

# Get to Know the Math Faculty: Christine Cole

*The second in a series of Math faculty profiles*



## **Where did you grow up?**

I grew up in University Place, WA. We lived close to the Tacoma Narrows Bridge, which replaced the bridge that was nicknamed “Galloping Gertie” due to its famous collapse in 1940. A video of the bridge collapsing is often shown in differential equations or physics classes when discussing the phenomenon known as “forced resonance,” although we now know that cause of the bridge’s collapse was actually aeroelastic flutter. In any case, I travelled across the replacement bridge many times in my youth without incident, and enjoyed walking across the second span shortly before it opened to cars.

## **When and how did you first become interested in math?**

I remember enjoying math from a young age, and I was convinced that I wanted to be a teacher at some level before I even graduated from high school. My parents tell me that I set up a classroom in our basement to teach them French shortly after we started learning it in 2nd grade, so I must have gotten the teaching bug pretty early. My dad was a professor in the Math & Computer Science department at University of Puget Sound, so teaching math at the college level seemed like a pretty natural thing for me to do. Dad’s retired now, and he has given me lots of extra math books to draw examples and ideas from. He also shared his Calculus notes with me. It’s great to be able to benefit from his 30+ years of experience teaching. We get to have lots of discussions about teaching and learning, which is really fun for both of us! The picture above left shows my dad and me wearing our regalia around the time of my PhD graduation ceremony.

## **Where did you go to college and what was your major?**

After graduating high school, I moved half-way across the country to attend Macalester College in St. Paul, MN. I had already decided to major in Math before I arrived on campus, and eventually decided to pick up a second major in Physics. Macalester was a small liberal arts school (even smaller than Seattle U!) and I enjoyed the small class sizes & getting to know my professors. The professor who taught our quantum mechanics class even had all of us over to his house for dinner one night. Many of my former math professors are very active in the Mathematical Association of America (MAA), so I still get to see them at conferences, which is a lot of fun!

## **If you are not from Seattle, when and why did you come here?**

After graduating from Macalester, I was ready to return to the Pacific Northwest. I took a year off before entering the graduate program in Applied Math at the University of Washington. My application area was Mathematical Biology, which encompasses everything from modeling how populations of species interact, down to cellular-level phenomena. My PhD research focused on modeling molecular motors, which move

things around in our bodies. The mathematical side of my research involved partial differential equations, as well as some probability. One of the examples that I talked about in my PhD defense was about how the bacteria *Listeria* moves within cells. My mom was a microbiologist, and my dad was a statistician, so it turned out that my dissertation was related to things that they were both interested in. Another fun fact: Dr. Oliveras and I were in the same cohort in our PhD program we had a lot of fun together! I also overlapped with other SU math faculty when we were grad students at UW in different departments.

**When did you start teaching at Seattle U. and how did that come about?**

While I was in grad school, I took every opportunity that I had to teach. I knew that I would be looking for a job where teaching was my primary role, and I also knew that I wanted to be at a school with small class sizes, similar to what I was used to from my undergraduate days. I also wanted to stay in the Seattle area. My first full-time teaching job was at Pacific Lutheran University in Tacoma, filling in for a faculty member who was on leave. I loved working with the students and my colleagues at PLU, but I didn't love the 50-mile door-to-door commute from Seattle. I was really lucky that a position at Seattle U became available at the same time that my visiting position at PLU was about to wrap up and that I was fortunate enough to be selected for the job. I have been at Seattle U since Fall 2013.

**What is your favorite class to teach and why?**

I mainly teach classes at the precalculus & calculus level. Working with students is always the best part of teaching, which is why I really enjoy all of the classes that I teach. My favorite class is probably Differential Equations, because the kinds of problems that we can solve start to have even more exciting applications. Solving differential equations also builds on techniques & skills that I teach in lower level classes, so it is exciting for me to see students start to put it all together.

**What is your favorite pastime, other than math?**

I love spending time outside, rain or shine, since I was raised in the Pacific Northwest. I enjoy hiking, playing soccer, and have recently started running a couple of times a week. I especially enjoy gardening! My parents have been very active in their local rose society since before I was born, so gardening has always been a part of my life. I'm fortunate to live in a house with a yard that I have filled with about 25 rose bushes, a fig tree, and two apple trees. There are four raised beds where we grow tomatoes, strawberries, snap peas, and other assorted vegetables. When I'm inside, I like to read and spend time with my husband Doug (pictured with me above right) and our two cats, Jack & Teddy.

**If you could give college students one piece of advice for success in school, what would it be?**

Ask lots of questions and go to office hours!