

On self-assembly of aperiodic tilings

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Aperiodic tilings serve as a mathematical model for quasicrystals - crystals that do not have any translational symmetry, Penrose tilings are the most famous example. The objective is to grow such a tiling by adding tiles one by one using only the local information. The motivation is to mimic the growth of real-world quasicrystals. In this talk, we propose a local growth algorithm for a particular class of aperiodic tilings namely the tilings which admit local rules.