

Speaker

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Workshop

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Title

Tiling translation surfaces with Wang tiles

Abstract

Wang tiles are squares with colored edges which must be placed edge-to-edge; colors on contiguous edges must match, rotations and reflections of the tiles are forbidden. Pairing the edges of given n Wang tiles at random, we obtain a translation surface. What properties are typical for this surface? For the easiest case (all edges have the same color) we will convince that the surface is connected with probability 1 as n approaches infinity and we will discuss its typical characteristics such as the genus, the number of singularities, the diameter, etc.

This is ongoing work joint with Thierry Monteil.