## [GUEST TEACHING]

UNIVERSITY OF MINNESOTA
*Catalyst Workshop*
*co-taught with Renee Cheng*

>> Problem / Potential
While rapid prototyping tools are leveraged in automotive, aerospace and product design to reinvigorate analog and digital design workflows, their use within the design phases of the discipline of architecture is quite limited and typically utilized for the production of final representation models. While most architecture schools have direct access to this equipment, the perception of 3d printing as a final production tool largely holds true within the academic context. As the novelty and expense of digital prototyping tools continues to recede, output looses mystique and should be understood as yet another tool for the production of physical models.
A significant challenge with 3d printing workflows in particular has been the difficulty to 'work' the material after output, and subsequently import or digitize altered physical models back into the digital modeling environment. As a result, the design feedback loop is severed at the point of printing.
This Catalyst workshop seeks to close this loop and promote an iterative design workflow where analog and digital design and output coalesce to offer the potential for a more responsive and intuitive workflow.

>> Premise
The workflow for this workshop will be explored through group projects that negotiate intent and implemented form for each of the members in the group. Specific criteria and formal characteristics will be assigned to each group. In an effort to avoid overwhelming the available resources, we have decided to divide the class into four groups of four students. While each group can be understood as autonomous, the work of the members within the group is interdependent. As such, the iterative process should be understood as the instrument to develop reciprocal relationships within the group while reconciling intent.

>> Project
There are two principle materials and associated processes for the workshop; 3d printed plaster and laser-cut chipboard. The relationship between these materials should be understood as nonhierarchical. While, each of the four investigations will principally consist of these two materials, the analog 'working' and 'reworking' of the models will demand an opportunistic attitude in which material is removed or grafted, i.e. white museum board in place of 3d printed plaster.

>> Process
As previously mentioned, the workflow for this project will rely upon both analog and digital processes. Projects should account for the inherent process and material limits of each medium, yet move beyond these limits as necessary when working analog.