

Faculty Spotlight with Dr. G Jay Kerns

We conducted this interview with Dr. Kerns, yet another resident of the 6th floor of Lincoln (we're starting to notice a pattern here). His primary research at the moment is dealing with negative probability, which means that it is outside of the 0-1 range that probability typically lies in. This research has taken Dr. Kerns to many faculty members outside the math department to obtain perspectives that only people in the given field can offer. Dr. Kerns sees this as an exciting plus and we here at PME agree! Interestingly enough, Dr. Kerns may not have been in this research at all if his path was not changed in undergrad. Initially he went to college as a music major with the goal of being a music teacher and ended up in a class about how humans obtain knowledge as an elective. This class actually led him to the library where he opened a stats book that changed his life forever. (DUN DUN DUN!) Dr. Kerns describes the book as being filled with these strange symbols, but it completely captivated him and he was hooked. The next summer he was taking a stats class, and as he puts it, "the rest is history."

Right now, Dr. Kerns spends most of his day organizing and getting ready for lectures, especially since he is teaching a new class to YSU. Something that a lot of students don't realize is that a new class is a massive new project that has a significant amount of forethought behind it. Ordinarily, in a COVID-free world, Dr. Kerns would be spending more time with research, but that is much more difficult as of late. In addition to this "normal professor stuff," Dr. Kerns is also the Graduate Coordinator at YSU, which essentially means that he helps graduate students earn their degrees, guide them to their goals, and basically help them with whatever else they need.

Dr. Kerns ended up at YSU after graduating with his PhD nearby at Bowling Green State University. This is partially because he was recently married to the other (now) Dr. Kerns who at the time was still in school. As such, both of them wanted to stay nearby and so the job search began. Dr. Kerns found out that YSU was hiring, and actually a Joint Mathematics Meeting here is what led to him getting an interview and (spoiler alert) job at YSU.

Dr. Kerns decided to pursue mathematics for a simple reason: "Math is the most pure; there's really no other word for it." If he weren't in math, he notes that he had a strong interest in music obviously, but he realized that it is very difficult to earn a living in the music world and so that leads him to believe that he would not have ended up there in the end. He also notes that he really enjoyed the sciences, which is where he believes he might have ended up if he didn't end up in math, but it was too applied for his liking. As for his choice in stats, he says that was because he sees it as the bridge between pure math and scientific fact.

Some of Dr. Kerns' hobbies include spending time with his family, something he finds very valuable, and getting involved in scouting (think Boy Scouts), which is mainly for his kids. Currently, he is working on building primitive arrows, specifically authentic Native American style arrows that will be given to the scouts.

One of more noteworthy things that was mentioned in this interview was that Dr. Kerns' favorite part of his job is having the opportunity to lead the students to that moment when they get it. He finds this the most satisfying, especially when it is a very difficult topic and the student has that

breakthrough that opens up the door for them moving on. He said simply and elegantly, “It doesn’t get any better than that.” However, he notes that this is a little more difficult this semester, especially since COVID means that one can’t always expect students to be there and this leads to a lot more difficulties. The way he sees it, one either double teaches, once in person and once online, or just records the lecture and there is no student interaction, so they will likely miss content. This is one of Dr. Kerns’ biggest problems recently.

As for Dr. Kerns’ goals, he had a very relatable short-term goal: get through the semester and do it well. As for a long-term goal, Dr. Kerns wants to navigate the transition to online learning. He added that he knew this was inevitable and that in all seriousness, COVID had not simply caused this, but simply accelerated the transition. In addition to these goals, Dr. Kerns wants to do some good math and publish more in the future.

Since Dr. Kerns is the Graduate Coordinator, he has a lot of input about graduate schools. The first thing to consider is location – you can either go to a new place or somewhere nearby and it is important to consider the distance from your family. The next thing to consider is what you want to study – knowing just math or stats is not enough, you need to find schools with programs that fit the specific interests that you have. However, the most important thing to remember is that a graduate school is shopping for you as much as you are shopping for them. Therefore, it is important to pick a place you fit in. He also said that a more independent, self-driven student will be more likely to fit into a big place like Ohio State, but if you want a more personalized experience, a smaller place would be a better fit. Now, keep in mind that neither is strictly better than the other, it is just personal preference.

That is the end of the material we got from Dr. Kerns. We thank him for giving us his time and for participating in this interview!