OBJECTIVES
What are the computational and intellectual foundations for a comprehensive and transformative approach that reexamines the premise of conventional energy standards specifying a closed building envelope, in order to design complex energy efficient built systems that derive energy, light and ventilation from their immediate surroundings?

CONTRIBUTIONS
Interdisciplinary research synergies in:
(i) Biomorphic Architecture
(ii) Computational Modeling and Integration,
(iii) Adaptive, Open, Self-configuring Envelope,
(iv) Internal and External Micro-Climatic Harnessing for Energy Production and Ventilation and
(v) Efficient Use of Ecosystem Services.

METHODS
To explore biomorphic architecture, we envision creating the science and developing a decision support computational framework to allow architects and engineers to synergistically work on green buildings.

RESOURCES NEEDED
• An integrated approach for simulation-based realization and rapid fabrication of complex and high performance built environments.
  • Digital Visualization and Modeling
  • Fabrication and Construction
  • Data Acquisition Systems)

• Students: 1 Ph.D. + 2 MS