

# THICK + THIN V.2

## Shell and Spatial Structures Construction Workshop

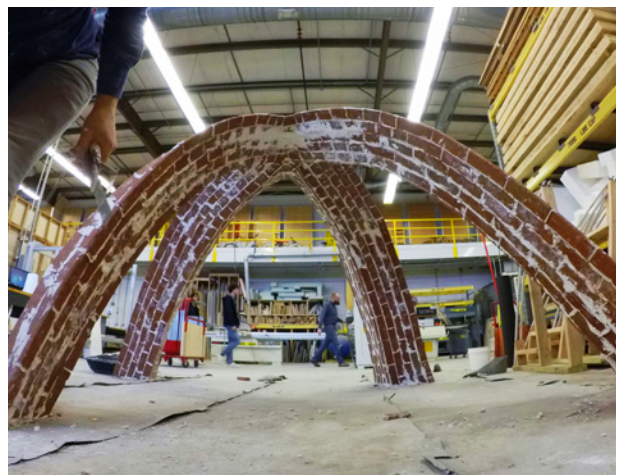
Instructor: Jonathan Dessi-Olive, Ventulett NEXT Generation Visiting Fellow

**THICK and THIN construction-innovation workshop will explore the essential relationship between building materials, geometry, and structures [matter, shapes, and forces]. Students will work in groups, pursue rigorous and highly experimental research that takes on material and structural primacy, and develop new and creative ways of constructing shell and spatial structures.**

**Arch 8833 (CRN 31335) & Arch 4833 (CRN 30773) on Wednesdays 6-8:45 DFL**

The course will provide a base of appropriate structural design and analysis techniques for pursuing research as well as construction knowledge using select techniques. A 3-4 week series of lectures will be followed by workshop sessions with exercises including: theoretical design and analysis exercises using both manual and computational methods, construction methods, prototype construction, etc. Students will choose a course of research either based on personal or collective interest. They may also chose to extend past or on-going research on shell and spatial structures. Past topics have included tile vaulting, funicular structures in raw clay and lightweight concrete, mycelium-composite construction, and pneumatics. The goal is to develop new material logics for building shell and spatial structures. The deliverable will be one or several innovative structures built to be exhibited at the department of architecture End of Year Show.

Pre-regs: Students must have Arch 4833/8833 Structures I; have proficiency in digital design tools such as Rhino, Grasshopper. Construction/Digital Fabrication experience preferred.



Constructions from Thick + Thin V.1, Spring 2018. Roberto Bucheli (MS), Bennet Crawford (MS), Keyhan Khaki (BS), Alex Knight (M.Arch), Anna McCuan (BS), Sean Miller (MS), Sounok Sarkar (MS), Matt Singleton (BS), Justin Wilson (MS), and Jonathan Dessi-Olive