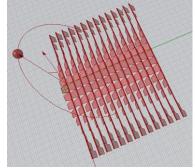
University of Oregon – School of Architecture and Allied Arts – Department of Architecture ARCH 484 / 584 ARCHITECTURAL DESIGN – Envisioning the Future

Nancy Yen-wen Cheng

Assignment 3: PERFORMATIVE POD

Hand-in: Wednesday, Oct. 14, 1pm

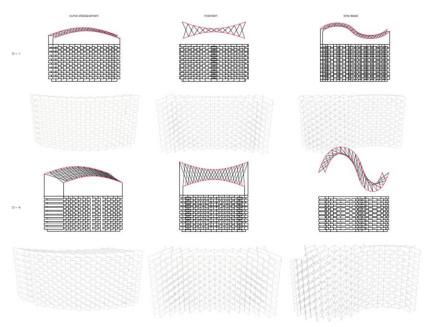


Solar flags by Sarah Cohen

For a hot climate, design a shading device using an adjustable version of your motif, using Grasshopper to vary between open and closed. The mechanism can be hinging, rotating, radius closing, changing depth, etc.: it needs to respond to a sun vector. Do not worry about the material or technology: create the adjustable geometry and assume that you could find the necessary materials and connections.

- 1. Start by creating a façade module that adjusts according to a slider bar.
- 2. Then make it change according to a moving vector. (i.e. **Orient** a part perpendicular to the vector OR measure the angle between a vertical line and the sun angle & **ReMap** it to the value range you need)
- 3. Use Heliotrope or Ladybug to create this sun vector.
- 4. Aggregate the modules into an adjustable facade, being careful about the data structure.
- 5. Create a catalog of the different versions of your adjustable shading device, showing it in a 2D and a 3D view. Show versions that would
 - a. shade a South façade
 - b. shade a West façade
 - c. open to the North
- 6. Sketch a minimal living pod with sleeping, eating, washing/toilet and workspace, showing how your façade would attach.

<u>For the ambitious:</u> Visualize how the façade would impact the interior, paying attention to scale, color and material.



Woven Wall Catalog by Marziah Rajabzadeh

Required Reading: The Geometry of Environment by Lionel March and Philip Steadman, Chapter 3.