ZIMMER

Design and build a piece of conceptual art: a building that walks
Independent Study (Architecture) Senior Thesis or M-Eng Project (Mech.Eng.)
Fall 2017

A collaboration between Cornell Architecture and Mechanical Engineering
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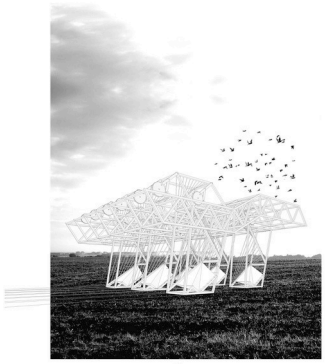

A collaborative faculty team between Architecture and Mechanical Engineering has funding to build a conceptual architectural/engineering dynamic sculpture in the Spring and Summer of 2018. Zimmer is a `building' with legs instead of columns, no walls, and a porous roof truss that is analogous to a multi-legged animal body. It should walk a few hundred meters over a few months, off the grid, using some mixture of solar, wind, water and human power. The plan is to use a building frame that is 50' x 25' x 15' made of light-gauge steel. Students will consider the mechanism, the power source, the design details, parts selection, fabrication and installation. This is an engineering project that involves all stages, from ideation, to design details, to the practical aspects of construction.

While Architecture has frequently made reference to architecture as a "machine" (Le Corbusier) and paper designs for mobile and dynamic projects like Archigram's *Walking City* or Cedric Price's *Fun Palace* have captured our imaginations, the interplay between mechanical systems and architecture has been limited. This project hopes to provoke, through real construction and operation, a new era of dynamic architecture.

The faculty and student team will meet once per week at a time and location to be determined. Number of credits is optional. Letter grade or P/F.

Initial information meeting will be on Thursday August 24 at 5 PM in Upson 566.Architects meet at main architecture office at 4.40 for walk over.

Andy Ruina Dept: Mechanical and Aerospace Engineering ruina@cornell.edu
Interests: Dynamics, especially of locomotion, especially the energetics and balance of walking, biking and boating, both human and robotic. Other interests include the mechanics of friction and collisions.
Jason Cortell jbc2@cornell.edu
Martin Miller Dept: Architecture
Interests: Architecture and Robotics, computational design and fabrication.
Caroline O'Donnell: Dept: Architecture cao53@cornell.edu
Interests: Architecture and change, architecture and unconventional materials.