

Granular Entropy and the Gibbs Paradox

(Keynote Talk #5)

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I will present calculations that allow us to compute the number of distinct packings of granular materials. Our simulations allow us to probe much larger system sizes than were hitherto accessible. In particular we can count numbers of packings that are more than 200 orders of magnitude than what was accessible before. We find that the existing definitions of granular entropy are not adequate. In my talk I will comment on the relation between granular entropy and the Gibbs Paradox.