



## Fall 2007 CIS Seminar Series

### Contour Grouping Based on Local Symmetry

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#### Abstract

The talk deals with grouping of edges to contours of shapes using only local symmetry and continuity. Shape skeletons are used to generate the search space for a version of the Markov Chain Monte Carlo approach utilizing particle filters to find the most likely skeleton. Intuitively this means that grouping of edge segments is performed by walking along the skeleton. The particle search, which is an adapted version of a successful algorithm in robot mapping, is assisted by a reference model of a shape, which is expressed as the sequence of sample points and radii of maximal skeleton disks. This model is sufficiently flexible to represent non-rigid deformations, but restrictive enough to perform well on real, noisy image data. The order of skeleton points (and their corresponding segments) found by the particles defines the grouping.

Location: *Tuttleman Learning Center, Room 401A (note new location!!!)*

Time: 3:30-4:30PM, 10/10/2007, Wednesday

Light refreshments will be served.