1125-A0-17 **Laura Taalman***, James Madison University, Harrisonburg, VA 22807. *Math by Design: 3D Printing for the Working Mathematician.*

Mathematicians often spend their days thinking about ideas that exist only in their minds. In this talk we'll discuss how to use 3D printing to bring models of those ideas into reality, from start to finish. We'll show how to leverage design software to convert mathematical objects into triangular meshes or voxel representations, and then how those digital representations become code that a 3D printer can understand and implement to create real-world objects. Learn how to get started creating your own mathematical 3D design files, level up your existing design skills, or just enjoy watching the process of turning abstract mathematics into physical plastic. Along the way we'll explore the essential importance of failure, not only in the design process but also in the study of mathematics itself. (Received May 23, 2016)