OpenSource:Wood.

The research for Open Source Wood focused on the design and development of a variable module structural system realized with wood-to-wood connections made possible by the precision accomplished through digital fabrication.

Design, in conjunction with an open source platform and "maker culture", has the power of being systematically shared, continuously improved, digitally distributed and locally produced.
Craftsmanship has evolved to crafts-machine-ship, rising design to a level of precision and efficiency no man could accomplish.

One of the hypothesis this research thesis looked to answer was: How to rethink the architectural discipline in sight of the fourth industrial revolution and the environmental challenges present today?

With this in mind, sustainability is approached from four core ideas:

1. Use of wood as a renewable and carbon positive material to tackle embodied energy.

2. Digital fabrication as a way to achieve new found efficiencies and considerably reduce waste associated with the built environment.

3. Use of technology and the internet as a way to share designs globally and reproduce them locally with digital fabrication, eliminating the carbon footprint associated with transportation.

4. Adaptability as a way to prevent obsolescence creating a structural system that can be used, reused, modified, and even relocated trough time, effectively expanding the life span of buildings.

The potential of open source design comes in part from its "bottom-up" approach, answering to the ideas of Adaptable Architecture discussed in 1974 in Stuttgart at the colloquium hosted by Frei Otto.

The final project included building a 1:1 model, developing all needed parts and pieces, and machining connectors with a CNC router. The result is a real size structure that is assembled with wood-to-wood digitally fabricated joints.