

1105-51-261

Md Ashraful Alam* (ashraful@cs.umass.edu) and **Ileana Streinu** (istreinu@smith.edu).

Star unfolding polygons.

In this talk we introduce a new type of unfolding of convex polyhedra known as geodesic star unfoldings. They are a generalization of shortest-path star unfoldings of 3D convex polyhedra and have a very simple characterization. We also address several problems concerning the existence of shortest-path star unfoldings on specified source point sets, and of reconstructing shortest-path star unfoldings with given ridge tree combinatorics. (Received September 23, 2014)