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**Ciprian S. Borcea** and **Ileana Streinu\*** ([istreinu@smith.edu](mailto:istreinu@smith.edu)), Smith College, Northampton, MA 01063. *Expansive periodic frameworks and pseudo-triangulations.*

We characterize two-dimensional periodic frameworks which admit an expansive deformation, defined by the property that the distance between any pair of vertices increases or stays the same. The proof uses our generalization to the periodic setting of Maxwell's theorem on lifting and stresses. Since expansive implies auxetic, we obtain an endless resource for auxetic designs. (Received January 19, 2014)