

2009 Code, Form, Space

Algorithmic processes, harnessed through the medium of code, allow creators to generate complex forms and organic structures by the application of elementary but carefully-tuned sets of rules. Digital fabrication systems, such as computer-controlled laser cutters, 3D printers, and machining systems, offer a nearly instantaneous way of exploring ideas in new spatial and material formats. The combination of these two approaches represents an extreme but growing position in art and design, wherein the traditions of hand-craft are exchanged almost entirely for the unprecedented possibilities made possible through a demanding new form of mind-craft.

In this mini-symposium, we present four practitioners – Casey Reas, Marius Watz, Ben Pell, and MOS Architects (directed by Michael Meredith and Hilary Sample) – who are refiguring the material world through rule systems and digital fabrication tools. Their work spans the disciplines of art, design, architecture, and engineering; the objectives of provocation, of utility, and of pure aesthetic delight; and the realms of bits, atoms, and ideas. All of these practitioners have singularly rigorous personal aesthetics and sensitive understandings of how the arts can transform the way we live. In their contrasting approaches at the limits of digital craft we can catch a glimpse of a new humanism in our increasingly computer-articulated environments.

Schedule of Events

Dialogue

C.E.B. Reas and Marius Watz work, independently, at the global forefront of generative and algorithmic art. In this unusual lecture format, Reas and Watz will trade short presentations about their complementary approaches to digital fabrication, rule-based systems, and the use of computer programming to produce their work.

Workshop

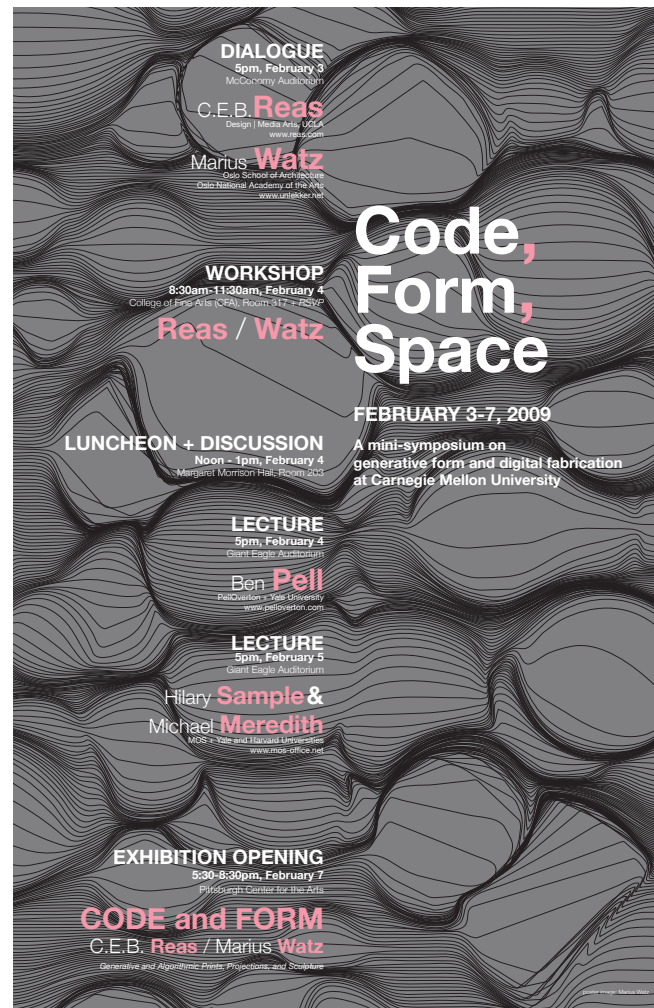
C.E.B. Reas and Marius Watz visit Adjunct Professor Ian Ingram's "Digital Fabrication for the Arts" class to demonstrate their process and share tips and techniques for generating physical forms from code.

Luncheon + Discussion

In Margaret Morrison 203. View the morning's workshop results and enjoy an informal lunchtime discussion with C.E.B. Reas, Marius Watz, Ben Pell, and "Code, Form, Space" co-hosts, Professors Jeremy Ficca (School of Architecture) and Golan Levin (School of Art).

Lecture

Architect Ben Pell investigates the intersection of contemporary ornament, display culture, and digital fabrication. In this one-hour presentation, Pell discusses new interventions for urban and domestic spaces produced by his firm PellOverton, an architectural research and design practice based in New York since 2003.



Lecture

MOS Architect partners Michael Meredith and Hilary Sample engage interdisciplinary research spanning art, design, environment, and computation. In this one-hour lecture, they present a diverse range of innovative projects made possible through new approaches to digital craft, including a puppet theater (with artist Pierre Huyghe), a generative rug system, a prizewinning 9/11 memorial, and the first-ever American drive-in theater produced by a non-profit cultural arts space.

Exhibition Opening

"CODE and FORM," an exhibition of new generative artworks by C.E.B. Reas and Marius Watz, runs February 7th through April 19th at the Pittsburgh Center for the Arts (PCA). Located at 6300 Fifth Avenue, in Shadyside, the PCA is open Tuesday-Saturday, 10am-5pm, and Sundays from noon-5pm.

2009 Digital Tectonics: Robotic Fabrication

As the impact of digital fabrication systems permeate the construction industry, opportunities for increased control, customization and efficiency emerge. The computer numerically controlled operation of such equipment allows for an increasingly fluid connection between design data and fabrication instructional data. By extension of this numerically reliant process, algorithmic processes and computationally driven design rule systems can inform digital fabrication processes and manifest beyond the screen. Industrial robots have long been utilized in the automotive industry for the precise repeatability of finite tasks. Recently, the cost and workflow of these systems has afforded investigations that seek to tap into the underlining process flexibility of the robot for the production of customizable building components that redefine material use and assembly.

Three practitioners and educators are presented in this mini-symposium - Martin Bechthold, Kostas Terzidis and Fabio Gramazio (Gramazio & Kohler) - who are utilizing advanced digital design and production work flows for the production of individualized, tailored design solutions. While reliant upon software and hardware machines, the voice of the author is evident in the work of each presenter and promotes alternative modes of expression reliant upon the use of the machine.

Schedule of Events

Lecture

Architect and educator Martin Bechthold investigates computer-aided design and manufacturing applications in architecture, with a current focus on structural systems, construction automation, and robotics. In this one-hour presentation, Bechthold shares recent robotic fabrication explorations at Harvard University and discusses the emerging influence of robotics upon the design and production of architecture.

Workshop

Participants will explore the application of rule based design systems through the utilization of Grasshopper.

Lecture

Educator and programmer Kostas Terzidis engages interdisciplinary research spanning arts, architecture and computer science. In this one-hour presentation Terzidis will look into the current state of computation-based design and offer insights in the possibility of using exhaustive permutations for the generation of architectural plans.

Dialogue

Architect Fabio Gramazio will join professor Jeremy Ficca's course Digital Tectonics and discuss the current Pike Loop installation in Manhattan.



Workshop

In this intermediate workshop Kostas Terzidis will utilize the Processing computer language to explore the application of advanced algorithms and techniques.

Luncheon + Discussion

Join "Digital Tectonics" host Jeremy Ficca for an informal lunchtime discussion with Fabio Gramazio, Kostas Terzidis, and professor Kai Gutschow.

Lecture

Architect and partner in Gramazio & Kohler, Fabio Gramazio explores non-standardised architonic products through highly controlled robotic fabrication processes. In this one-hour lecture Gramazio presents a diverse selection of work including a robot fabricated brick facade, the 2008 Swiss Pavilion at the Venice Biennale, variably perforated concrete wall panels and an alpine hut.

[LECTURE SERIES ORGANIZED]

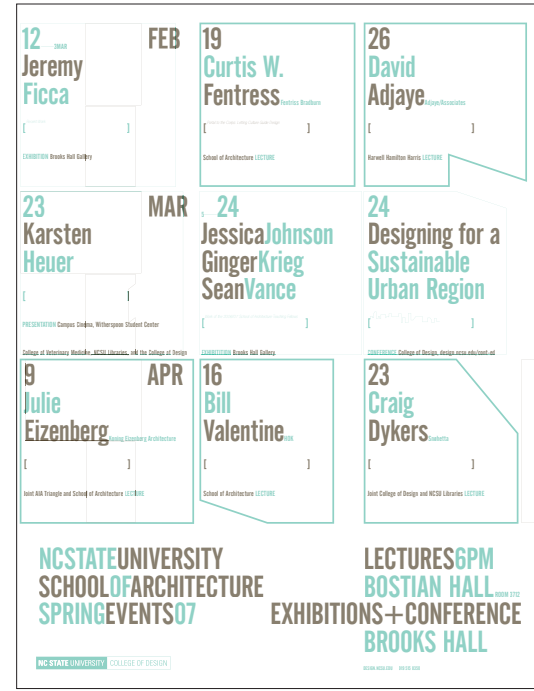


FALL 2006 NORTH CAROLINA STATE SCHOOL OF ARCHITECTURE LECTURE SERIES

Lecturers:

- Scott Marble - Marble Fairbanks
Bootstrapping
- Marc Tsurumaki - LTL Architects
Catalyzing Constraint
- Pablo Castro + Jennifer Lee - OBRA Architects
Incomplete Works: Mementos & Lacunae
- John Ochsendorf - MIT Architecture
On Structure and Form
- Gilles Saucier - Saucier + Perrotte Architects
Horizon 3
- Victoria Ballard Bell + Patrick Rand - NCSU
Materials for Design

[EXHIBITS ORGANIZED]



SPRING 2007 NORTH CAROLINA STATE SCHOOL OF ARCHITECTURE LECTURE SERIES

Lecturers:

- Curtis Fentress - Fentress Bradburn
Portal to the Corps
- David Adjaye - Adjaye/Associates
Harwell Hamilton Harris Lecture
- Karsten Heuer
Being Caribou
- Julie Eizenberg - Koning Eizenberg Architecture
- Bill Valentine - HOK
Horizon 3
- Craig Dykers - Snohetta

2010 LADALLMAN

Exhibition of recent work and School Lecture

