

Auteur Kostas Senetakis

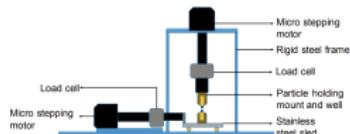
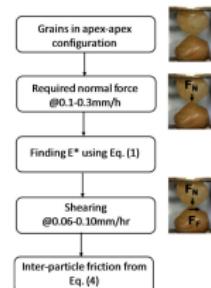


Figure 1. Schematic diagram of the inter-particle loading apparatus of the City University of Hong Kong.



[Kostas Senetakis, 2017,2018] : "Under the low normal load range applied in the study, between 1 and 5 N, we found that the frictional force is linearly correlated with the applied normal load"

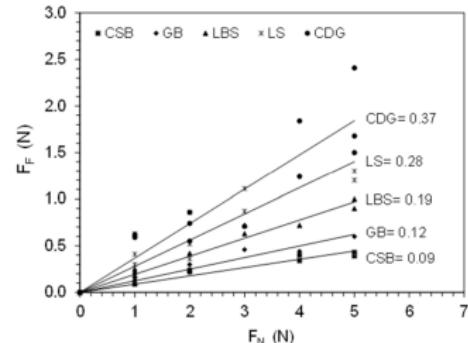


Figure 4. Variation of frictional force with normal force for the materials tested and corresponding inter-particle coefficients of friction.

Article Stress-strain behavior of sand at high strain rates (Mehdi Omidvar et al,2012)

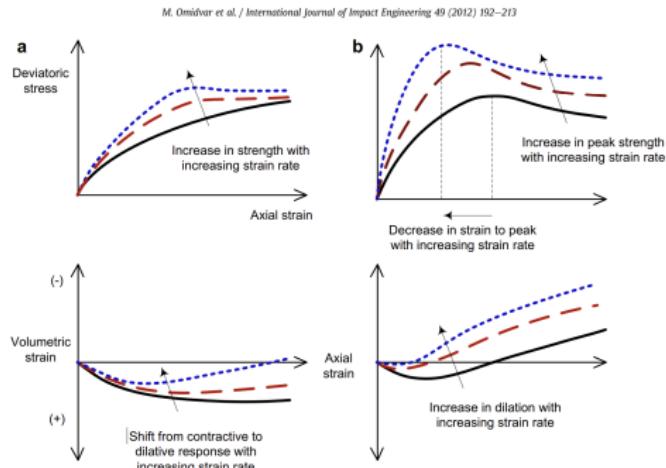


Fig. 19. Effect of increase in strain rate on stress-strain response and volumetric strains in (a) loose sand, (b) dense sand (interpreted based on data from Table 3).

"Under HSR loading, there is not enough time for strain energy accumulation, which prohibits crushing and promotes rolling-rearrangement resulting in a higher resistance to shear"

Trouver le régime de l'état critique

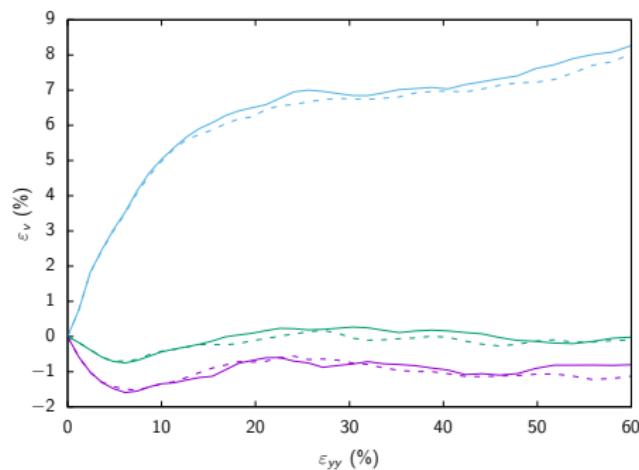


Figure 1 – petit déformation

$$\varepsilon_v = \varepsilon_x + \varepsilon_y + \varepsilon_z$$

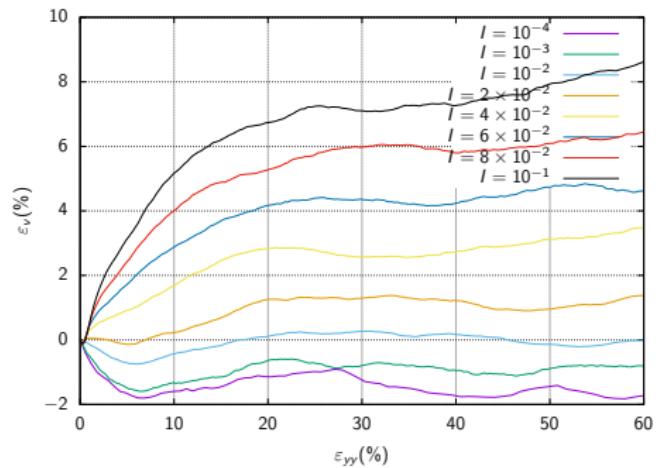


Figure 2 – grande déformation

$$\varepsilon_v = \frac{\det(h)}{\det(h_0)} - 1$$

Trouver le régime de l'état critique

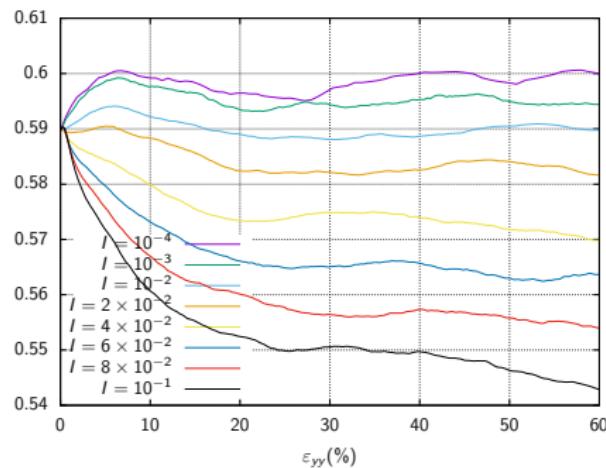


Figure 3 – Fraction solide

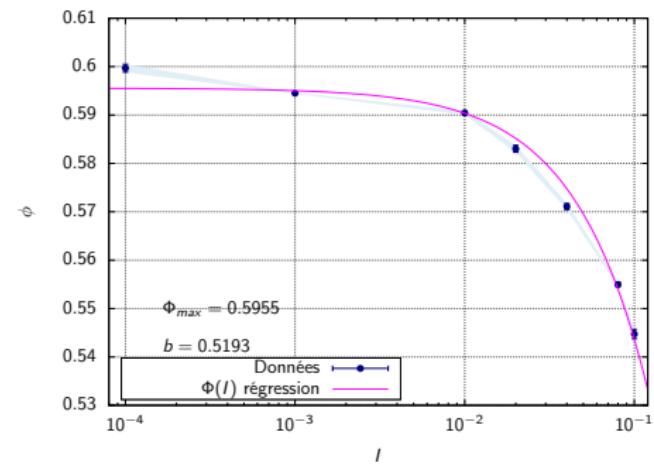


Figure 4 – grande déformation

Trouver le régime de l'état critique

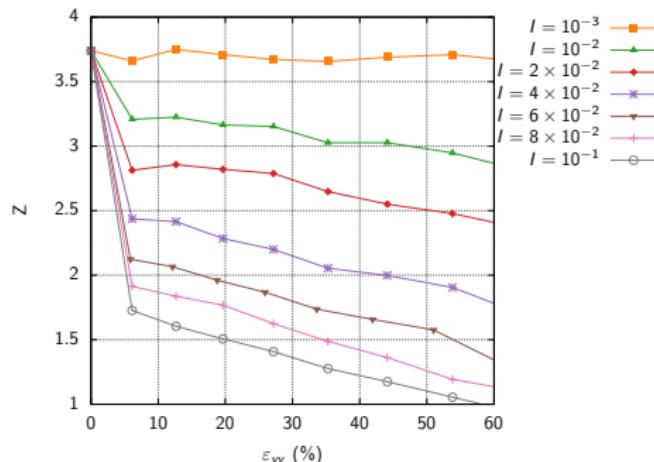


Figure 5 – Nombre de Coordination

$$\text{hpd} : \varepsilon_{yy} = \frac{\Delta y y}{h_{yy}^0}; \varepsilon_v = \varepsilon_{xx} + \varepsilon_{yy} + \varepsilon_{zz}$$

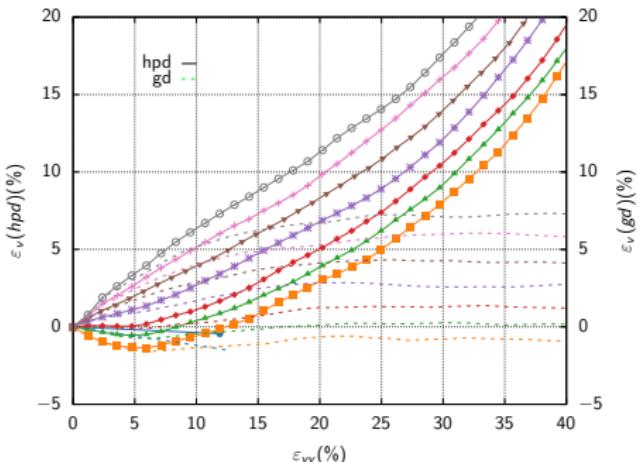


Figure 6 – Déformation Volumique

$$\text{gd} : \varepsilon_{yy} = \ln\left(\frac{h_{yy}}{h_{yy}^0}\right); \varepsilon_v = \frac{\Delta V}{V_0};$$

Trouver le régime de l'état critique

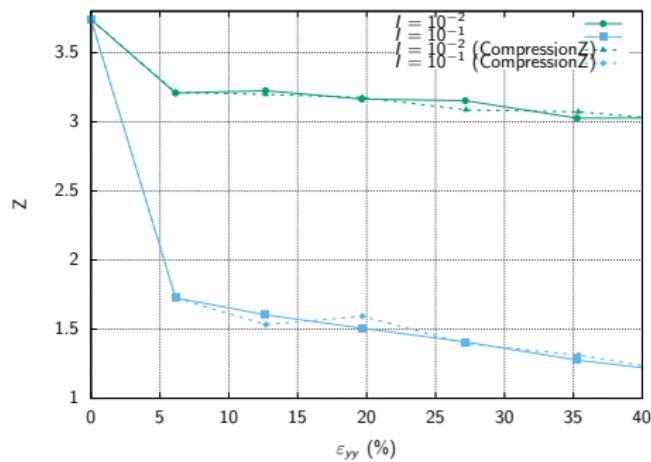


Figure 7 – Nombre de Coordination

échantillon aléatoire par compression dans l'axe Z

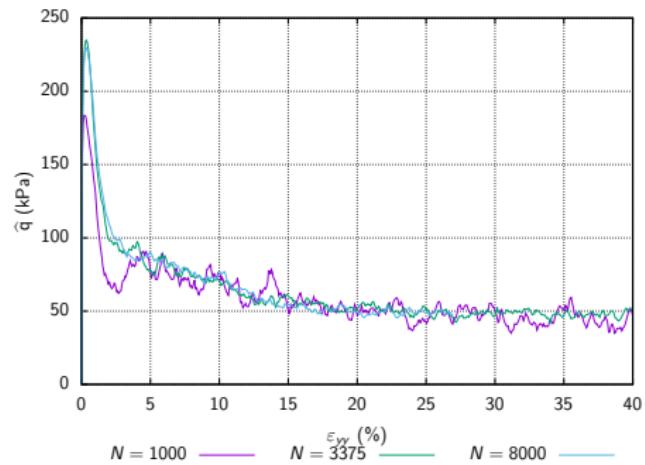


Figure 8 – Nombre de Particules

Stabilisation d'une colonne de sol par Mohr-Coulomb

Figure 9 – MP=12

Figure 10 – augmenter rigidité de condition aux limites

Effondrement d'une colonne de sol par Mohr-Coulomb

Figure 11 – MP=1200

Figure 12 – MP=1200 Effondrement

Poster pour la conférence "Powder and grains"