

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, April 19
2:00 – 3:00 PM
Maria Sanford, Room 101

**HOW DO THEY DO THAT?
MATHEMATICAL IMAGERY IN THE 21ST CENTURY**

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Abstract: You have seen incredible 3-D mathematical images in the Mathematical Art Exhibitions at the joint meetings of the AMS/MAA and the Museum of Mathematics in NYC. There are 3-D mathematical models with more than 60 identical parts and origami constructions with hundreds of folds. How do the pros do it? They have access to sophisticated machinery. Some of them use their own 3-D printers or send files to Shapeways to have them printed on 3-D printers. Some use laser cutters and some use plotter cutters. Laser cutters and mechanical computer driven plotter cutters can cut shapes precisely and score card stock where folds are required. The plotter/cutter is a popular tool for advanced origami and model building.

We will take a quick look at some of the work and techniques of the experts, then show you how you can build your own models using the Graphtec Craft Robo Pro that has recently taken up residence in the CCSU Department of Mathematical Sciences. You will find out how to prepare your own graphics files from Mathematica or Geometer's Sketchpad then send them for vectorizing in Adobe Illustrator to be sent to the plotter /cutter. The talk will conclude with the printing, cutting and assembly of a community model. Handouts will be provided with links to a variety of resources.

For further information:
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<http://www.math.ccsu.edu/gotchev/colloquium/>