Dan Good

Art & Technology Portfolio

Entangled

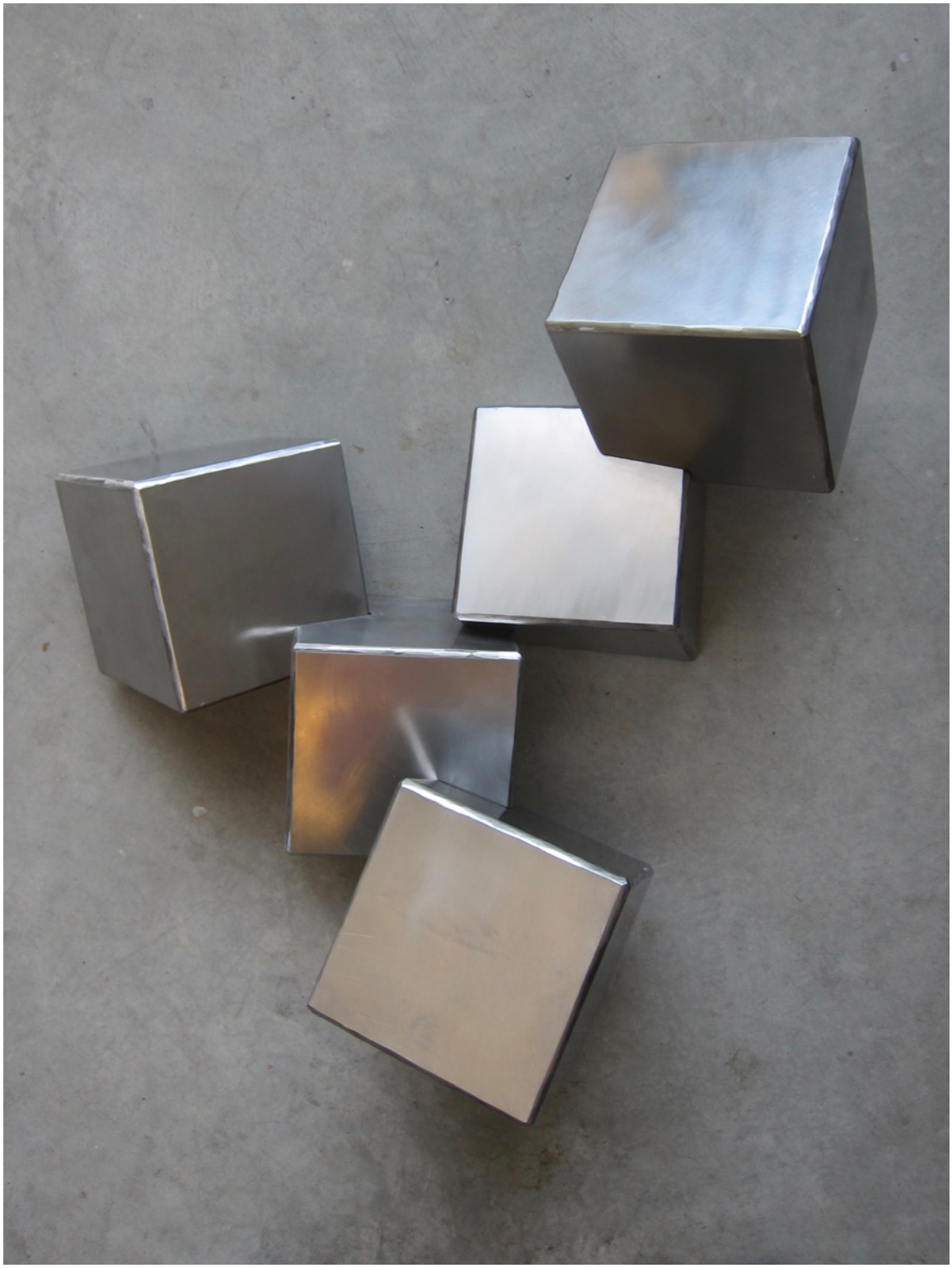
2018

Stainless steel and copper

This sculpture makes use of a novel mechanical process I developed to form strong non-orthogonal joints. This process has been used to make numerous sculptures.

The stainless steel and copper are joined by hidden stainless steel nuts and bolts. Stainless steel nuts are interally welded to the copper surfaces using silicon bronze filler.

Parts were laser cut from sheet steel and copper and assembled to form the finished work.



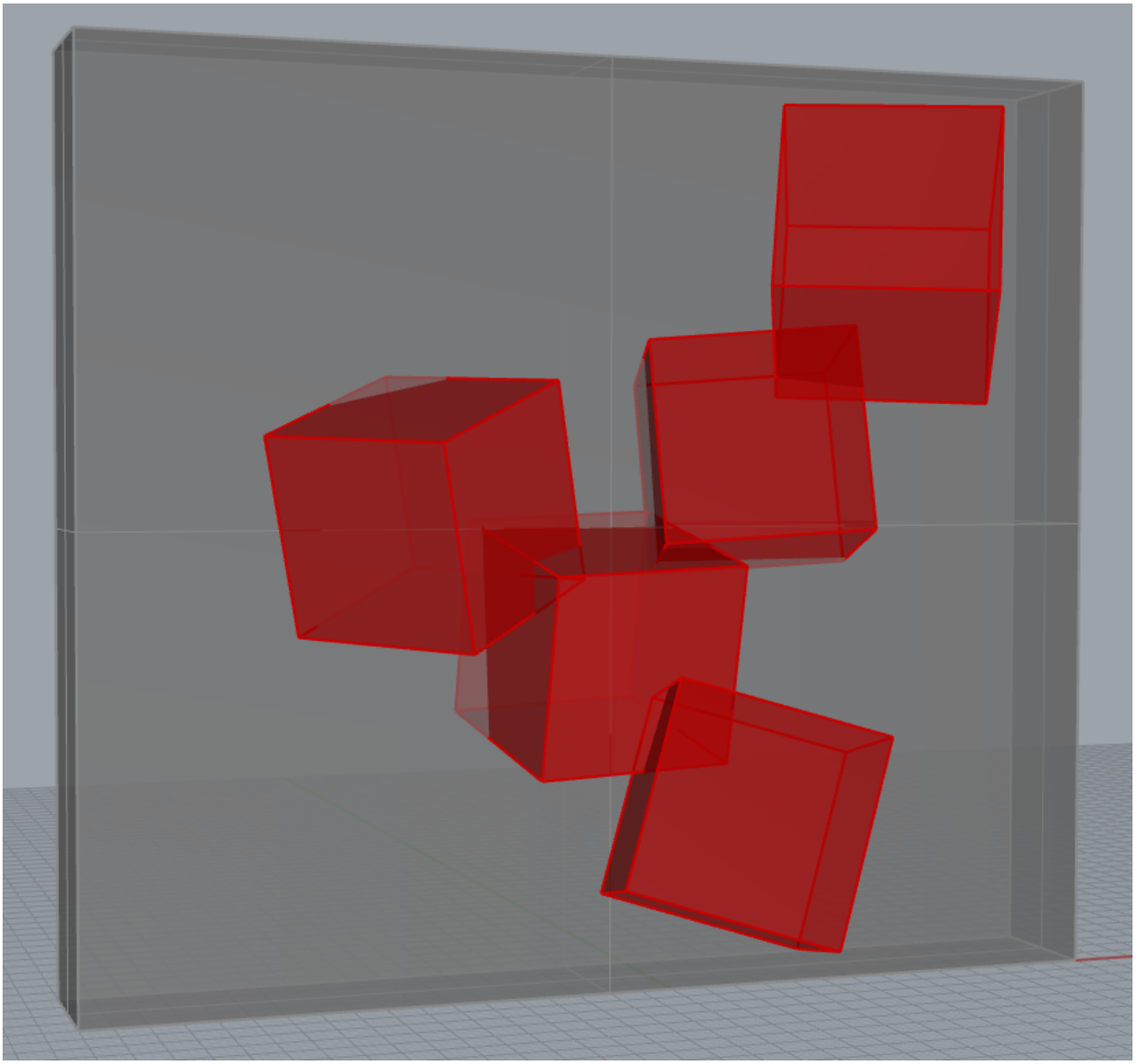
The Stars, Like Dust

2019

Stainless steel

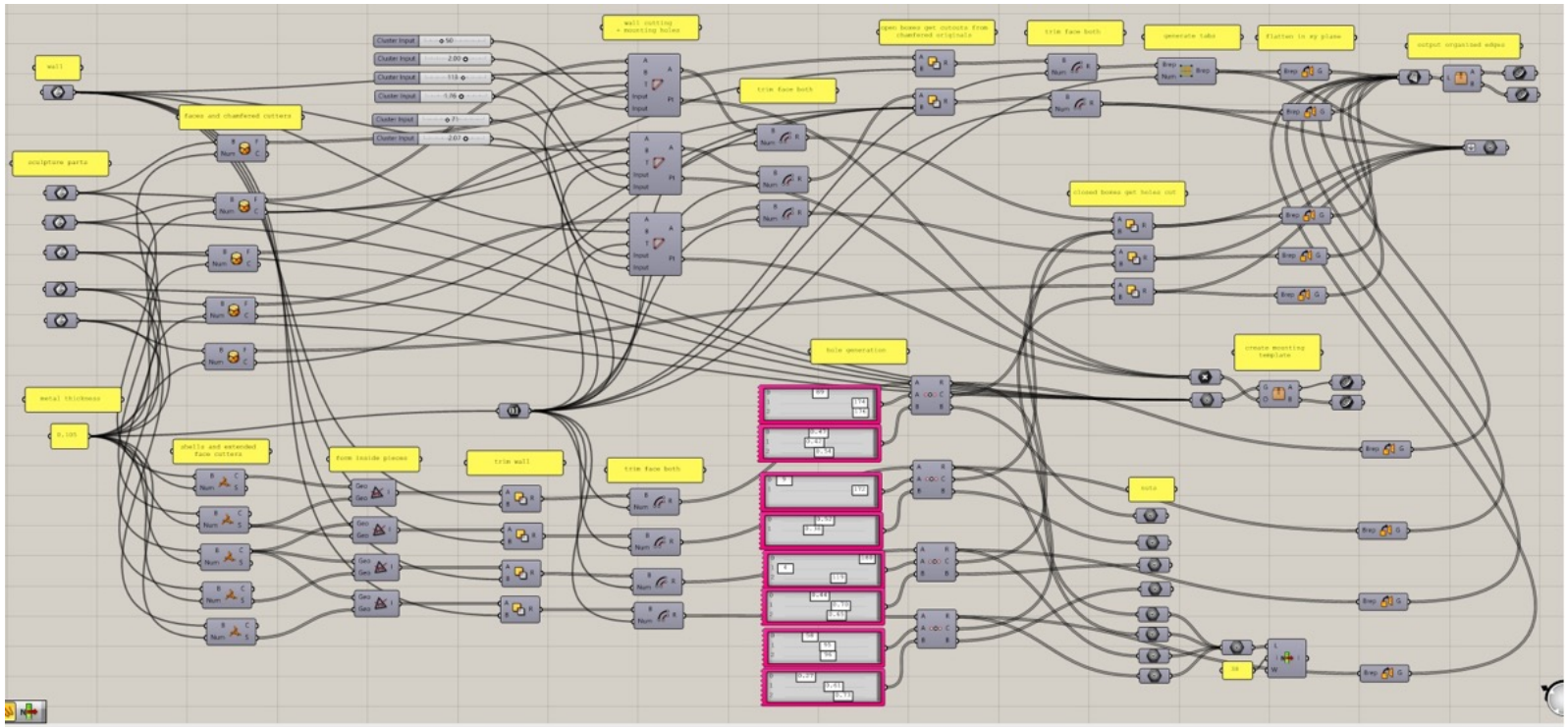
This sculpture makes use of a novel mechanical process I developed to form strong non-orthogonal joints.

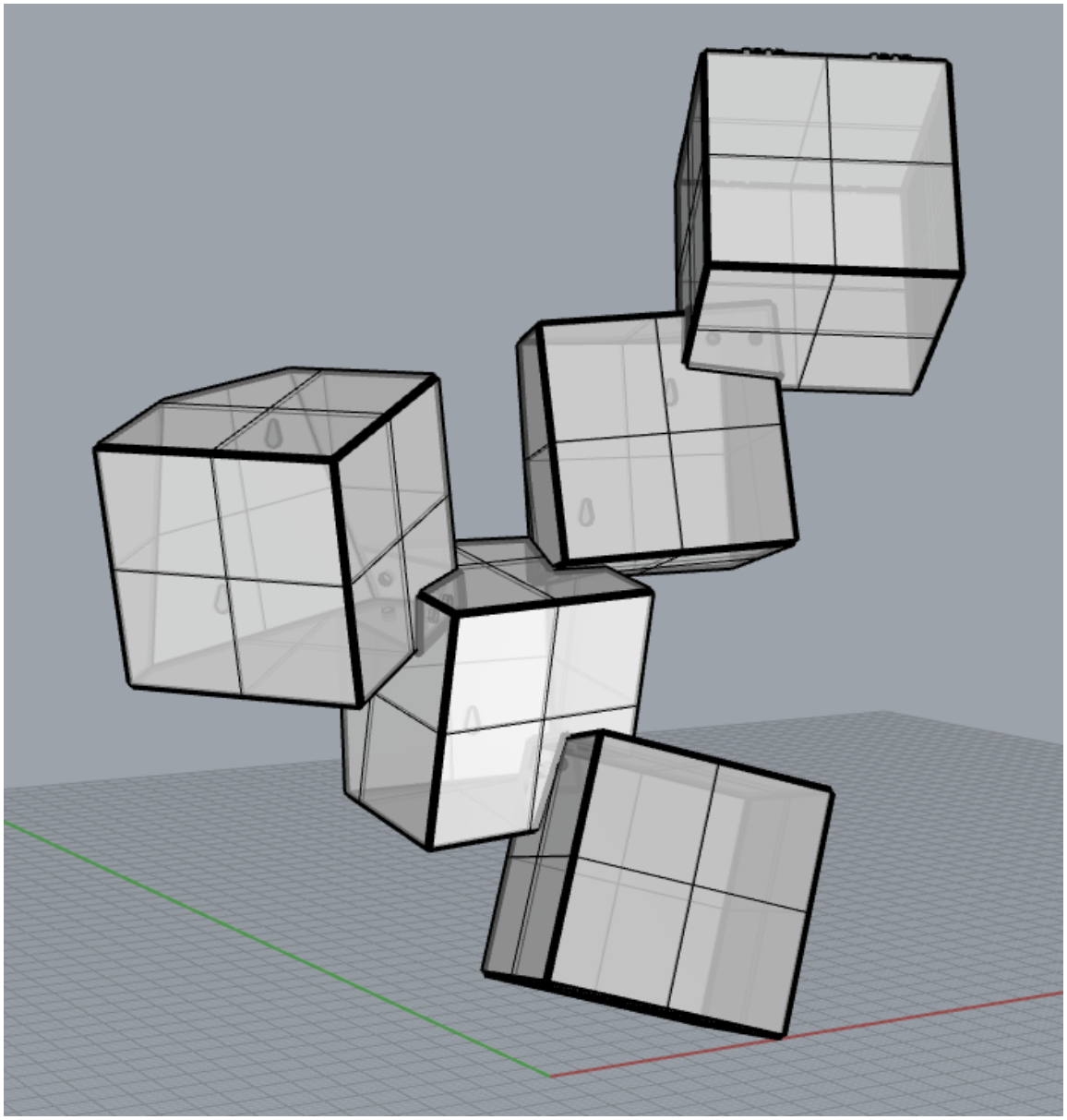
Custom Grasshopper code is used to extract a cutlist for fabrication, as shown on the next pages.



Original sculpture design

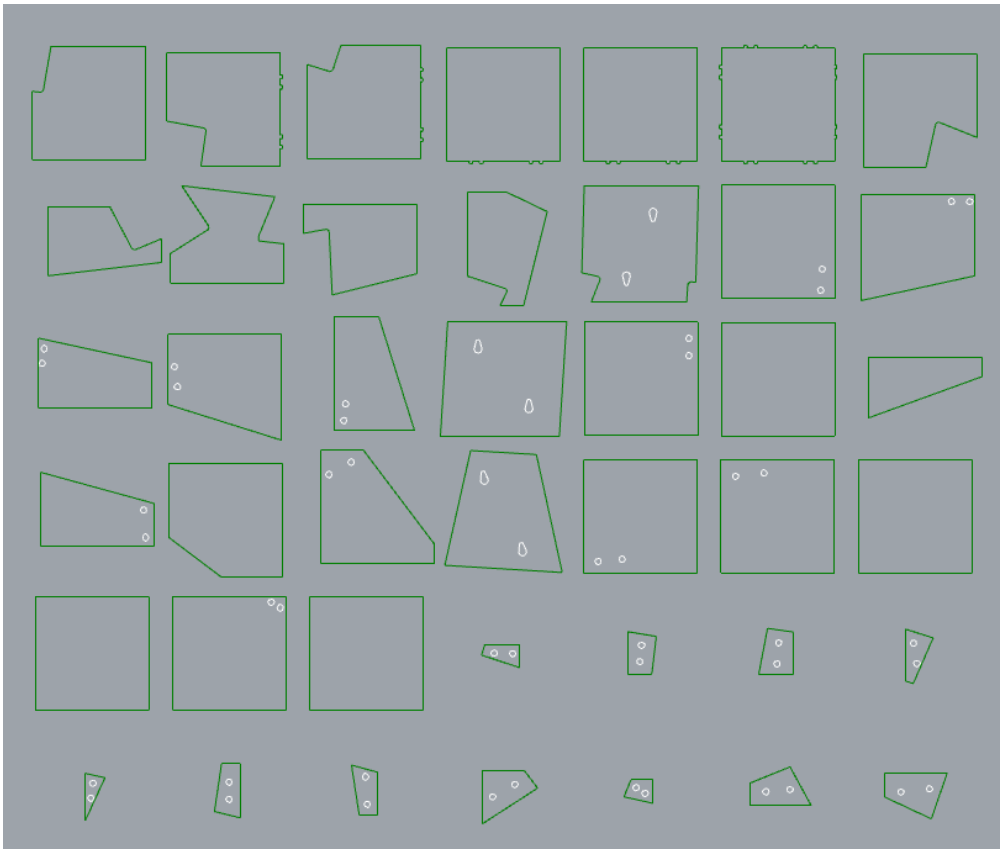
Grasshopper patch





Sculpture with all fabrication details

Final cutlist

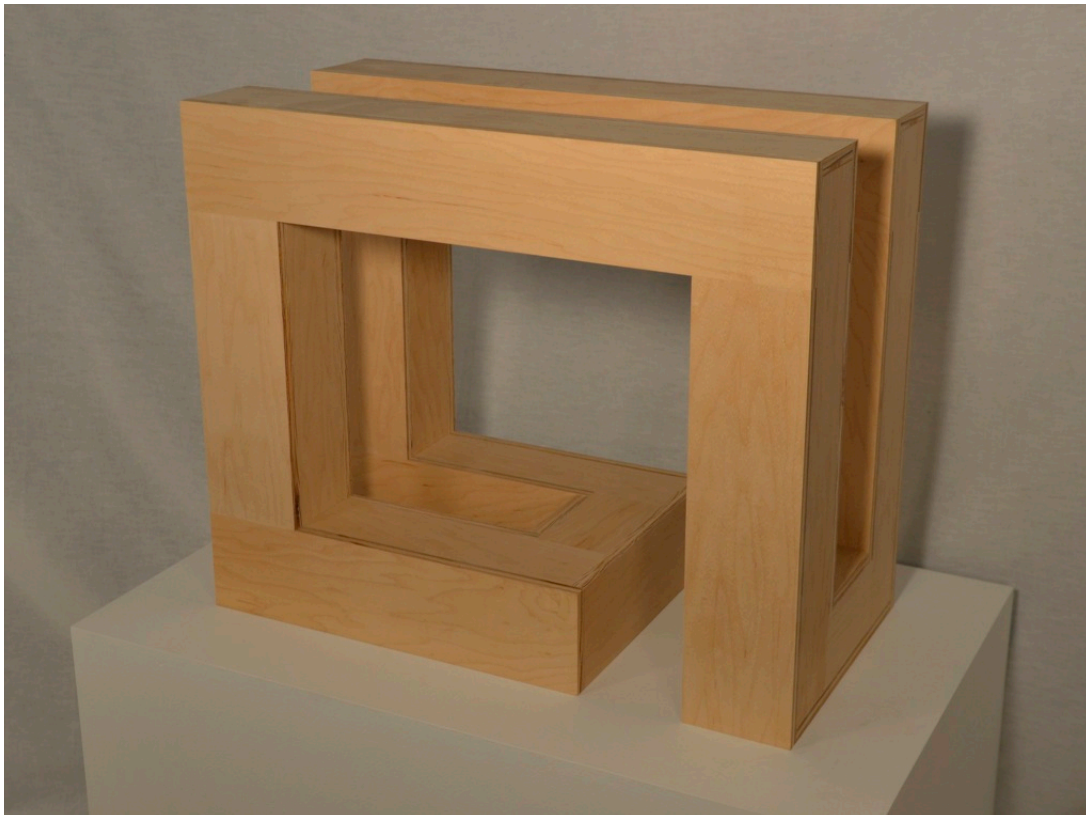


DIY Stainless Steel Electropolishing

Electropolishing is an important step for cleaning and preserving stainless steel. Free iron on the surface left during the welding process is removed and a passive chromium oxide surface remains. Since commercial electropolishing tools are very expensive, I created a DIY setup.

I made an Instructable:
https://www.instructables.com/id/DIY-Stainless-Steel-Weld-Cleaning-Electropolishing/

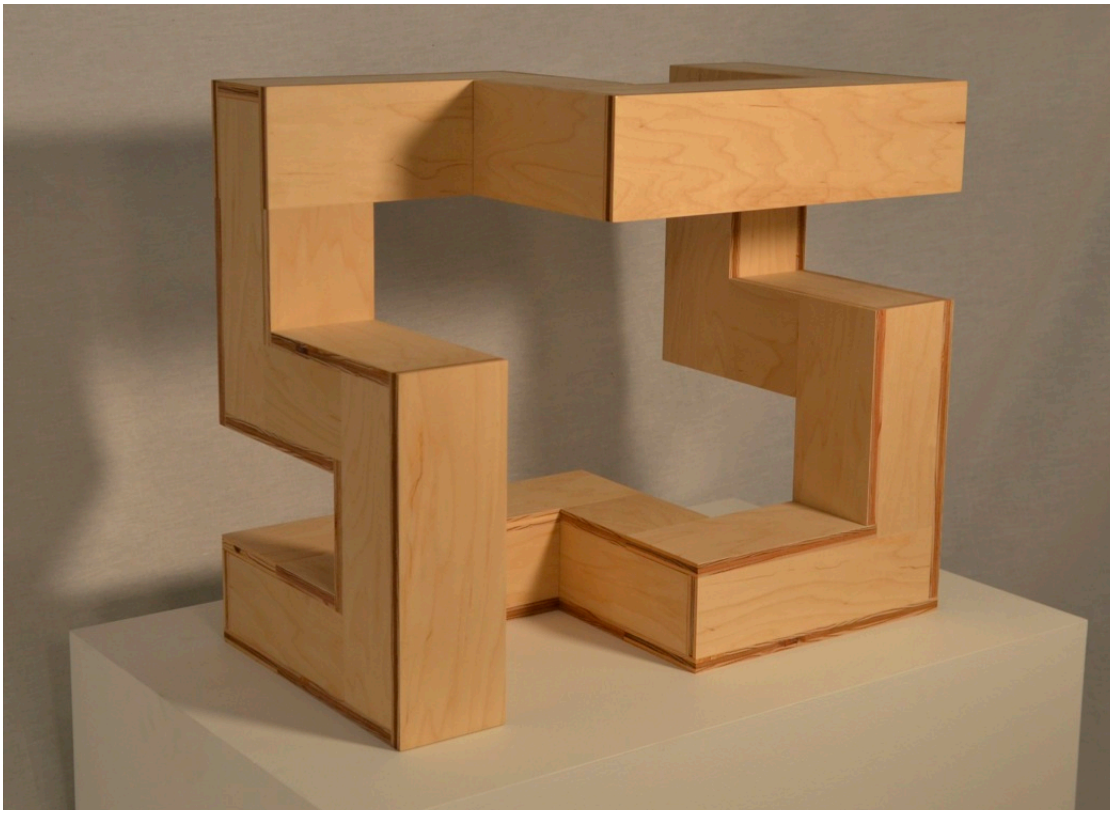
The left and right sculpture pieces have been polished, with the middle two still to go.



12 Variations On A Frame

2011

12 Variations on a Frame is a set of 12 wooden sculptures I designed and built. Numbers 5 and 6 are shown here.



These sculptures were designed in CAD; I cut parts from plywood sheet on a table saw and assembled using biscuits and glue.

Custom fixtures were used to cut the biscuit holes in the position where the tool was most accurate, enabling correct alignment without sanding through the plywood veneer.

King of the Mountain

2018

3D Printed Resin

King of the Mountain is a sculpture designed in Fusion 360, printed on a Formlabs Form 2, spray painted, and assembled using cyanoacrylate glue.

Acoustic Permutations

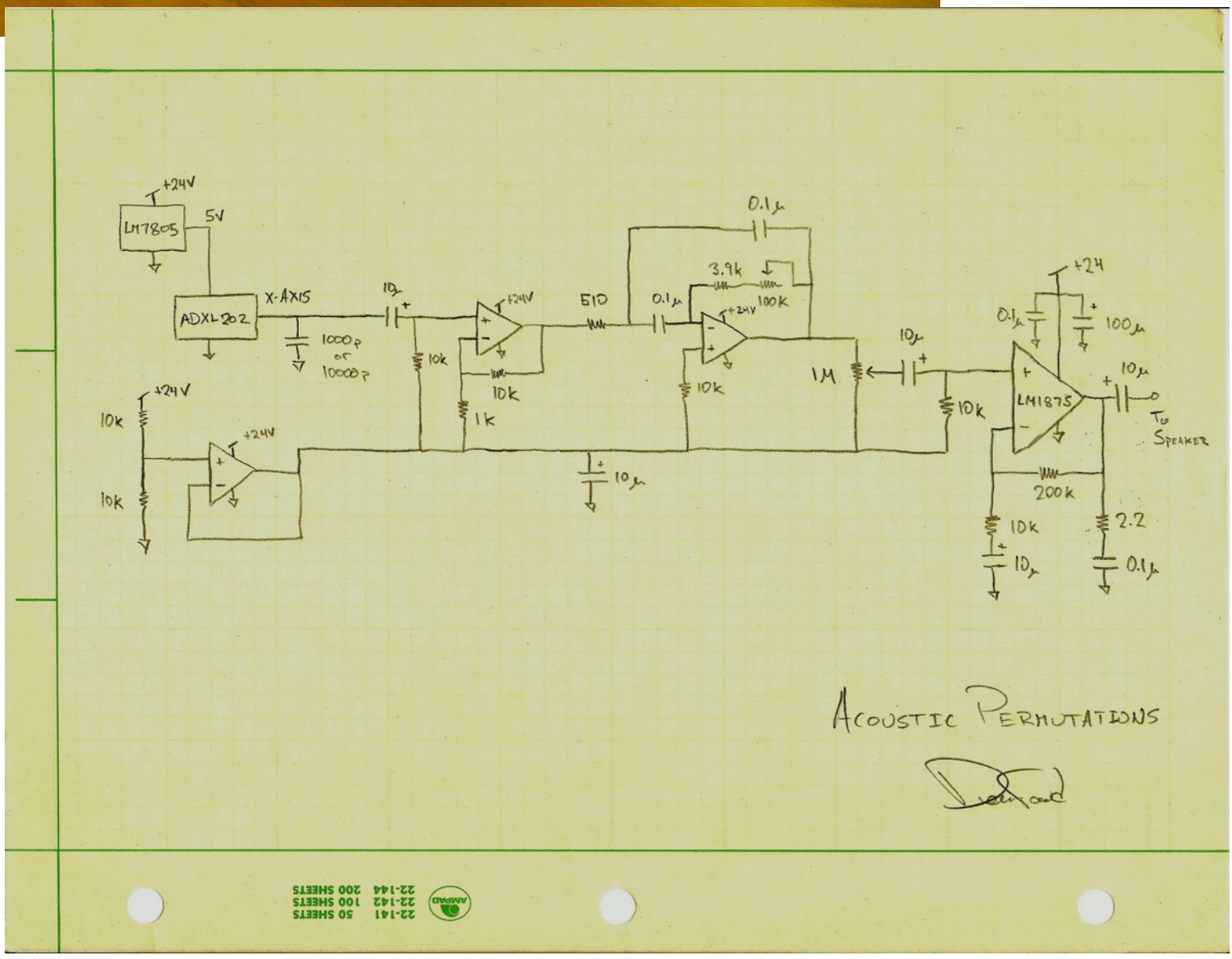
2009

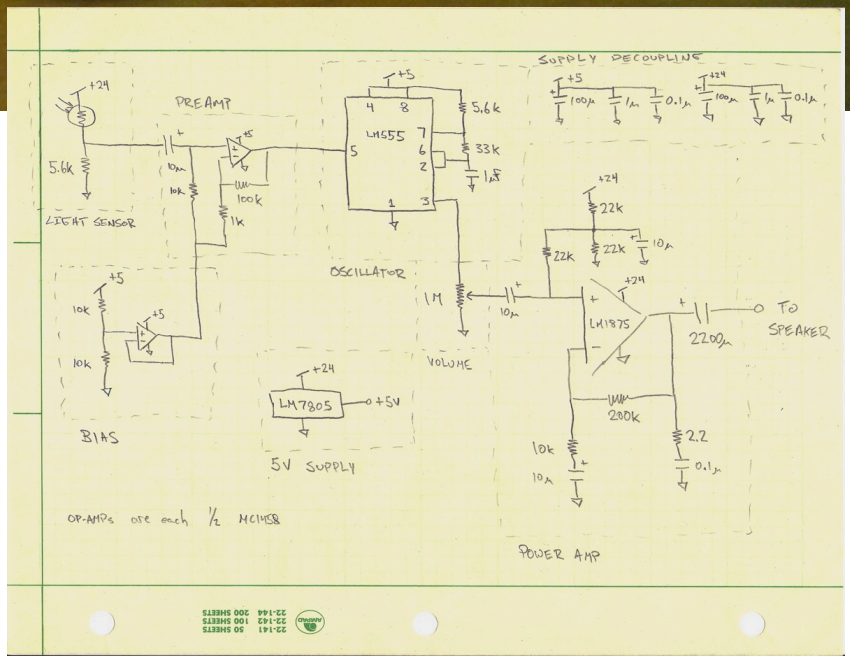
Sound sculpture built as an electronic music student at Mills College.

Acoustic Permutations comprises 27 plywood boxes of varying sizes assembled into a 3x3x3 matrix. Each box is coupled with an accelerometer-based sensor circuit and an audio power amplifier driving a speaker cone, forming a feedback loop including the box acoustics.

Interaction affects the box acoustics and changes the produced sounds

Each box uses this custom circuit to create the feedback loop





Flame Feedback

2009

Sound sculpture built as an electronic music student at Mills College

Flame Feedback is a sound sculpture built from a speaker, a candle, and a custom electronic circuit creating a feedback loop.

The speaker is driven by a drone tone at a frequency within the bandwidth of the motion of the candle flame. The motion of the flame is tracked by a light sensor and the resulting signal modulates the drone. The system hops between steady state modes as air turbulence creates nonlinearity in the feedback path.

In action: https://www.youtube.com/watch?v=xuM2PYRKgjw