

Abstract Submitted  
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**Imaging Force Anisotropy in 3D Sheared Granular Media**

JOSHUA DIJKSMAN, MARCEL WORKAMP, Wageningen University — We experimentally study force distributions in three-dimensional driven granular suspensions. By suspending slightly polydisperse, soft photoelastic gel spheres in an index-matching fluid, we obtain a direct method to assess spatial stress fields in the bulk. Using a rheometer equipped with a camera and simple optics, we simultaneously probe the rheology and force structures in Couette geometry. Our experimental system gives insight in the anisotropy of force structures inside flowing suspensions, one of the mechanisms behind the emergent shear-induced rigidity in these materials.

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