Anh Tran, Kyle Andrle and J Mealy* (jmealy@austincollage.edu). Staircase metric tori.

After a brief introduction to the category, staircase metric (SCM) geometry and its accompanying methodology, we discuss compact examples of (positive definite signature) SCM manifolds; specifically, we investigate examples of compact SCM surfaces of higher genus. Constructions are given of new SCM tori, and variously featuring: almost everywhere (a.e.) negative curvature; a.e. zero curvature; and a.e. positive curvature. The asymptotic behaviors of geodesics on these tori and other SCM manifolds are analyzed. (Received August 16, 2019)