

## **Aperiodic tilings (tutorial)**

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From its early origin in logic, punctuated by such highlights as Penrose tilings and connections with quasicrystals, the theory of aperiodic tilings has developed into a large field, spanning discrete and combinatorial geometry, ergodic theory, statistical physics, etc. In this tutorial I will introduce some of the basic tools and concepts, including tiling spaces and associated dynamical systems, as well as invariant measures on them. This sets the stage for the spectral theory of tilings, which will be discussed from the points of view of dynamics and diffraction theory.