The Isostatic Conjecture

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Abstract

We show that a jammed packing of disks with generic radii, in a generic container, is such that the minimal number of contacts occurs and there is only one dimension of equilibrium stresses. We also point out some connections to packings with different radii and results in the theory of circle packings whose graph forms a triangulation of a given topological surface. The following is an example of an isostatic packing of 10 disks in a torus given by square lattice.