

Abstract Submitted
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Unifying granular and suspension rheology FRANCOIS BOYER,
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sité / CNRS UMR 6595 — Using an original pressure-imposed shear cell, we study
the rheology of very dense suspensions. We show that they exhibit a visco-plastic
behavior similarly to granular media successfully described by a frictional rheology
and fully characterized by the evolution of the friction coefficient μ and the volume
fraction ϕ with a dimensionless viscous number I_v . Dense suspension and granular
media are thus unified under a common framework. These results are shown to
be compatible with classical empirical models of suspension rheology and provide a
clear determination of constitutive laws close to the jamming transition.

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