

Kari, Jarkko**The tiling problem revisited (extended abstract).** (English) [Zbl 1211.03062](#)

Durand-Lose, Jérôme (ed.) et al., Machines, computations, and universality. 5th international conference, MCU 2007, Orléans, France, September 10–13, 2007. Proceedings. Berlin: Springer (ISBN 978-3-540-74592-1/pbk). Lecture Notes in Computer Science 4664, 72-79 (2007).

Summary: We give a new proof for the undecidability of the tiling problem. Then we show how the proof can be modified to demonstrate the undecidability of the tiling problem on the hyperbolic plane, thus answering an open problem posed by *R. M. Robinson* [“Undecidability and nonperiodicity for tilings of the plane”, *Invent. Math.* 12, 177–209 (1970; [Zbl 0197.46801](#))].

For the entire collection see [[Zbl 1129.68003](#)].

MSC:

- [03D35](#) Undecidability and degrees of sets of sentences
- [03D10](#) Turing machines and related notions
- [52C20](#) Tilings in 2 dimensions (aspects of discrete geometry)

Cited in 1 Review Cited in 10 Documents
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Keywords:

[Wang tiles](#); [mortality problem](#); [Turing machine](#)

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