

Terra Forming

Manifesting Material Histories

Laura Garófalo

QUESTIONS

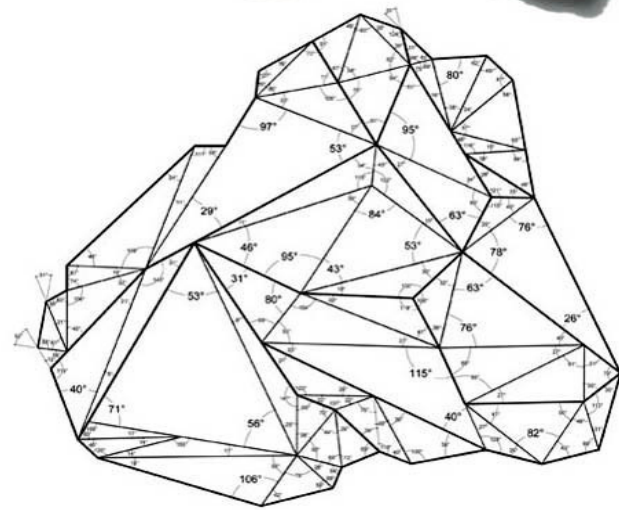
Once seen as static entities, earth sciences exhibition venues are facing challenges to their material and historical representations. This studio will question how institutions will represent geology in the face of the controversial new geological epoch, the Anthropocene. How do these institutions contend with critical material histories and hyper-natural conditions? How do they represent themselves? Can the buildings housing them engage visitors and scholars with sublime expressions of transformative forces? And most directly, how can processes like erosion, deposition, plate tectonics, and atmospheric energy cycling (or weather) inform a design process and the expression and performance of a building?

PROMPT

The earth's geology shows an imprint of ecology, biology, and climate. Encrustations on the globe and in our bodies that define the Anthropocene as a new geological epoch have become part of our geospatial condition. Drawing from geological processes and conditions the studio will aim to design building systems that celebrate the complexity, variability, responsiveness and uncertainty of natural systems. Analogies and performative models will form part of our discussion and inform material explorations. Ceramic materials are similarly responsive and metamorphic. By exploring this non-extractive but historically tested material, we will develop bioclimatic façade systems that reimagine the building's adaptation to local ecology and climate change. These performative surfaces are by their very nature ornamental so the studio will attempt to understand ornament and its role in both socio-cultural and environmental "performance".

CONTEXT

Material research will organize the semester starting with form finding explorations and finishing with ceramic assembly prototypes. The process of making through digital fabrication and analog craft will be juxtaposed with questions

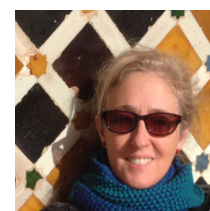


The geometry of geology, by Vicente Guallart



MicroHabitats, Chris Gomez / Mandy Situ. 2016

Participants should be invested in learning through making and find joy in digital and analog fabrication of physical objects. Patience, hard work, and care in making will be intrinsic to the process. The studio environment will support experimentation and risk taking in concept and fabrication. After some individual research and development, students will work in teams to facilitate material exploration, prototyping, and assembly. The studio will have support, consultation, and feedback from ceramic artists, and technical experts.



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of labor, expertise, resource access, and ecological responsiveness. The studio provides an in depth look at this material process which is embedded in an ancient artistic tradition and engages cutting-edge architectural fabrication techniques. The instructor's involvement with a community of architects and industry partners facilitates this exploration. Industry partner Boston Valley Terra Cotta, as well as members of design and facade engineering firms, and ceramic artists participating in the yearly Architectural Ceramic Assemblies Workshop (<https://archceramicworkshop.com/>) will inform the development of each project. Optional participation in ACAW in the summer of 2024 will round out the semester's experience.

PROGRAM

The studio will consider how the Geology Exhibition Gallery is re-envisioned internally and externally, programmatically, and performatively. Students will define what their building communicates leading to the design of a Gallery and the prototyping of its ornamental skin. Project sites will be defined by students in response to site visits. We will visit local venues including museums and galleries. Regional day trips will take us to geological sites including the Laurel Caverns. Further afield, we will travel to Buffalo NY to visit industry partner Boston Valley Terra Cotta, tour a gallery addition by OMA, and learn about the geological impacts of erosion in Niagara Falls and the Great Lakes. There will also be an (optional) field trip to NYC to visit the addition to the Natural History Museum by Studio Gang, and meet with NYC architecture offices.

LEARNING OUTCOMES

On successful completion of this studio you should be able:

- to develop morphological transformation that lead to performative ornamental architectural surfaces;
- to understand architectural material processes, fabrication, manufacturing and assembly systems;
- to use CNC and analog craft skills in prototyping;
- to understand the structure required in experimentation, and planning and production of prototypes;
- to use design to raise questions of environmental regeneration, resilience, and adaptability;
- to address architecture's role as an ecological practice.