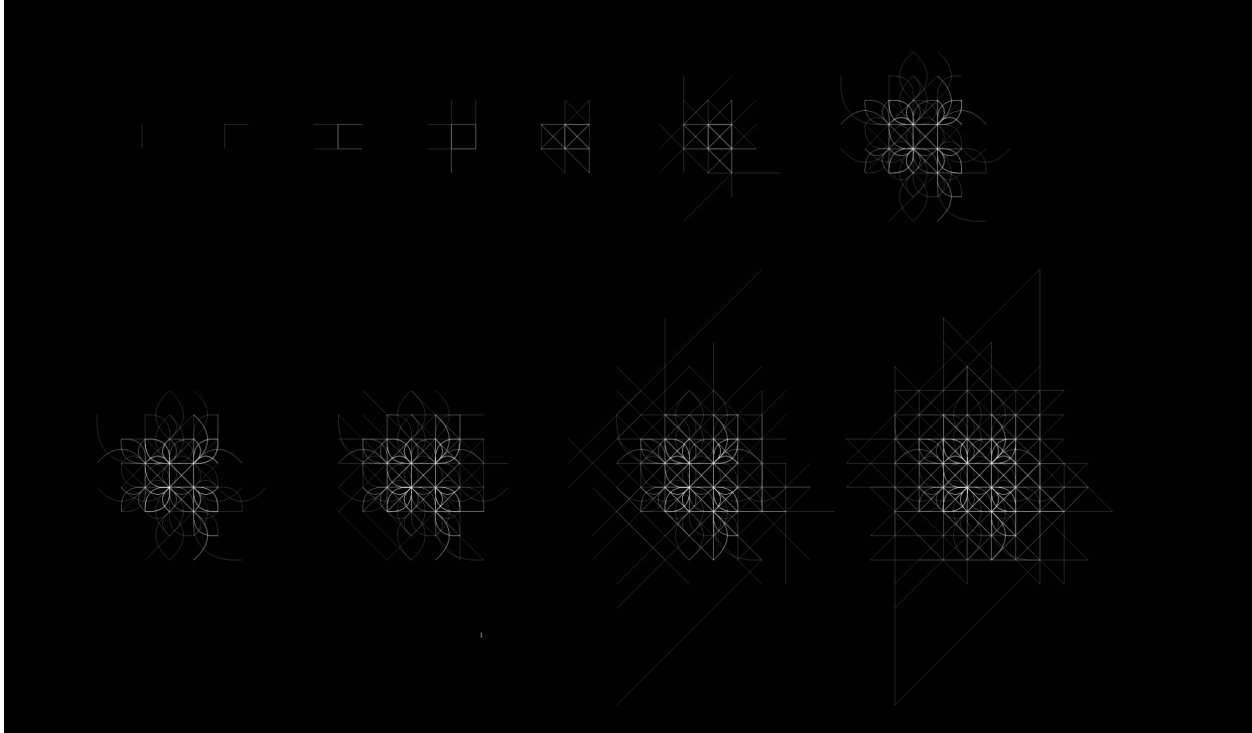




Carnegie Mellon University

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



Procedural Design Variations; Shape Grammar Chloe Hong (MSCD) 2022

48722: Inquiry into Computational Design

Units: 9

Instructor: Daniel Cardoso Llach (dcardoso@cmu.edu)

Course description

This graduate-level course examines the emergence of computation as a pivotal concept in contemporary architecture and design through a selection of design theories and practices responding to the so-called “computer revolution”. An aim of the course is to explore computation beyond particular technologies and tools, and to cultivate an awareness of design technologies as cultural artifacts shaping disciplinary identities and worldviews, and shifting conceptions of design, creativity, nature, body, and place. The semester is divided into two-week thematic modules, often with computational design faculty participating as guests covering topics derived from their own research. Each module includes readings and a short team-based project expanding on the topic introduced. Topics include among others shape grammars, tangible interaction, responsive environments, cybernetics, and architectural robotics. The course also introduces participants to the rudiments of academic research, in particular to the elements and structure of an effective research paper. Participants practice reading and responding to both historical documents and contemporary research related to each topic, and develop a critical understanding of a rapidly expanding landscape of hybrid practices, theories, and research methods linked to computational and interactive forms of creative practice.