Temple Mathematics — End Of Semester Talk

Benjamin Seibold

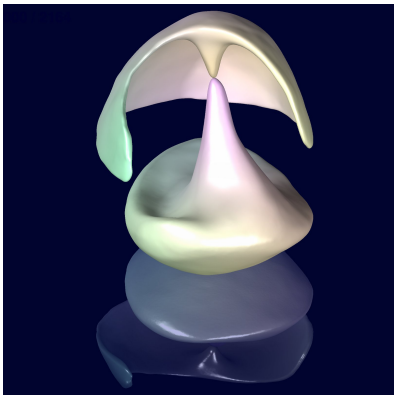
Temple University

will speak on

The sound of an evolving floating sculpture

ABSTRACT: Marta Pan's 1961 "Sculpture Flottante" is an exhibit in the Kröller-Müller Museum, Otterlo, Netherlands. A base is floating on a pond, and connected through a thin shaft, it is covered by a top, like an umbrella. The artist Jane Philbrick (MITs Center for Advanced Visual Studies) fell in love with the sculpture, its reflection in the water, and the sounds it creates when excited by the wind. Her work on bringing the sculpture to "life"—in stills, video, and sound—led to the exhibition "Everything Trembles" at the Skissernas Museum, Lund, Sweden, which ran in fall 2009.

Here is where mathematics comes into the game. Y. Farjoun, E. Lenzmann, and B. Seibold were confronted by the artist whether they can predict the "future" of the sculpture, and its sound. The mathematicians' answer was to let the sculpture evolve under its mean curvature, and to create sound based on eigenfunctions of the Laplace-Beltrami operator on the evolving surface. This project, which eventually led to two art pieces in the exhibition, takes the audience on a tour through geometry, partial differential equations, numerical linear algebra, and computation.


Monday, 7 December 2009
Lecture at 4:00 pm
Coffee, tea, and refreshments from 3-5 pm
Room 617, Wachman Building
Department of Mathematics