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Non-affinity of displacement fields in sheared granular systems KINGA LORINCZ, PETER SCHALL, University of Amsterdam — The jamming transition, i.e. the transition in a granular system from rest to flow is a fundamental problem of great importance to the understanding of a wide class of disordered materials. Using the experimental method of laser sheet imaging we can accurately visualize individual particles in a sheared three-dimensional granular packing immersed in an index matching liquid. We study fluctuations in the displacements of the particles as a function of varying confining pressures and shear stresses. We characterize these fluctuations by investigating the non-affine regions in the displacement fields.

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