GSAPP Spring 2014 - VISUAL STUDIES WORKSHOPS

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Session A: A4747 - Parametric Realizations

Mark Bearak Monday 7-9pm 115 Avery

Parametric Realizations: exploring the intrinsic relationship between parametric algorithms and material explorations

Overview

Parametric modelers are commonly used in the development of digital architectural models, but they are rarely taken to the point of becoming physical realities. This course will look at the process of generating parametric algorithms then turning those models into physical realities. Students will work in groups to design an installation that will be the physical realization of their scripted protocol.

Project

Students will work in groups to design an installation that will be the physical realization of their scripted protocol. Groups will develop mathematical algorithms using parametric modelers such as Rhino.script, Grasshopper and Generative Components. Concurrently students will be testing modeling techniques in order to create a prototype for their final physical system. Students will then take their digital models, rationalize them, and physically construct the system using a material process from their prototype.

Implementation

Students will start by researching certain room typologies such as wall panels, lighting elements and furniture pieces; each group will choose an element that will be used as a seed for their scripted cells. Students will use parametric modelers to generate their individual cells while keeping in mind the constraints of physical materials. Over the course of the semester students will apply specific techniques to differentiate their cells in order to create a series of distinct modeled elements. While students are developing their differentiated cells they will start testing their proposed modeling technique based on a single modeled cell. Students will streamline the modeling techniques that will generate a 1 to 1 prototype of one of their cell.