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Jane Wang* (janeyw@mit.edu). *An Introduction to Dilation Surfaces*. Preliminary report.

Translation surfaces are surfaces that can be formed by identifying the sides of polygons by translation. They are well-studied objects in dynamics and geometry, and are important objects in the study of mathematical billiards and Teichmüller theory. In this talk, we'll introduce a cousin of the translation surface called a dilation surface, which can be formed by identifying the sides of polygons by translation and dilation. We'll discuss how these objects naturally could arise in the study of pseudo-Anosov maps, and compare the geometry and dynamics of dilation surfaces with that of translation surfaces. (Received February 09, 2018)