

**CSC2521 - COMPUTATIONAL DESIGN AND  
FABRICATION FALL 2017**

**Assignment 2**  
Parametric Design

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## Results:

### Basic Functionality :

Originally I wanted to make a twisty menger sponge, but that turned out to be too much of a pain. So instead, it's just a twisted menger sponge of depth 1 that can be tiled. The main parameters are `twist_degrees`, the degrees that the box twists. `hole_scale`, the scale of the hole relative to the box. And `n_wide`, `n_long`, `n_tall` for the number of repetitions in each direction.

**Sources :**

1. Fast algorithm for ray-triangle intersection: Moller-Trumbore intersection algorithm.
2. Branchless ray to bounding-box intersection algorithm: <http://tavianator.com/2011/05/fast-branchless-raybounding-box-intersections/>.
3. Stanford 3D scanning repository for Stanford dragon mesh: <http://graphics.stanford.edu/data/3Dscan>