

# GLUING CONSTRUCTIONS IN MEAN CURVATURE FLOW

XUAN HIEN NGUYEN

ABSTRACT. In the 1990s, Kapouleas and Traizet constructed new examples of minimal surfaces by desingularizing the intersection of existing ones with Scherk surfaces. Using this idea, one can find new examples of self-translating solutions asymptotic at infinity to a finite family of grim reaper cylinders in general position. Recently, it has been shown that it is possible to desingularize the intersection of a sphere and a plane to obtain a self-shrinker under mean curvature flow. I will discuss the main steps and difficulties for these gluing constructions, as well as open problems.