Seminar/Talk

Slip Slidin' Away

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Host: Scott Waitukaitis

You know the nearer your destination, the more // you realize you dont understand rheology. Take the case of dense hydrogel suspensions. These solid-fluid like materials display a myriad of remarkable features. The microscopic origin of their behavior is poorly understood, despite them being just a collection of simple, soft, slippery particles. We test the hydrogel packing mechanics via rheology and custom intruder tests, both in transient and steady state normal and rotation driving, and via stress and strain control modes. Our findings highlight the short, strong but reproducible shear history dependence of the packing, various rate dependencies and a sensitivity to boundary conditions. The results will be discussed in the context of the observed relaxation dynamics in particle-level contact mechanics.[1] J.A. Dijksman, T. Mullin, Confinement controls the creep rate in soft granular packings, Soft Matter 20 4015 (2025)[2] J.A. Dijksman, T. Mullin, Creep control in soft particle packings. Physical Review Letters 128 238002 (2022)

Thursday, May 15, 2025 11:00am - 12:00pm
Moonstone Bldg / Ground floor / Seminar Room F (I24.EG.030f)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.