Carrière, S.R.; Jongmans, D.; Chambon, G.; Bièvre, G.; Lanson, B.; Bertello, L.; Berti, M.; Jaboyedoff, M.; Malet, J.-P.; Chambers, J.E.. 2018 Rheological properties of clayey soils originating from flow-like landslides. *Landslides*, 15 (8). 1615-1630. [10.1007/s10346-018-0972-6](https://doi.org/10.1007/s10346-018-0972-6)

Flow-like landslides in clayey soils represent serious threats for populations and infrastructures and have been the subject of numerous studies in the past decade. However, despite the rising need for landslide mitigation with growing urbanization, the transient mechanisms involved in the solid-fluid transition are still poorly understood. One way of characterizing the solid-fluid transition is to carry out rheometrical tests on clayey soil samples to assess the evolution of viscosity with the shear stress. In this study, we carried out geotechnical and rheometrical tests on clayey samples collected from six flow-like landslides in order to assess if these clayey soils exhibit similar characteristics when they fluidize (solid-fluid transition). The results show that (1) all tested soils except one exhibit a yield-stress fluid behavior that can be associated with a bifurcation in viscosity (described by the critical shear rate γ c ˙ γc˙) and in shear modulus G; (2) the larger the amplitude of the viscosity bifurcation, the larger the associated drop in G; and (3) the water content (w) deviation from the Atterberg liquid limit (LL) seem a key parameter controlling a common mechanical behavior of these soils at the solid-fluid transition. We propose exponential laws describing the evolution of the critical shear stress τc, the critical shear rate γ c ˙ γc˙ , and the shear modulus G as a function of the deviation w-LL.