SPRING 2022
ARCH 598C
COMPUTATIONAL DESIGN

PROF. TOMÁS MÉNDEZ ECHENAGUCIA

The course is a deep dive into state-of-the-art computational methods for architectural design. We will introduce the central concepts behind the creation of tools used by designers to improve the quality of their buildings, with a particular focus on building performance, such as structural efficiency, operational energy and acoustics. The course will make use of the Python programming language, in combination with the Rhinoceros CAD environment and several open source libraries during a quarter long computational design project. The course has the objective of introducing the computer as a powerful design tool that goes beyond traditional drafting methods and static models. This is achieved by imparting a combination of computational concepts and technical skills. Some of the key areas of focus will be computational geometry, parametric modeling, performance analysis, fabrication aware design as well as optimization and machine learning.