

# USING INEXPENSIVE AND SIMPLE, YET VERSATILE, 3D SOFTWARE IN THE CONSTRUCTION OF COMPLEX GEOMETRIES IN ART AND DESIGN.

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3D modeling Tutorial and Hands-On Workshop at the Nordes 2009 Conference “Engaging Artifacts”, Oslo Sunday 30. August 2009 10.30AM-4.00 PM.

“Historically, sculpting models meant molding and shaping clay with your hands and some basic tools. Adding color required paint and brushes. With the arrival of 3D modeling applications, everything changed.”

Quote from Autodesk Brochure advocating “MudBox” software.

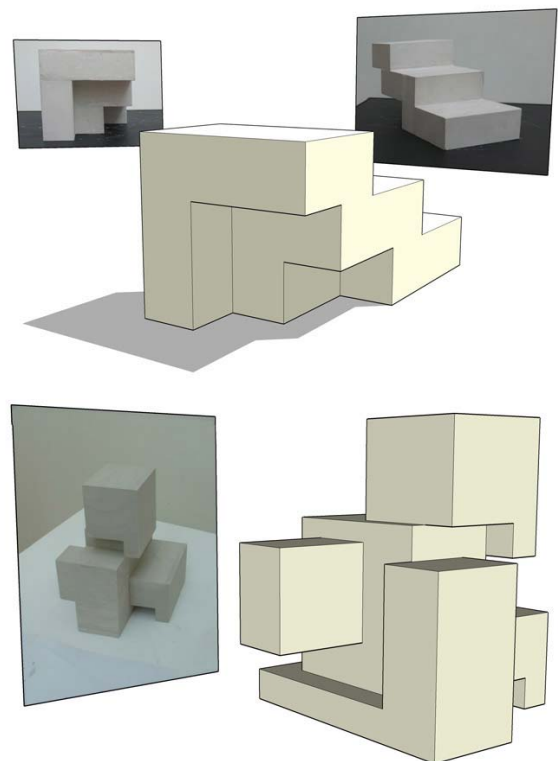
## INTRODUCTION AND BACKGROUND

Having participated in this workshop dealing with 3D, curves and surfaces “first-hands”, the participants will achieve an indepth understanding of some of the design methods the *simple* 3D computer software has to offer, and fully appreciate the exquisite work of Gaudi/Burry.

Participants bringing their own (Windows) laptop will get a free 8 hour/30 day trial version of SketchUp from Google and “MoI”\* from Triple Squid Software Design.

Artist and designers are currently overwhelmed with all the different brands of 3D software, and several of the most promising new approaches to parametric design expects the artist/designer to get deeply involved with *scripting*, or a kind of *visual programming*, to actually benefit from the new *paradigms* in the design process.

This hands-on workshop will take some of the heat out of this usually quite frustrating situation, and enable the participants to take advantage of new functionality in some of the simple, yet versatile tools, *commonly* used in the earliest *conceptual* stages of the design process.



All Figures: Student works showing SketchUp 3D + Plaster-models.



**Tutorial + Workshop** Full-day (2x3x45min) session offering an introduction to *approaches, methods* and *techniques* in designresearch related to the creative use of 3D-Computer-Aided-Architectural-Design-Ideation.

**Time Schedule:** (10.30 AM - 5.00 PM):

45 min-1 hour: Preparing all laptops with 3D software.  
 15-30 min: Walkthrough of Graphical User Interface(s)  
 35-70 min: Hands-On Tutorials with prepared handouts.  
 10-20 min: Coffee break and discussion of 3D method: Push/Pull, SandBox, NURBS-Curves/Surfaces-editing.

Co-teacher: Arthur Steijn

**Intended participants:**

Anybody with an interest in acquiring new knowledge of design practice, teaching practice and 3D methodology. No previous experience in 3D modeling is necessary ☺

**Relevance:**

In relation to the outlined themes and the widespread use of digital Rapid Prototyping in the designer/maker practice, it is important to share knowledge of how to prototype in *other ways* than physical model making. See also the paper “Binary Tools” by Tavs Jørgensen presented at the Nordes 2005 titled: “In the Making”.

**Goal:**

By focussing on 3D software costing less than \$ 200(!) and not the usual \$ 4500-10500 (3dsmax/SolidWorks), it is possible to impact a much larger range of students, users, researchers, and design professionals & industry.

ACKNOWLEDGEMENTS

Michael Gibson from “Triple Squid Software Design” + The original development team at @Last Software Inc. for creating the SketchUp application, Google for making it free, and in particular: Brad Schell + Joe Esch + John Ulmer for inventing, describing, patenting and implementing the “Push/Pull”-technology in SketchUp.

SOFTWARE TO BE DOWNLOADED AND USED:

“Google SketchUp 7.0” & “Moment of Inspiration 1.0”  
 Minimum requirements for participating: Laptop with Windows Vista/XP + DirectX 9, Internet Explorer 6/7.

\*)

“Moment Of Inspiration” is a Rhino-like 3D software developed solely by Michael Gibson, a former Robert McNeel employee. “MoI” is currently sold for \$ 195.-

The MoI 1.0 software is powered by the “SOLIDS++” modeling core by IntegrityWare.com, which also has companies like McNeel, Bentley and Autodesk on it's customer list. “MoI” uses Rhino’s native 3DM format. SketchUp use the SKP format (imports/exports DWG).

REFERENCES

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