

Additional Color Figures

Rigid, percolating network.pdf

Blue-shaded particles belong to a rigid, percolating connected network of contacting particles with short-range attractive interactions. White particles do not belong to the percolating cluster.

Rigid, percolating network with short range-attractive halo.pdf

Rigid configuration of particles that possess a hard-core repulsion (yellow shading) and short-range attractive interaction (blue halo).

Static packing of ellipse-shaped particles.pdf

Static packing of ellipses with two different sizes (the minor axis of the larger ellipses is 1.4 times that of the smaller ellipses) and same aspect ratio $\alpha = 1.5$.

Force chains in static packing of disks.pdf

Force chains in static packings of disks. The blue shading indicates the magnitude of the center-to-center force on the disks on a linear scale.

Percolating, but not rigid, network.pdf

Green-shaded particles belong to a percolating, but not rigid, connected network of contacting particles with short-range attractive interactions. White particles do not belong to the percolating cluster. The network will deform under most applied loads.