1145-J1-1655 Laura Taalman* (laurataalman@gmail.com). 3D Printed Mathematics: Student-led design and creation of mathematical objects to discover fractals, polyhedra, and knots.

How can you use 3D printing and design to support a college mathematics course? In this talk we'll discuss one example of a hands-on inquiry-based liberal arts mathematics course in JMU 3SPACE, a 3D printing classroom at James Madison University. In this course students directed their own explorations of fractals, mathematical cake cutting, knots, polyhedral graphs, infinite geometric series, and other mathematical topics while at the same time using 3D design programs like Tinkercad, OpenSCAD, Meshmixer, and Fusion 360 to construct and 3D print models to support those explorations. (Received September 23, 2018)