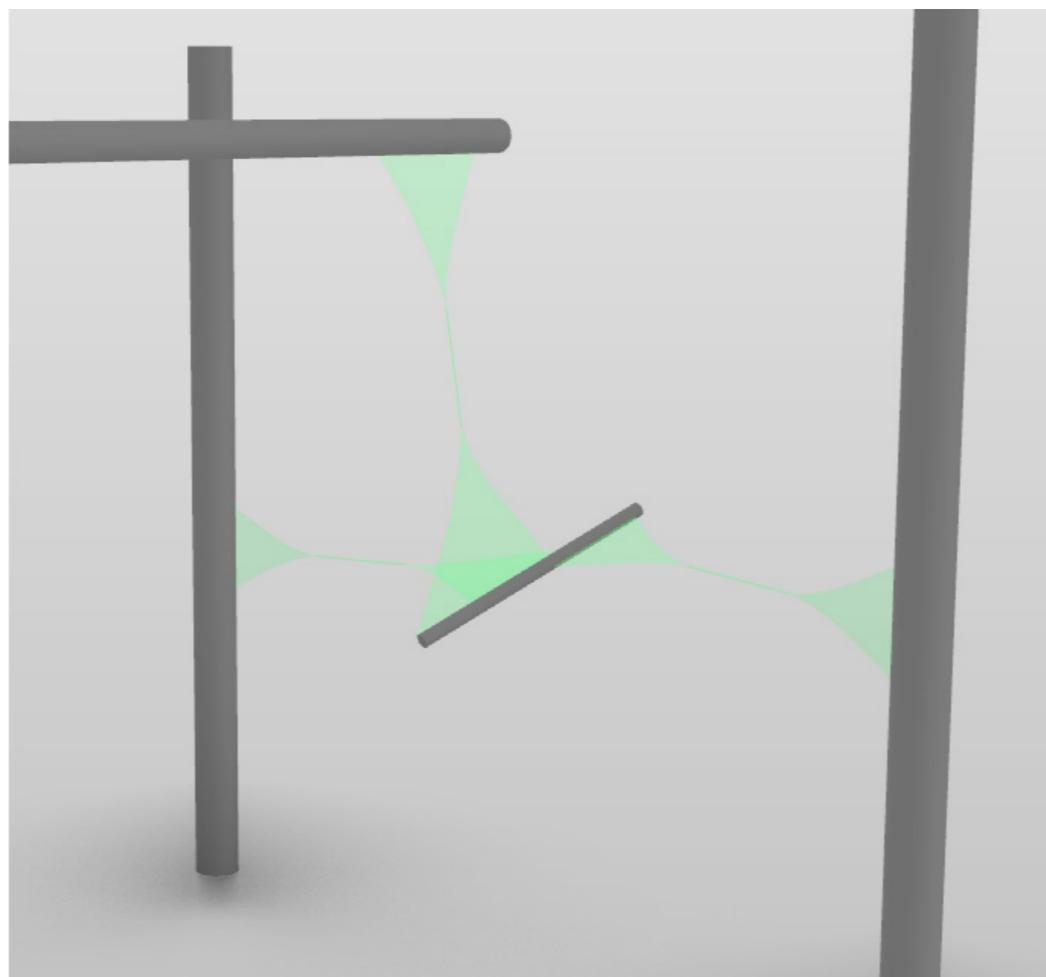


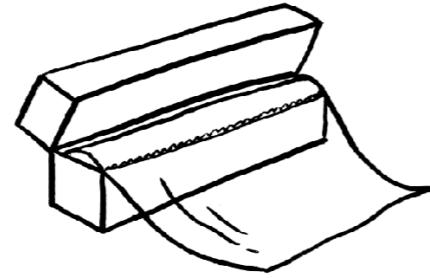
Plastic Stretch

Fabrication 2020
Dori Rosenberg

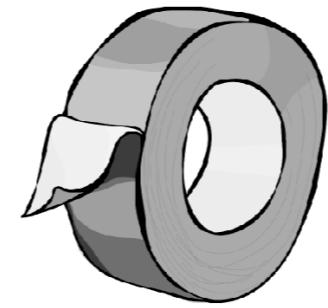


A material system that consists of plastic wraps taped to poles, located in a given space. By manipulating the length and placement of the wraps, the splatics foil's tension and geometry change, shifting the wraps from sheets to strings. The system performs simultaneously as a sheet and a string – cover and binder.

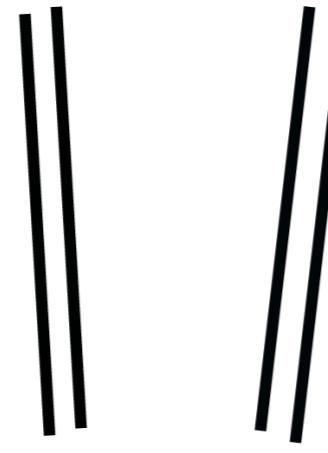
Elements



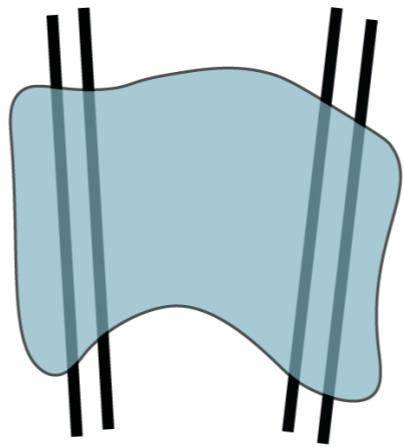
Plastic Wrap



Plastic Tape



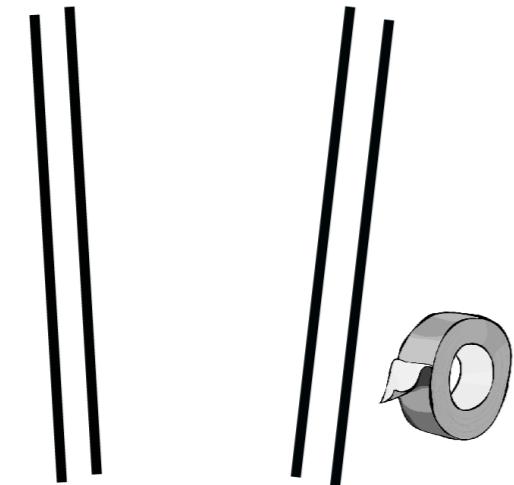
2 poles



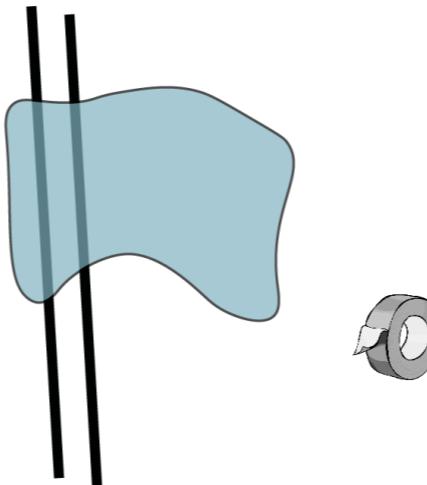
Methods of Wrapping
Foil around Poles

Manipulation

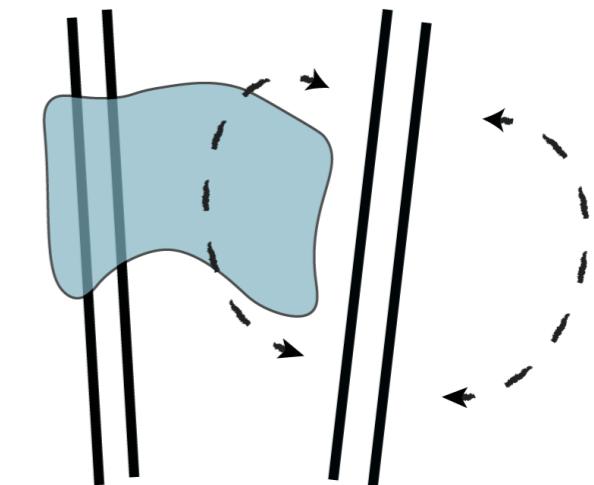
Foils of plastic-wrap taped and wrapped around 2 poles



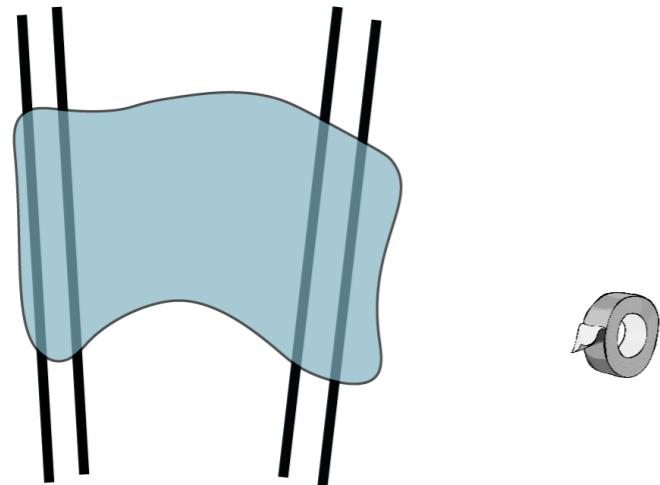
Wrap Plastic tape around poles
to increase static electricity



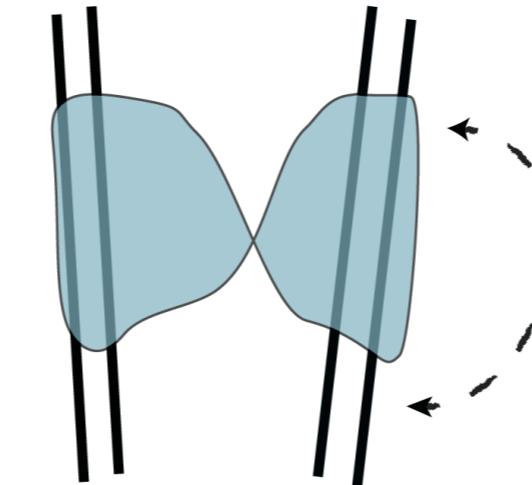
Wrap Plastic-Wrap around first pole,
tape it to secure it together



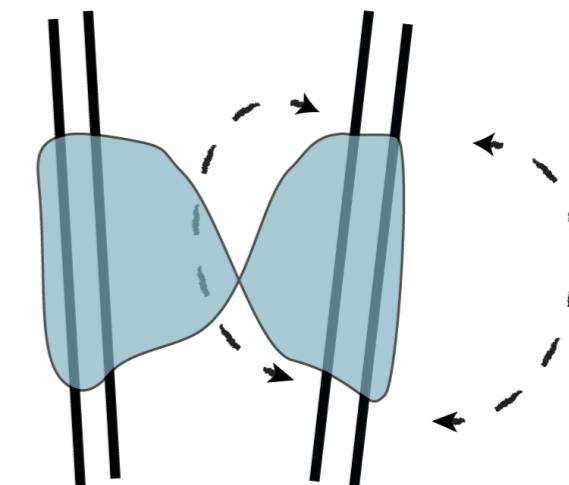
Position poles in (x, y) angles



Wrap plastic-wrap n times around
poles, tape wrap to second pole

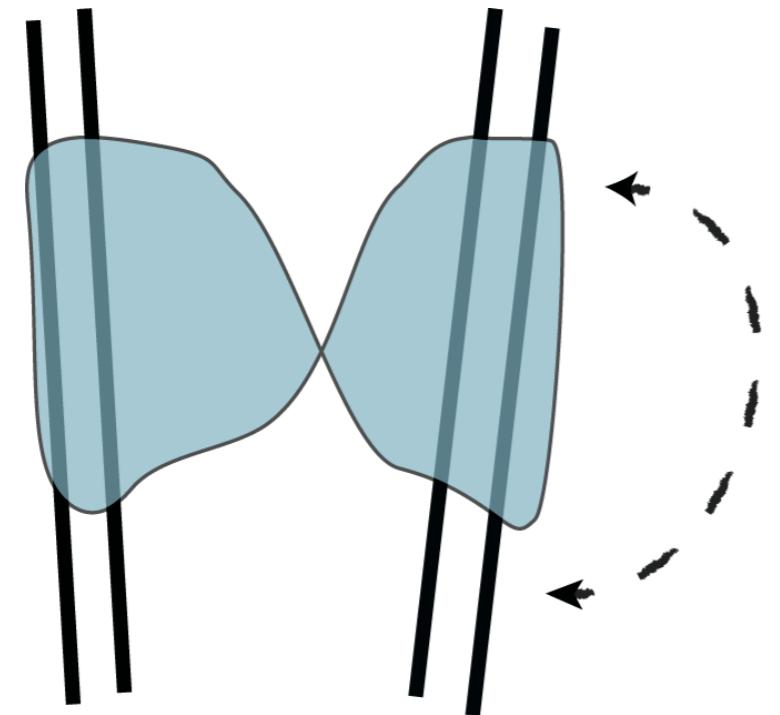


Revolve pole x, m times



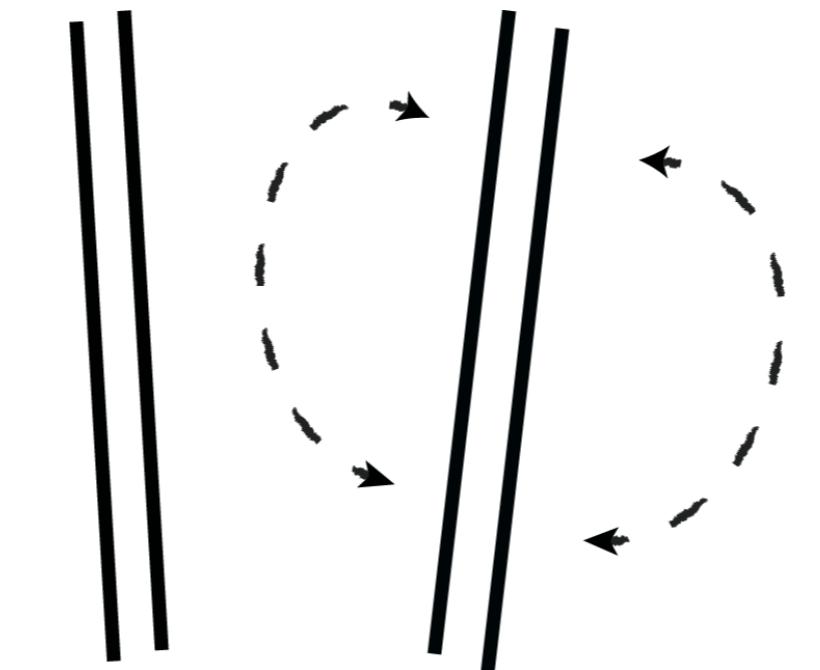
Position poles in (x, y) angles

Parameters



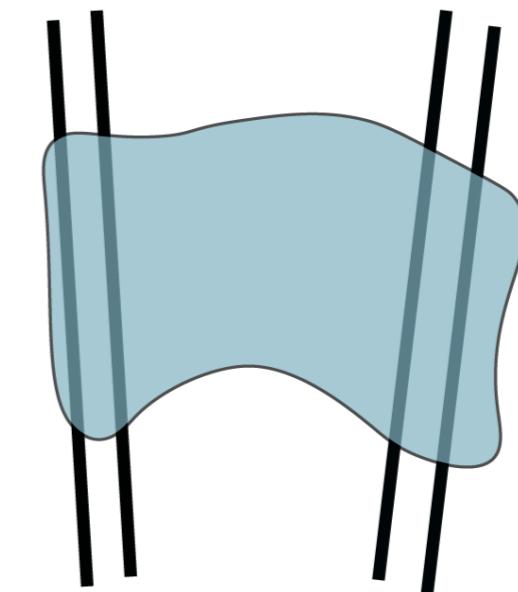
Revolved Cycles

0 - - - - - - - - - - - 15



Poles Angle(x,y)

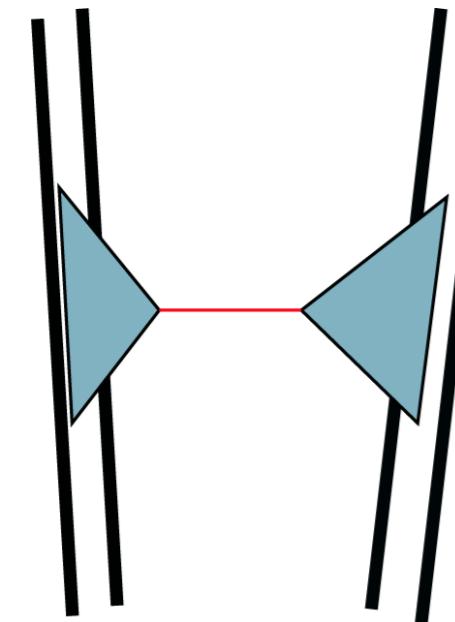
0° - - - - - - - - - - - 90°



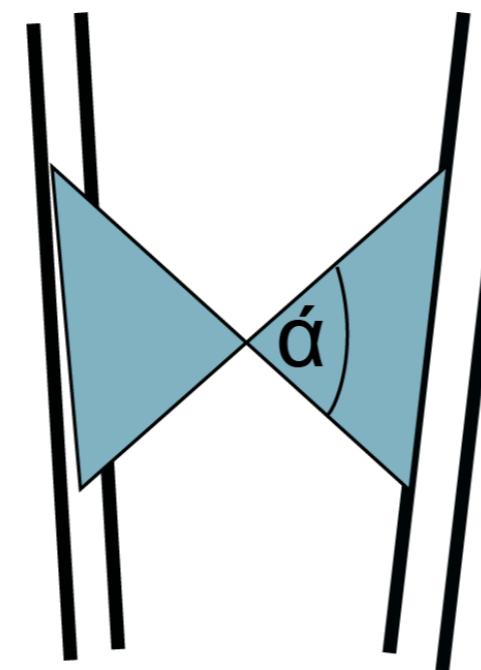
Foil Length

1 - - - - - - - - - - - 1.5

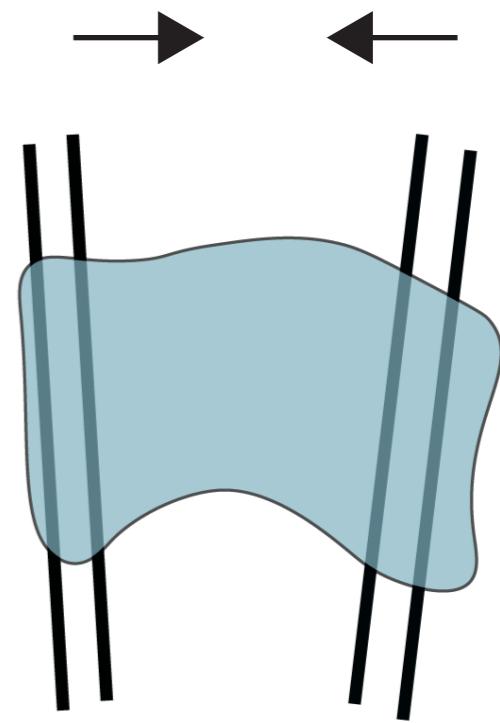
Output Measurement



Foil \ String ratio

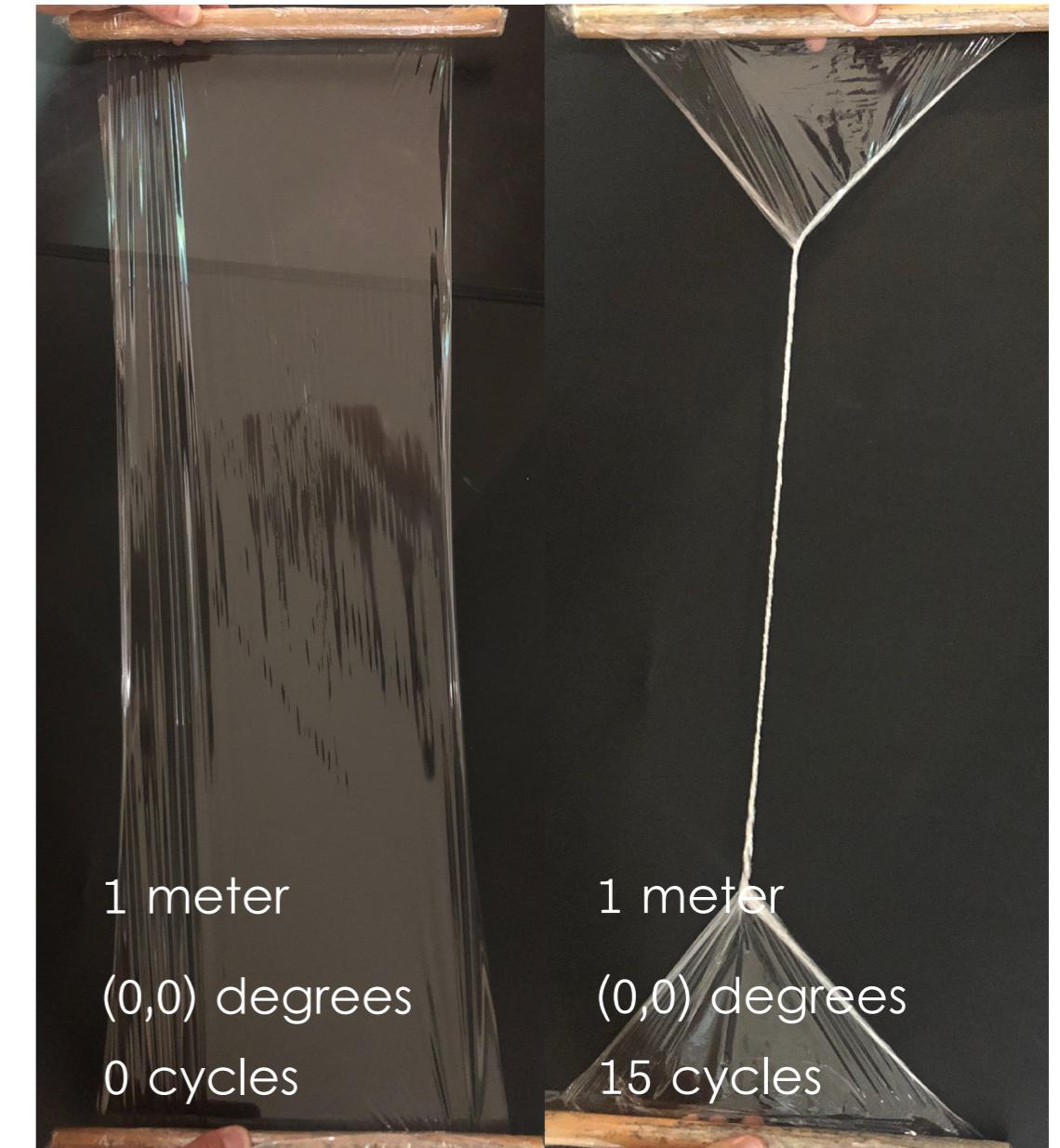
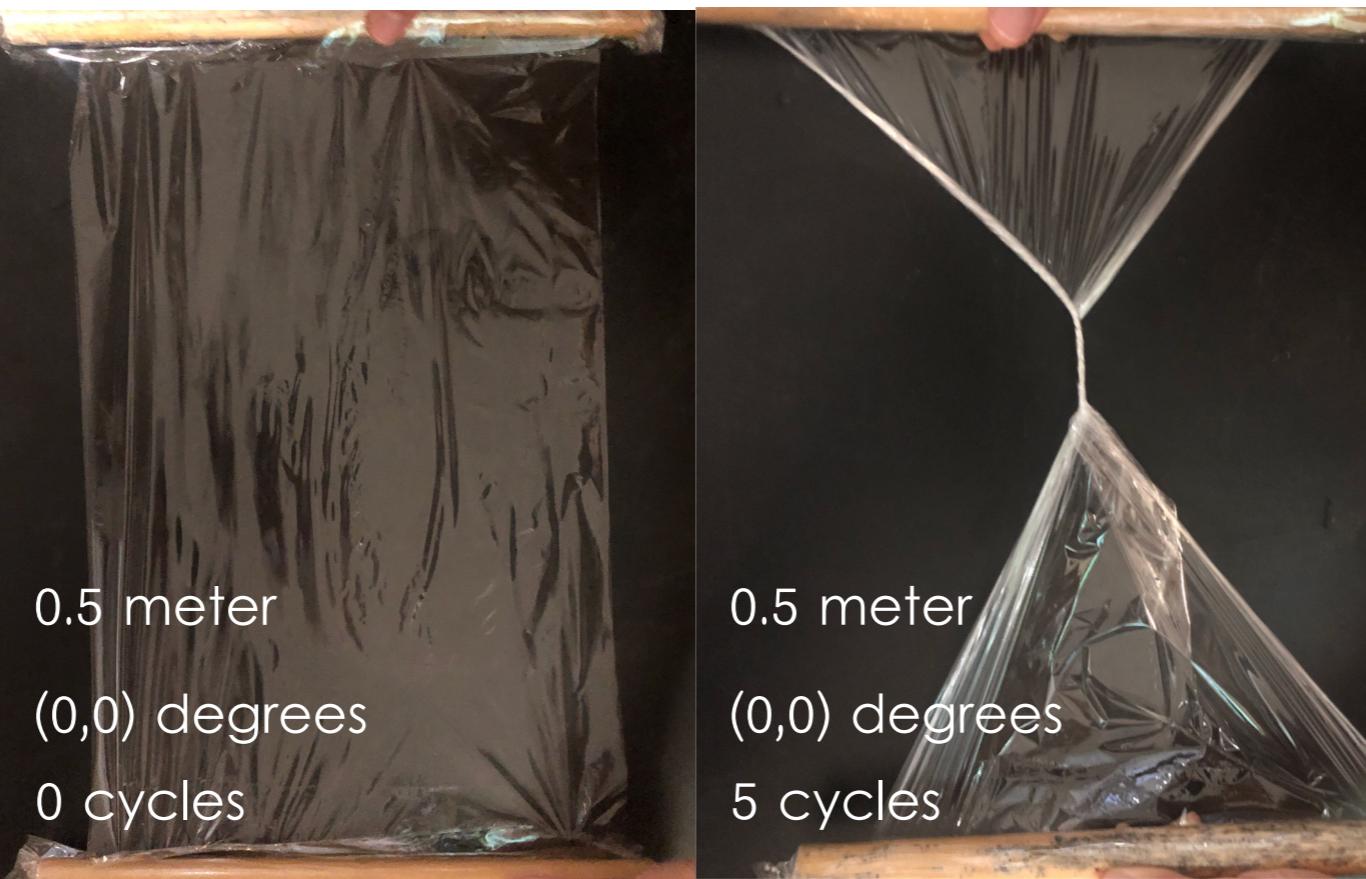
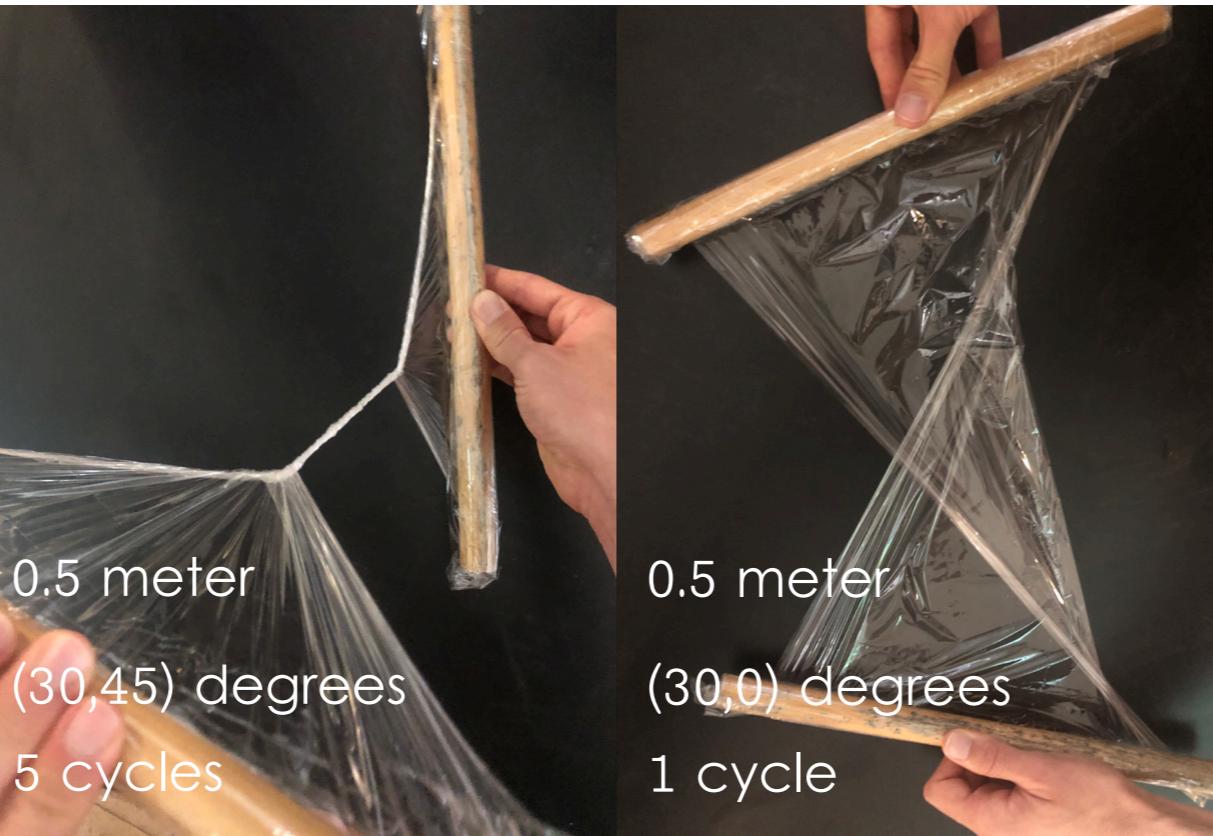


Triangle Shape



Tenstion

Catalog



System Rules

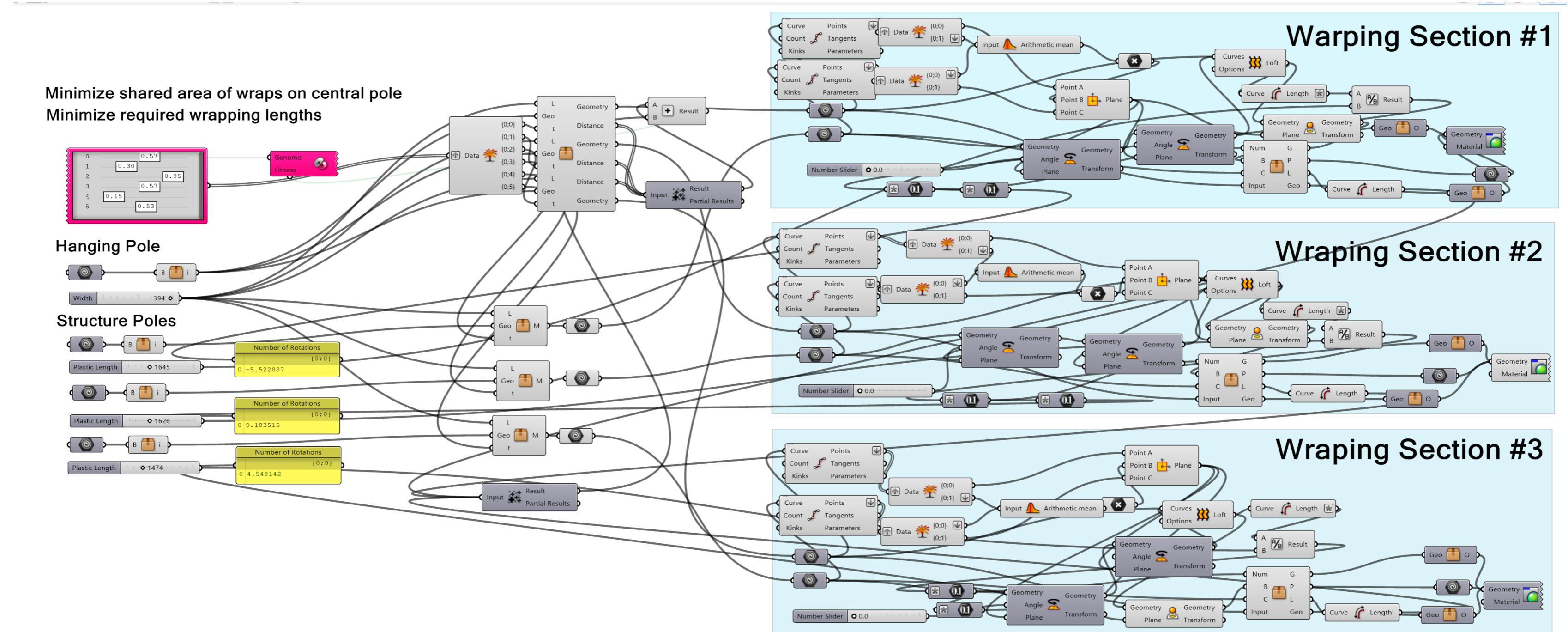
wraping cycles increase strine \ foil ratio

wraping cycles increase tension

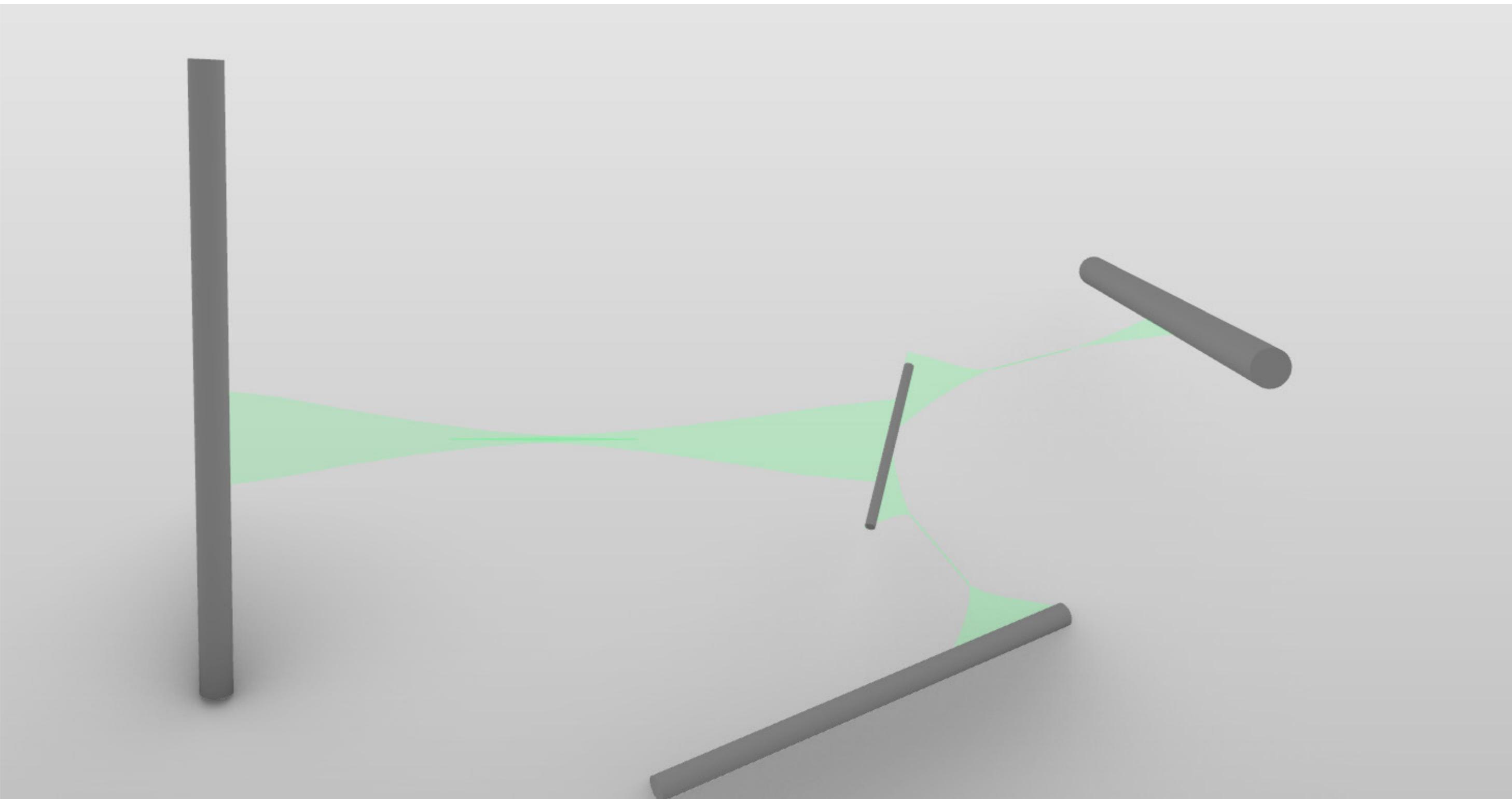
max tension is dependent on foil length (longer foil = less tension)

Rhino + Grasshopper

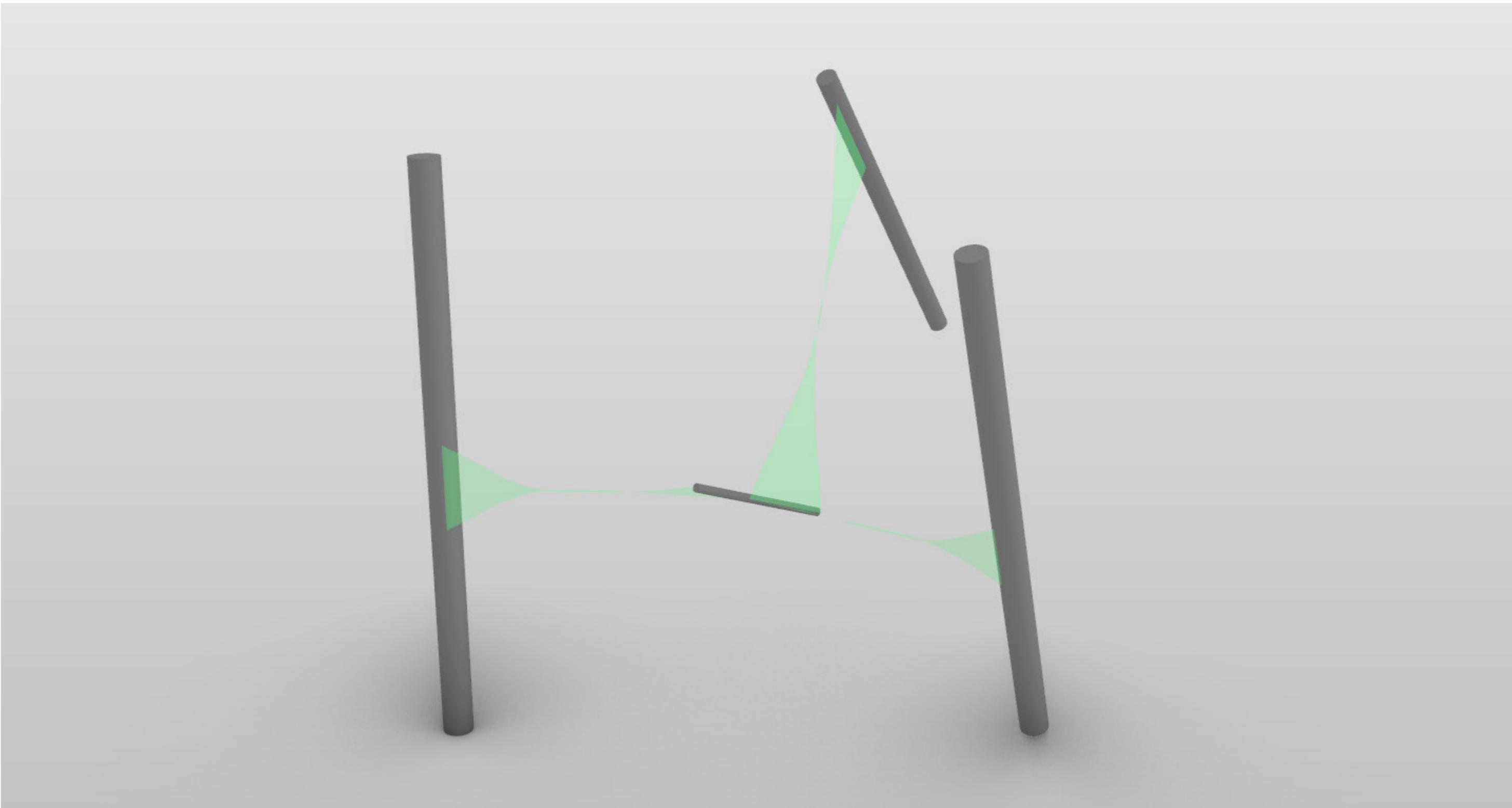
According to given structure poles and wrapping lengths, Galapagos component select wrapping area on top of each poles, minimizing distances and shared wrapping area. The wrap length \ distance ratio dictates number of wrapping “cycles” – increasing the string / foil ratio of each wrap.



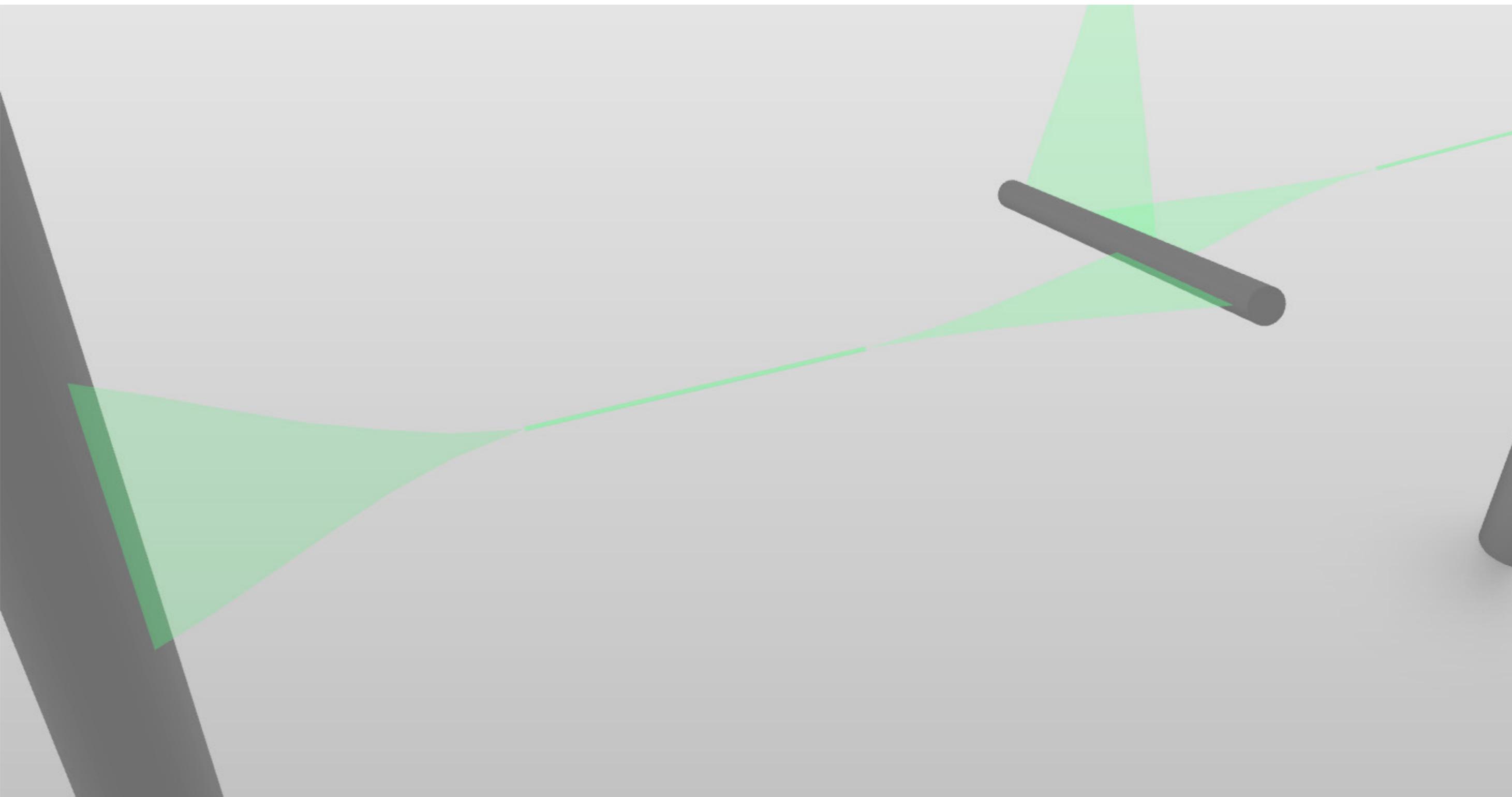
Simulation



Simulation



Simulation



Textile – Binding Cover?

Following Sempers discussion about the Four Categories of Raw materials, It was stated that textile has 2 opposite purposes:

To Bind – linearly combine elements into a single system.
To Cover – spatially enclose an empty surface

This work presents a unique mixture of both functions of the textile – a single system that includes foils of plastic that behave simultaneously as binders and covers. As can be seen through the digital simulation, the foil \ string ratio is changeable and can be modified to any purpose.

By examining the work through Sempers perspective, it might be interesting to question what functionality can be given to such a dynamic system, that encapsulates both principles, but doesn't fully operate as either. Are the plastic wraps connecting the wooden poles, or are they covering the empty surfaces trapped between the poles?