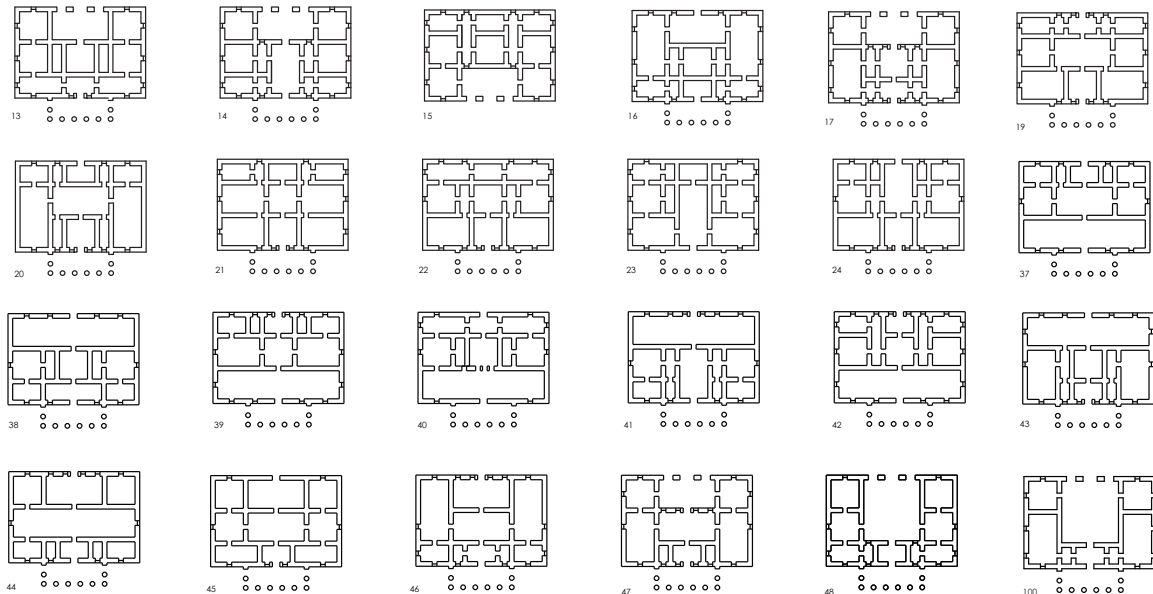


ARCH 6508 SHAPE GRAMMARS

Thanos Economou, PhD
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1:30 pm - 2:45 pm T/R
Economic Development Bldg, Room 235
College of Design, Georgia Institute of Technology
Fall 2018



Machine-generated possible Palladian Villas, ARCH 6508, School of Architecture, Georgia Tech, Fall 2017

SHAPE GRAMMARS

A course on the formal (visual / mathematical) analysis and composition in design. Students explore fundamentals of spatial and visual composition through the *Shape Machine*, a new software/plugin for Rhino developed at the Shape Computation Lab at the School of Architecture. The class and the tutorials are based on the shape grammar formalism, one of the most powerful formal systems for the generative description of designs. Significantly, the software implementation of *visual computations* rather than *symbolic (scripting) computations* promises an entirely new approach for the automation of visual recognition and doing in design, strongly suggesting new links between art, design, mathematics, psychology, neuroscience and more, not previously explored. The class is supported by the Creative Curricular Initiatives Program through the Georgia Tech Office of the Arts and the Georgia Tech Arts Council and student work will be exhibited at Georgia Tech and abroad.

Students are expected to attend the lectures, participate in the discussions, read the weekly readings and do five bi-weekly design studies and one final project. The grade for this course is divided as follows: 5 studies @ 12% each; and one final project: 40%.

The course is open to all students with an interest in formal (spatial / mathematical) analysis and composition in design.

Keywords: formal composition; design computing and cognition; design and mathematics;