Klaassen, Bernhard
Forcing nonperiodic tilings with one tile using a seed. (English) [Zbl 1482.52022]
Eur. J. Comb. 100, Article ID 103454, 14 p. (2022).

The so-called “Einstein problem” asks for a simply connected prototile only allowing nonperiodic tilings without need of any matching rule.

In the paper, the author gives some examples of decorated prototiles forcing nonperiodicity of any generated tiling using matching rules. Obtained tilings are mainly spiral but one non-spiral example is also considered.

It seems that many of considered examples were previously known but the proof of nonperiodicity was never published before.

Reviewer: Anton Shutov (Vladimir)

MSC:
52C20 Tilings in 2 dimensions (aspects of discrete geometry)
52C23 Quasicrystals and aperiodic tilings in discrete geometry

Keywords:
tilings; nonperiodicity; matching rules

Full Text: DOI arXiv

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