School of Architecture

College of Fine Arts, CFA 201 Carnegie Mellon University Pittsburgh, PA 15213



Projects from Shaping Environments Seminar (2016-2019)

Carnegie Mellon University

62-315|62-715 Shaping Environments: Experiments in Geometry and (Waste)Matter: T/Th 11am-12:50pm 12 Units Dana Cupkova

As of 2020, humanity officially became the maker of the planet. According to research published in *Scientific American*, all synthetic objects made by humans now outweigh all the living biomass on Earth. This accumulation of new matter has left an irreversible footprint, with the architecture and construction industries contributing to the ossified landscape and waste streams that now constitute our world's sole responsible material resource. In the 19th century, people commonly mixed blood, clay, and sawdust in their material culture, and reusing materials was a matter of common sense. Today, it has become an absolute necessity.

Shaping Environments is a design-research seminar that explores alternative material formations beyond our current petrochemical reality. Using digital environments and computational tools, such as photogrammetry, depth-map texture modeling, AI workflows, and 3D printing, we will experiment with shaping new hybrid material systems. Using resources, such as food and/or construction waste, our goal is to propose new material paradigms that embrace ecological thinking and environmental stewardship through physical prototyping.