Abstract Submitted
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Pattern transformation triggered by deformation.[1] TOM MULLIN, University of Manchester — Periodic elastomeric cellular solids are subjected to uniaxial compression and novel transformations of the patterned structures are found upon reaching a critical value of applied load. The results of a numerical investigation reveal that the pattern switch is triggered by a reversible elastic instability. Excellent quantitative agreement between numerical and experimental results is found and the transformations are found to be remarkably uniform across the samples. Moreover the phenomenon is found to be robust for a range of soft solids including rubber and jelly. *Joint work with M.C. Boyce, K. Bertoldi and S. Deschanel, MIT.

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