Know Your Wisconsin Mathematician

Interview with Chris Bendel, UW-Stout, by Laura Schmidt, UW-Stout

Where did you grow up?
St. Paul, Minnesota.

Was there a time in your life when you discovered that mathematics was what you wanted to do?
I always did well in math classes and enjoyed it, but I thought about various career ideas growing up. My math teacher during my senior year of high school, Mr. Ned Thompson, was great. More than ever before, he made math class fun. He would regularly give us various sorts of puzzles outside the standard curriculum that I really enjoyed. That's definitely when I decided that I wanted a career related to mathematics, although at the time I had no aspirations of an academic career.

Where did you go to undergraduate school?
The University of St. Thomas in St. Paul.

What about graduate school?
Northwestern University in Evanston, IL. Having lived at home during college and being a commuter student, graduate school was sort of my "off-to-college" experience.

What was the influence of your family on your education?
They were always supportive of my (and my brother's) education. Growing up, my dad was always ready to help me study or review for an exam or to get me to the library (in those pre-Internet days!). But they never pushed me into any particular direction.

Are there any teachers who had influenced you to become a mathematician?
Definitely. All of my undergraduate math teachers were excellent and many of them likely influenced how I now teach. It's hard to leave people out, but I'll mention three in particular: Dr. William Serbyn (now deceased), whom I had for a couple of classes, including a J-Term topics course that was full of interesting "outside the box" topics; Dr. Jeff McLean, who was my advisor at one point and first inspired an interest in abstract algebra (my now research field); and Dr. John Kemper, who was my first college math teacher and served as a mentor for a summer research project I did during the summer between my junior and senior years of college. It was this latter experience that cemented my decision to pursue graduate school.

How did you end up at UW-Stout?
During graduate school, I decided that I ultimately wanted to pursue a career at a teaching-focused institution. The mid- to late-1990s were a tough time for the job market, much like recent years, and it was extremely rare for people to land tenure-track jobs right out of school. I was fortunate enough to get a couple of visiting positions, and then started to get more interest from schools hiring tenure-track faculty. My wife is also from St. Paul, and I hoped to find a position somewhat close to home. In the end, the opportunity at UW-Stout came along. That was 1999, and I'm still here.

What have your students meant to you as a teacher and mathematician?
Everything. Perhaps that's a bit of an overstatement, but the students are why I come to work every day. The opportunity to share my passion for mathematics and help them grow in the world is incredibly rewarding. I am always energized in the classroom, and when I can work one-on-one with

students, it provides an opportunity to really reach them. I was fortunate quite a few years ago to be able to engage some students in various research projects, with some student work contributing towards one of my publications.

What courses do you like to teach?
Being an algebraist, teaching abstract algebra is always my favorite. Perhaps more so, because the chance to do so doesn't come along that often. I also really enjoy teaching calculus (any level), because it's just such a wonderful subject. Teaching the "terminal" courses for non-math majors can be fun as well. It's perhaps our one last chance to convince them that math can be fun, interesting, and useful.

How have you found that teaching of mathematics has changed over the years?
As others have mentioned, technology has certainly changed things with the tools we have available in the classroom, but also how we interact with students not just in person but virtually.

How were you involved with the MAA over the years?
I was awarded a membership by my undergraduate institution when I graduated and have remained a member since (save maybe one year once upon a time). I have always enjoyed the journals, attending the Joint Meetings, MathFest on occasion, and the Sectional meetings (perhaps not as much as I should!). I was an early member of Section NExT-Wisconsin, back when it met in Menomonie. I helped with the high school math contest when UW-Stout ran that, and I also helped coordinate our hosting of the spring meeting several years ago.

What do you think is the best part of being a mathematician?
Being able to do and talk mathematics for a living – whether that's with students, colleagues or collaborators.

What is the worst part of teaching mathematics?
Grading!

How do you describe what you do when you are talking to somebody outside of mathematics?
I usually say something about studying abstract structures and give my favorite group theory example of "clock arithmetic" (i.e., the group of integers modulo 12). I might ask them for example, "What's 8 + 7?" It's a familiar setting they can relate to, and hopefully gives them a small insight into a more abstract way of thinking.

What part of your work do you like the best?
Working with students, especially when they "get it" or get excited about mathematics. Also, doing mathematics myself or with others. It's still thrilling to struggle over a problem and then finally solve it. Problem solving is something I find enjoyable even in non-mathematical settings (e.g., some of my administrative duties).

What are you most proud of?
That's hard to say. As a teacher, I am proud of the impact I have made on students' lives over the years. Seeing students be successful and have them appreciate your efforts is very rewarding. As a mathematician, I am proud of my ability to stay active in my field and my almost 20-year collaboration with Dr. Daniel Nakano (University of Georgia) and Dr. Cornelius Pillen (University of South Alabama) (and sometimes others) that has resulted in 14 (and counting) publications over the years. More locally, I am proud of my 11 years as chair of the Mathematics, Statistics and Computer Science Department at UW-Stout, working with a great group of colleagues.

What is your advice to college students and new teachers?

In a nutshell: "Try something". Students often seem to get "stuck," unwilling to do anything but stare at a problem. Perhaps this is aided by the way we present mathematics in such a nice linear fashion. As mathematicians, we have all experienced many, many false starts in trying to solve a problem. But the key to success is starting down one of those paths, not being afraid to fail, and trying to learn something along the way. Similarly, new (and "mature"!) teachers should not be afraid to try a new pedagogical strategy. Maybe it works and maybe it doesn't. What's important is having student learning as your ultimate goal. Hopefully a new teacher finds her/himself in a department where she/he is free to explore and find the teaching style in which she/he is most effective at helping students learn.

Who is a Wisconsin Mathematician that you would like to know? Send suggestions for the next KYWM to Ben Collins, collinbe@uwplatt.edu .