

Mesh Movement via Optimal Transportation  
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A new mesh movement algorithm is presented, based on optimal transportation theory.

This approach naturally allows the mesh connectivity to change, so that adjacent cells can move

apart to avoid regions of distorted or poor quality mesh.

It is applied here to the Euler equations with conservation on such a mesh achieved by the

construction of space-time cells.

The method is demonstrated on problems with large deformations and where the regions of

concentrated mesh change their topology, eg merging and separating.