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Zachary Abel (zabel@math.mit.edu), **Thomas Hull*** (thull@wne.edu) and **Tomohiro Tachi** (tachi@idea.c.u-tokyo.ac.jp). *An origami locked triangular mesh in \mathbb{R}^3 .*

We present a piecewise isometric immersion of a bounded region of \mathbb{R}^2 into \mathbb{R}^3 (i.e., an origami fold) that is non-flat (the image does not lie in a plane, or more precisely the immersion is injective), is triangular (the maximal isometric regions in the immersion are all triangles), and locked (the folded image cannot be rigidly unfolded back to a flat plane). Such immersions were previously not known to exist and are of interest in architecture and industrial design. (Received September 17, 2013)