Adaptive Quad-tree Surface Representation for 3-D Vortex Sheet Motion[1] LEON KAGANOVSKIY, New College of Florida, ROBERT KRASNY, University of Michigan — We consider a new local, adaptive, higher order, tree-based quadrature and point insertion method to describe 3-D vortex sheet motion. This method for the first time enabled us to consider long time behavior of unstable vortex rings and vortex rings collision (oblique and head-on). The method is not limited to vortex ring motion and can be applied to other vortex sheets such as jets and wakes.

Leon Kaganovskiy
New College of Florida

Date submitted: 11 Sep 2006   Electronic form version 1.4