

The Nonlinear Systems Organization is a research organization at The University of Pennsylvania School of Design. Its mission is to explore ways in which architecture can demonstrate, test, and apply insights and theories from mathematics and the sciences—nonlinear, algorithmic, and complex—in the design of material structures across an open-ended range of scales, materials, and design disciplines.

Through a comprehensive, open program of research, the NSO is structured to establish collaborative links across academic departments and with research interests outside the university. By transferring theoretical scientific knowledge into the applied design arts, it seeks to expand the horizons of design and, at the same time, promote a broader appreciation of these theories by the general public.

In addition to the multiyear, funded research projects of the NSO senior researchers, the NSO delivers a program of events and publications complementing the research agenda. The NSO hosts annual conferences that bring together researchers in the sciences with architects and other design professionals to identify scientific models that could be developed into new design techniques and processes. It awards annual research fellowships to support the work of outstanding individuals in the sciences and the arts, and affords opportunities for students at the undergraduate and graduate level to meet and work with these individuals.

The work of the NSO is experimental and treats the activity of design itself as a form of research. The NSO seeks to produce new organizations of matter and life that possess extraordinary beauty, diversity and versatility. By exposing scientists and theorists to the opportunities of applied design, the NSO also seeks to stimulate the further development of science.