MPIDS Colloquium

MAX-PLANCK-GESELLSCHAFT

Soft and Wet is Different

Prof. Thomas Salez

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Soft and wet contact arises in a range of phenomena that spans many length and time scales, and includes: landslides, aquaplaning of tires, wear of industrial bearings, ageing of synovial and cartilaginous joints, cell motion in blood vessels or microfluidic devices, and atomic-force or surface-force rheology. Therein, the coupling between boundary elasticity and confined viscous flow leads to a striking zoology of counterintuitive emergent effects. From the canonical situation of a free particle that can simultaneously sediment, slide, and roll in a viscous fluid, and near a soft wall, we study a range of novel inertial-like (despite the low-Reynolds-number ow) features, such as: enhanced sedimentation, elastohydrodynamic bouncing, roll reversal, emergent lift and torque...

Wednesday, June 19th, 2019 at 2:15 pm

MPIDS, Prandtl lecture hall, Am Faßberg 17, Göttingen

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