Meet Our Faculty:
Dr. Charlotte C. Gard, Applied Statistics

Interviewer: Mr. Brian Taillon, NMSU

Your NMSU biography indicates you have been all over the country and have had many different work and educational experiences. How did that happen?

I grew up in Alabama and attended the University of Alabama for my undergraduate degree in Applied Mathematics. Back then, I didn't know what it meant to be an Applied Mathematician. I imagined being stuck in a cubicle working math problems for the rest of my life. So I decided to get an MBA and ended up at the University of Texas at Austin.

That degree was funded by the Department of Defense. In exchange for that funding, I was required to work for the DoD for two years after graduating. I was assigned to Redstone Arsenal army post in northern Alabama. There, I did rotations through different offices and got tastes for things like budgeting, contracting, program planning, and operations research.

After three years of working in these different areas, I was asked what I wanted to do next and chose operations research. I worked in that area for one more year.

About that time, I met my husband. He is a former army helicopter pilot who was transitioning in his career and beginning work in operations research at White Sands Missile Range. We began dating long-distance. Eventually, I moved to New Mexico, we married, and I started a degree program--then called experimental statistics—at NMSU. It took about two years to complete it. When my husband finished his two-year assignment, he resigned from the military and we moved to the Washington D.C. area.

I've always wanted to do public health research. Thus, I was fortunate to find a position in that field coming right out of school. I went to work for a company headquartered in North Carolina called
Research Triangle Institute—now RTI International. They had a small office in Rockville, Maryland, next door to the NIH. There, I worked as a statistician on large NIH-funded projects primarily related to reducing infant mortality. My husband went to work for a defense contractor.

After several years working at the master's level, I decided to return to school and earn a Ph.D. in biostatistics. I did an online “find the program that's right for you” exercise. The University of Washington came up number one, so I applied and fortunately was accepted there. It worked out well because my husband had an opportunity to transfer to Seattle with his employer. While a doctoral student, I started working with the Breast Cancer Surveillance Consortium.

There was then a brief detour through Hawaii. My husband was transferred there. I went with him once my dissertation research was to the point I could finish it remotely. We spent roughly two years there and then my husband left his job to join White Sands as a government employee. I was pregnant, and we wanted to raise our soon-to-be daughter in a smaller town, where we could be more focused on our family. So we returned to New Mexico in June and I gave birth in August. Because I'd been in NMSU’s program, I had connections with many of my former professors. I joined the faculty initially as a temporary college assistant professor. I did that one semester and then was fortunate to be hired as a tenure track assistant professor. I've been in this position for two years.

You said you always knew public health was an area of interest to you. How?

It’s the idea of helping people. I think that’s one thing that drew me to teaching. But in thinking about a research career, I was drawn to public health because I could see the benefit of the research. In my family, there is a strong history of breast cancer, so I wanted to work on breast cancer, specifically. I wanted to feel I was doing something research-wise that was going to make a difference in people’s lives—people like the women in my family.

Have you done any other type of research other than public health?

Not really. Not outside of a classroom setting.
You are a former NMSU student who now teaches here. How have you found that transition?

I had a wonderful experience here as a student. It was a very happy time in my life personally and I had a very good experience in the program. I hope having gone through our program has given me a perspective that allows me to understand my students and maybe what they are going through a bit more because I can remember taking the classes I’m now teaching.

What don’t your colleagues and students know about you?

I’m in love with my daughter and I enjoy being a mom. I’ve spent much of my life trying to find balance. Being a mom balances me in a way nothing else has.

What are you most proud of as a researcher and educator?

I can’t tell you how many times I have had someone tell me that they “hate statistics.” So when I first started teaching, I would tell my students, “I don’t want you to hate statistics. You don’t have to love it, but if you could just not hate it.” I try to expose my students to the subject and my excitement about it in hopes that maybe I can spark an interest in someone else. So, when a student writes to me and tells me, “I am thinking about getting a master’s degree in statistics, can you help me find a program?”—it makes me really happy. If I can just open up a little bit of a world to a student. To hear from former students that I have made a difference to them means a lot. I am also very happy that I have been able to continue to do research with the breast cancer group in Seattle. It’s really nice to have the two things together.

Where do you see your research going in 5-10 years?

A group I work with is developing models to predict a woman’s risk of developing breast cancer. One thing we’re trying to do is incorporate information about a woman’s breast density into these models. I’m also interested in measurement issues related to breast density. As currently measured in clinical settings, it’s subject to considerable measurement error. I’m interested in understanding that error and developing statistical models that account for it. So, I imagine my research will focus on breast cancer and breast density specifically to improve risk prediction modeling. I’m excited to see where it will lead. I’d also like to learn more about the work that others here at NMSU are doing in cancer research.
Is there anything about NMSU they can help you with or something they may not know that can be helpful to them?

I am happy to be back at NMSU. Everyone has been so welcoming and supportive. I'm very grateful for that.