



Faculty of Mathematics and Computer Science  
The Weizmann Institute of Science

## *Distinguished Lecturer Series*

Sponsored by the Arthur and Rochelle Belfer  
Institute of Mathematics and Computer Science

## **Professor David Mumford**

Division of Applied Mathematics  
Brown University

*will speak on*

# **Mathematical Approaches to Optimal Deformations Between Planar Shapes**

### *Abstract*

In the last few years, the idea of putting a Riemannian metric on the space of shapes has been proposed. This space is possibly the simplest infinite dimensional truly nonlinear space. Psychophysically, it seems as though we have a quite clear idea of what "similarity" of shapes means, i.e. that we use some such metric. But THREE families of metrics have arisen, based on three quite distinct approaches. I will discuss all of them and report on what is known, though it looks as though we are just beginning the exploration of the geometry which each brings to shape space.

*The lecture will take place in the Dolfi and Lola Ebner Auditorium, on campus  
on Tuesday, June 1, 2004  
at 11:30*

A light lunch will be served after the talk