

# **Weakening and failure of granular assemblies**

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Granular packings (sand, rocks, ...) are submitted to constant and slowly increasing external forces at the set of boundaries until the packing 'fails', i.e. the structure becomes unstable and the grains suddenly rearrange. In these systems, energy is not conserved, and temperature is irrelevant. One perspective from which granular behavior can be investigated is a structural mechanics approach. Therefore the number of contacts and also their individual status (closed or sliding -- the latter permitting grains in contact to slide along each other) are important quantities. In the talk, particular emphasis is paid to the number and distribution of contacts that are sliding. Furthermore the properties of precursors of the failure will be investigated. These precursors appear to be localized failures.