with fewer check boxes than I had, and some have more. I hit a point while on the faculty job market where I didn't know what else to do to make myself more competitive. This was made more difficult by hiring freezes brought on by COVID-19.

3. Getting where you want to be requires some sacrifices, and this looks different for everyone. As much as you should decide what you want, you should also decide what you are willing to give up or postpone to get there. If you have a partner, this requires balancing their goals and priorities, and it can be challenging to make theirs align with yours. It’s not always possible to turn down faculty offers because a spousal hire is not something that can immediately be manifested. But it’s harder to push for what you need once you have made the move.

4. Don’t compare yourself to others. People are more than papers, credentials, and a list of awards. It takes rejection after rejection to get where you want to go. Get used to it, because my CV of failures has only grown since becoming faculty. But know this about your faculty job applications: some you'll win, some you'll lose. Getting a faculty job is as much luck, personality fit, and who you know as it is based on your expertise and productivity.

Some things to expect when applying for faculty positions:

Your CV and application package will get you short-listed for a video or phone call. Making a great first impression and being highly prepared will get you a site visit.

During the site visit, your host department(s) are trying to answer the following questions:

- Will you be a good and pleasant colleague? This hinges on the personalities in the department and how well you "click". It is also an assessment of how you can contribute service to the department through participation in committees, organizing guest lectures, and other internal activities.

- Do you hold similar values as the members of the department? This may be related to teaching, mentoring, and research philosophies, but it might even include your personal values.

- Can you teach difficult concepts? This can come through during your research talk, but some institutions will assess this more directly with a teaching talk as well.

- Is your research interesting, and can you get others excited about your work? This will be important for attracting and training graduate students and postdocs.

- Have you thought about how you would run a lab and mentor students? A lab is like a small business, where you have to make budgets, manage personnel, make progress on big projects, and help train the next generation of researchers.

- Can you bring in grant money? They want to know if you can pitch your research logically and within the scope of a grant proposal. They also want to make sure you can present your work in an engaging way that conveys the potential impact of your work. It's important to limit yourself to a couple of ideas that you want to focus on first. Otherwise, they may worry that you will be too scattered and will not be able to write a high-quality and well-thought-out proposal.

Interviewing takes practice, just like anything else. Have experts outside your field review your application materials, just as you would your graduate fellowship applications. Practice and refine your talks based on questions during your interviews. Keep in mind that your audience is not necessarily in your field. Take any positive feedback as genuine. Always bring a granola bar. Ask for "bio breaks" as needed. Don't have more than one alcoholic drink during dinner.

My take-home message as someone who spent a lot of time figuring out the process herself? Finding your passion and charting your career journey takes time and sometimes some trial-and-error. That’s normal and perfectly okay. Experience guides our decision-making. Finally, and most importantly of all, don't stop believing in yourself.