5. What experiences and responsibilities can you expect from this opportunity?

"Depending on what type of research is being done, the student needs to be prepared to adapt to many different types of roles that may be needed by the researcher. For example, time management and multitasking are essential skills that can be applied to any research. In biology/chemistry research, what is most commonly seen is lab procedures such as PCR, cell culturing, distillation, etc. These can all be learned in the lab. "

- **Ishani Pandit**, Biology and Psychology Major, Chemistry Minor

"Working in a research lab is very different from being in a class environment. In addition to learning technical skills (such as the use of equipment and instruments), communication skills (both orally and written) will also improve. Personally, I have learned to accept the high possibilities of failure when running an experiment. Research is not for the faint of heart as it does not do to be discouraged easily."

- **Sumaiya Ahmed**, Chemical Engineering Major

CSU Launches New Center for Applied Data Analysis and Modeling (ADAM)

By: Ariana Chriss

Buzzwords like *big data* and *machine learning* are used quite often in academia nowadays, but what do they really mean for the future of research?

Earlier this semester, Cleveland State took an innovative step forward by establishing the Center for Applied Data Analysis and Modeling, or ADAM, aimed toward advancing research in an interdisciplinary way. Co-directors Dr. Shawn Ryan of the Mathematics and Statistics Department and Dr. Thijs Heus of the Physics Department worked with the Office of Research to bring this center to life.

"We wanted to bring together faculty from across campus that have either expertise in generating large amounts of data or analyzing those data, but maybe don't have a place to come together yet," said Dr. Ryan. The co-directors also wish to emphasize that "big data" does not have to be big data. The center also welcomes projects with minimal amounts of data, as one can "extrapolate something useful in a larger sense, especially with medical data," mentioned Dr. Ryan.

The center has three main long-term goals. The first is to form a mentoring network for faculty across all CSU colleges so that they are supported in their research and have a place to discuss and overcome challenges. The second goal is to provide more student opportunities for research on data science and modeling-driven projects. The third goal is to establish CSU as a research hub that the community or industries can bring their projects to for collaboration, which may lead to further grant funding.

Both faculty and students will benefit greatly from the center. For faculty, the interdisciplinary work will build a stronger research culture among them. Dr. Ryan said, "When you're working with other people across campus, rather than working by yourself, it leads to better projects, interdisciplinary projects, and higher-impact journals."

Students can get involved by checking the ADAM website for seminar dates. During the monthly seminar, someone may present data they have collected and ask for help with methodology, or someone may have a new or traditional method they can teach to other members for use on their own data. Because the center has a small budget to support student research with center members, this can lead to new research projects for the students. If interested, a student should start by going to the seminars and taking note of the types of projects in development. Then, the student may reach out to someone in the center to discuss what they are working on.

With the establishment of ADAM, the university will be involved in cutting-edge research across numerous fields. Interdisciplinary work as well as collaboration with industry will be encouraged, and students will have the opportunity to get involved in this groundbreaking environment. This is the future of research.