GSAPP Spring 2014 - VISUAL STUDIES WORKSHOPS

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Session A: A4730 - Adaptive Fabrications 01

Adam Modesitt Tuesday 8-10pm 202 Fayerweather

Note: Adaptive Fabrications is a separate but complementary course to Adaptive Formulations--it is NOT required
that students have previous CATIA experience.

Session A

This session will focus on CATIA as a tool for authoring adaptive, parametric geometry. As the evolving nature of design requires us to handle more complexity at a faster pace, it is becoming increasingly important to create flexible, scalable systems that can accommodate change. The ability to layer, nest and embed rules and logic into design allows for parallel workflows, while the increasing availability of CNC and Direct-to-Fabrication processes allows updates to systems that are a few clicks away from fabrication. With the design-to-fabrication workflow becoming a more immediate process, efficiencies come from the ability to skip formalities of documentation; total control of geometry is essential to establish trust with third-parties responsible for manufacturing the product. Coursework will involve the design of independent systems of adaptive modules as well as systems that interact with geometry backgrounds (provided) such as structural systems imported from recent construction projects. Assignments will be informed by trade building and construction practices.

* Class Tours will include the offices of SHoP Architects / SHoP Construction, as well as potential visits to additional offices.

Session B: A4731

The future of the architectural profession is NOT in the production of drawing sets. While the relatively recent emergence of 'Building Information Modeling' in architecture relies on the coordination of systems from the various trades in a federated 3D environment, little has been done to challenge the traditional 2D deliverable. Revit, which has emerged as the industry standard BIM authoring tool in architectural practice, is built to produce a drawing set. It is not a good modeling software and is a clunky 3D environment to navigate, collaborate and coordinate design. Other modeling platforms used in the industry such as Rhinoceros and 3ds Max/Maya are far more agile both in form-generation and user-interface. Revit, which essentially functions as a graphic interface for MS Excel, sacrifices facility for parametricity and integrated 2D production.

This session will be dedicated to the use of Catia as a collaborative environment for coordinating design. We will use its unmatched ability to organize, visualize, navigate and analyze a vast amount of geometry in conjunction with native tools for dynamic sectioning, 3D annotation and measurement to propose alternate, more efficient methods of communicating design beyond the 2D drawing.

* Class tours will include the Barclays Center as well as potential visits of other project sites.

***While it is not required that participants take Session A, this session does require previous modeling experience*
with CATIA/Digital Project.