



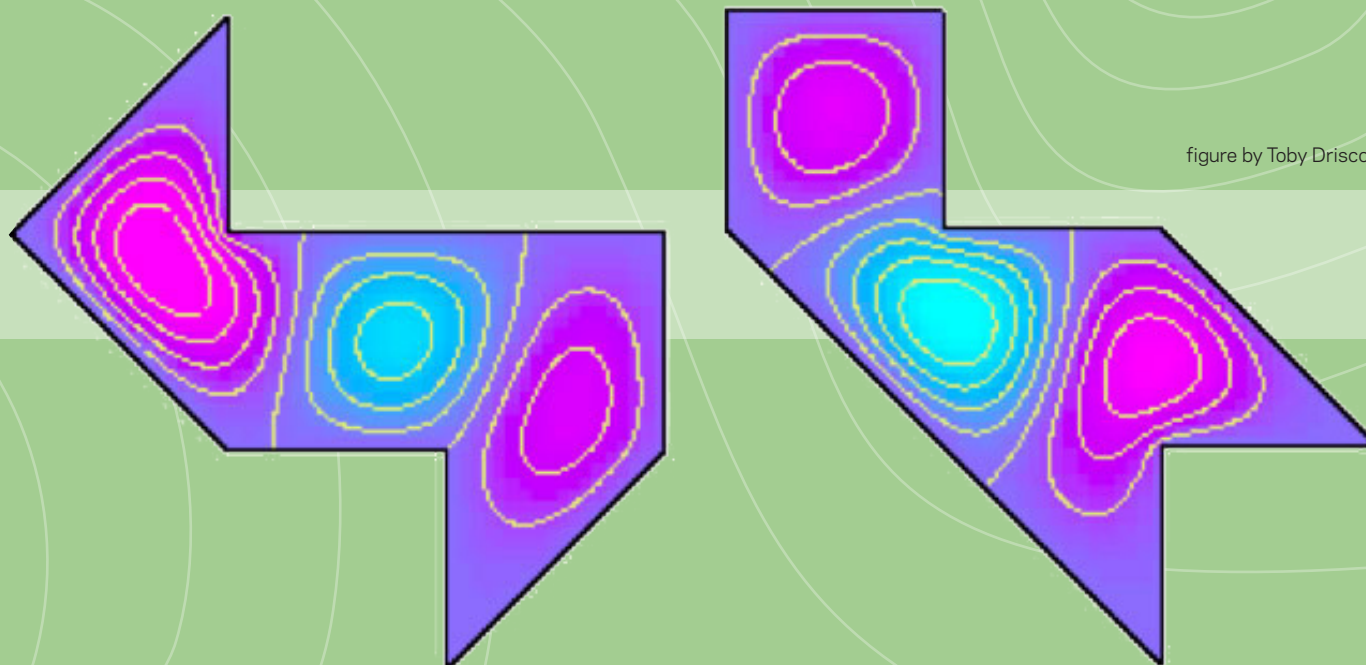
MATH FOR EVERYONE

TALKS AND DISCUSSIONS ESPECIALLY FOR UNDERGRADS



Carolyn Gordon
Dartmouth College

In spectroscopy, one attempts to recover the shape or chemical composition of an object from the characteristic frequencies of sound or light emitted. Mark Kac's question, "Can one hear the shape of a drum?" asks whether two membranes (drumheads) which vibrate at the same characteristic frequencies must have the same shape. We answer Kac's question negatively by constructing pairs of exotic-shaped sound-alike drums. We also listen to a computer simulation, produced by Dennis DeTurck, of the sounds of these drums.



"YOU CAN'T HEAR THE SHAPE OF A DRUM"

THURSDAY, APRIL 4, 2013
5:00PM
127 HAYES-HEALY CENTER