Hyperuniformity

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The discovery of quasicrystals shattered the then-conventional view that atomic and molecular arrangements in solids are either crystalline or glass-like by showing that there exist an infinite number of quasiperiodically translationally ordered possibilities with different rotational symmetries. Hyperuniformity represents another extension of our notion of long range order in a way that cannot be characterized in terms of translational and rotational symmetry. This talk will introduce the concept of hyperuniformity and discuss some of the distinctive physical properties of hyperuniform matter.