## 62-275 Fundamentals of Computational Design

**Course Description**

As analog mechanisms; as metaphors; as bodily extensions or prosthetics; as material systems; as building envelopes; as partners —or servants?— of humans. This course takes computers outside the box and outlines a journey of discovery revealing computation as the connective tissue encompassing multiple facets of architectural practice and experience. Addressing conceptual and practical aspects of the relationship between computation and design, the course explores the fundamentals of generative and rule-based systems for designing and making, simulation, and responsiveness, along with basic approaches to creative data processing, visualization, and materialization. The course offers a holistic view of computation, exploring the different roles computing plays in the design of our built environment. Organized in two-week modules, the course explores six themes, each combining historical insight, state of the art architectural examples, and hands-on computational exploration.

Pre-requisites: Generative Modeling
Schedule: Tuesdays and Thursdays, 3:00-4:20 pm (Remote Only)
Instructor: Daniel Cardoso Llach, Ph.D. (dcardoso@cmu.edu)
Office: MMCH 412; Office hours: By appointment.