

Coding and Generative Design for 3D Printing

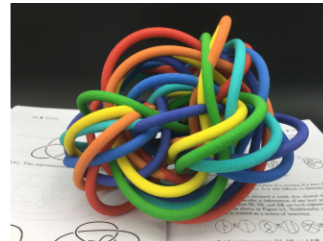
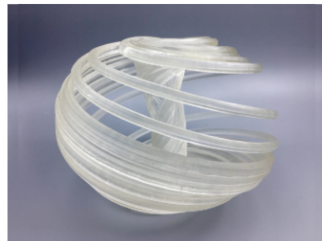
Data Science and Applied Topology Seminar

Laura Taalman (mathgrri)
James Madison University

Friday November 8, 2019, 11.45am

Room 4419

3D printing and design allows us to physically experience complex mathematical objects. In this talk we'll take a 3D-printed tour of mathematical knots, tessellations, fractals and polyhedra. Using code and generative design we can create parametric models that leverage randomness to achieve structural variety or even organic-looking behavior. We'll also talk about iterative design, the ability to "learn by failing", and the importance of being open to sharing that process, both in the 3D design process and in mathematical exploration.



Laura Taalman is a Professor of Mathematics at James Madison University whose research has included algebraic geometry, knot theory and games. Also known as "mathgrri", Dr Taalman is a computational designer who leverages a diverse toolbox of 3D design software and technical materials to create elegant and aesthetic realizations of idealized mathematical objects.

She is a Project NExT Fellow, a recipient of the Alder Award, Trevor Evans Award and SCHEV Outstanding Faculty Award, and has been featured on Thingiverse, Adafruit and Science Friday.

For more information: <http://cunygc.appliedtopology.nyc>

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