

1135-20-1465 **Hoang Thanh Nguyen*** (nguyen36@uwm.edu). *Distortion of surfaces in 3-manifolds*. Preliminary report.

We give a large scale geometric classification of immersed surfaces in 3-manifolds by using distortion of the fundamental group of an immersed surface in the fundamental group of a 3-manifold. (Received September 22, 2017)