Faculty Spotlight with Dr. Jalics

This week, some of our PME officers interviewed Dr. Jalics, another resident of the sixth floor of Lincoln. Dr. Jalics primarily does his research in the area of mathematical neuroscience where he analyzes and models things like the rhythms of activity in networks of neurons. Dr. Jalics has always been inclined towards math. His mother was a high school math teacher, so this might have influenced him, but math was his favorite subject growing up. When he began his undergraduate studies at John Carroll University, he was a physics major. He wanted to learn about how things work but really appreciated the rigor of mathematics, so he ended up changing to a major in mathematics and a minor in physics.

As his undergrad came to a close, Dr. Jalics knew that he wanted to teach, specifically at a university level, so he applied to graduate school and entered into a PhD program at Ohio State University. It was his research there that really introduced him to mathematical neuroscience. Dr. Jalics really has a passion for helping people. Teaching would give him a very hands-on opportunity to do this by being directly involved with helping students learn. The experiences he had teaching as a graduate student solidified his desire to teach as well. However, studying mathematical neuroscience stood out to him too because his research might also be able to help people live healthier lives.

After completing his doctorate, Dr. Jalics actually traveled to Deva, a city in Romania that is roughly the size of Youngstown, with his wife Julie to volunteer for the Saint Francis Foundation. For that year, he and his wife served at a Hungarian-speaking children's home and school by being math teacher, soccer coach, caregiver, and more. (Dr. Jalics also speaks Hungarian fluently and has taught his own children to do so.) Before going to Deva, Dr. Jalics was offered a postdoc at Boston University that he was able to defer until after he returned to the states. Dr. Jalics continued to do research in mathematical neuroscience there for three years. During that time, he was able to learn a lot more about by collaborating with some leading experimental and theoretical researchers in the field.

While he was getting ready to leave Boston, Dr. Jalics knew that he wanted to get back to teaching, so he applied to a number of faculty positions. He and his wife were just starting a family around this time as well with two kids, the older being only 2 years, so he was looking for an opening somewhere close to relatives near Akron. The opening here at YSU was a perfect fit, and Dr. Jalics joined the math department here in 2006. He told us that he really appreciated the supportive department that YSU and that it reminded him of his professors back at John Carroll University who led him to study mathematics. He has able to find quite a few opportunities to collaborate with other faculty here, such as Dr. Yates in the math department as well as Dr. Womble and Sims in the biology department. One of the projects involved experimental data collected by Dr. Sims' team from heart cells in rabbits to study cardiac arrhythmias; Dr. Jalics said that a lot of the modeling techniques were similar to the ones he had used with neural networks before. He has also been able to get a lot of students involved in his research and was a part of the Mathematics and Biology Undergraduate Research (MBUR) program at YSU for several years. Currently, he is also working on iterative techniques to solve systems of linear equations with his former colleague, Dr. Buoni, and he has started working on a project with a

graduate student involving the spread of infectious diseases, like the current pandemic, using differential equations.

Outside of math, Dr. Jalics enjoys playing and coaching soccer. He has coached all three of his kid's soccer teams from a young age. With everything that has been going on, he's excited to get back to playing and has an indoor soccer season starting up this weekend. Dr. Jalics also likes to spend time with his family doing outdoor activities like mountain biking, hiking, camping, canoeing, sailing, and skiing. If he didn't go into mathematics, Dr. Jalics said he probably would've ended up in the field of medicine. He would want to be doing something where he can help people, but something like a physical therapist where he'd still be able to find a balance between his work and spending time with his family.

Dr. Jalics's goals for this year are to make life as normal and safe as possible for his students and his family. As a professor, he spends a lot of his time preparing for classes, communicating with students, doing research, and going to committee or research meetings. His least favorite part about his job is grading, although he said that it is much better when he gets to see that his students are really learning. Because of all the changes in how classes are being delivered, more of his time has been devoted to his classes. He said that there have been more logistical concerns, but that through this he's learned a lot of new teaching tools and techniques that he hopes to use after things go back to normal.

Dr. Jalics also offered some advice for students that are applying or planning to apply to grad school. He suggested applying to a variety of schools: ones that you aspire to attend, ones that you feel more confident about getting into, and some in between. Dr. Jalics also said that it is good to consider the geographical area of the school, since you'll be living there for a few years. Lastly, he recommended that students should make sure to get started on their applications in a timely manner. It can take a while to get all your documentation and letters of recommendation together.

Dr. Jalics expressed his gratitude for being a part of YSU. He said that he is impressed with the student's research and their dedication. We want to express our appreciation for Dr. Jalics as well. We're thankful to have him as a professor here and appreciate him sharing his time with us for this interview!