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**Disorder pressure in dense and flowing granular materials**  
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LMM-CNRS/UNiv. Paris VI — Dense granular materials with a volume fraction  
between the random loose and random close packings display several specific fea-  
tures that do not exist at smaller or higher concentrations. When flowing they act  
as weakly compressible liquids. Their compressibility stems from the many inde-  
pendent configurations the grains can explore when flowing, and is represented by  
a compaction-dependent “disorder” pressure which has a direct influence on many  
quasi-static flows. As an example, disorder pressure is a necessary ingredient to  
understand the layer thickness that remains on a rough incline just after flow has  
stopped.

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