Mathematics Colloquium Series, Spring 2011
Fresno State

Dr. Kathryn Leonard
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Title: The mathematics of skeletal shape models

Friday, February 4, 2011
from 4:00 p.m to 5:00 p.m.
PB 192

Abstract: A fundamental barrier to an automated image recognition system is the ability to recognize the shape of objects in an image. In order to recognize a shape, we must first develop appropriate models for shape. One such model is the Blum medial axis, which can be thought of as the skeleton of the shape and the length of its ribs. The Blum axis has several beautiful mathematical properties as well as good shape modeling capabilities. We will define the Blum axis, discuss its history, explores its strengths, and compare its value as a shape model with the boundary curve of a shape. We will also discuss related work-in-progress for a generalization of the Blum axis, as well as a few related research projects involving undergraduates.

For more information, please contact Dr. Tamas Forgacs at (559) 278-4907 or e-mail tforgacs@csufresno.edu