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GRANULAR PLASTICITY

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ABSTRACT

Granular media stand as an example of materials governed by plastic (in the sense of irreversible) deformational processes related to continuous microstructural rearrangement under evolving loading. The constitutive complexity emerging on the macroscale is thought to stem from those multiple microstructural features, in a way that remains to be elucidated. Furthermore, dissipative mechanisms taking place within multiphasic granular materials are likely to interact with additional micro-physical processes such as capillary effects, grain removal or bonding/debonding chemical reactions.

In the continuity of the three previous editions (Barcelona 2015 and 2019, Hannover 2017), we envision that this session will provide an international outlook on the current state of knowledge in all fields related to granular plasticity, including among other: role of the microstructure, micromechanics, bifurcation and instability, discrete numerical methods, multiphase coupling in granular media, transition solid to fluid behaviour, erosion processes.

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