

## Sediment & packing properties

Composition

Size distribution

Grain shape

Packing state  
(loose vs. dense)

Deposition conditions  
(stratification, imbrication)

Confinement

## Porosity prediction model

Input

Volume fractions

$y_i$

Class sizes

$d_i$

Initial porosity  
values  $n_{0,i}$

Size ratios

$r_{ij}$

Cohesion  
model

Interaction  
functions

Packing model

Output

Porosity  
prediction  
 $n$

