

Mathematics through 3D printing, a GMU capstone course

Evelyn Sander, George Mason University

This talk will describe the work of the GMU Math Makerlab in teaching, research, and outreach activities. I will mainly focus on the capstone math class "Mathematics through 3D printing" taught in Fall 2019 and due to run again each fall at George Mason University. The students are mathematics majors, so they have had a lot of in-depth mathematical content. By getting them to design and create a weekly print, as well as give a written or oral explanation of their print, the class allows them to see the content in a new way, incorporating both exposition and artistic expression into the experience. I will provide examples and will distribute adaptable code in both OpenSCAD and Mathematica.