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Hoang Thanh Nguyen* (nguyen36@uwm.edu). *Distortion of surfaces in 3-manifolds.*

In the 3-manifold theory, a great deal of interest has focused on the study of immersed surfaces in 3-manifolds in last decades. One reason is that studying immersed surfaces will help us to understand the structures of 3-manifolds. For instance, cubulation is used in the work of Wise and Agol to resolve the Virtually Haken conjecture on the hyperbolic manifolds. Wise observed that the following problem is important in the study of cubulations of 3-manifold groups: Determine the distortion of surface subgroups in 3-manifold groups. The answer to this problem has been answered by Bonahon–Thurston in the hyperbolic case. In this talk, I will give a solution to this problem in the non-geometric 3-manifold case. (Received January 30, 2018)