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Tilings of hyperbolic $(2 \times n)$ -board with colored squares and dominoes

Takao Komatsu

School of Mathematics and Statistics, Wuhan University, Wuhan, China

László Németh

University of Sopron, Institute of Mathematics, Hungary

László Szalay

*University J. Selye, Department of Mathematics and Informatics, Slovakia**

Abstract: Several articles deal with tilings with squares and dominoes of the well-known regular square mosaic in Euclidean plane, but not any with the hyperbolic regular square mosaics. In this article, we examine the tiling problem with colored squares and dominoes of one type of the possible hyperbolic generalization of $(2 \times n)$ -board.

Keywords: Tiling, domino, hyperbolic mosaic, Fibonacci numbers, combinatorial identity.

Math. Subj. Class.: 05A19, 05B45, 11B37, 11B39, 52C20

**E-mail addresses:* komatsu@whu.edu.cn (Takao Komatsu), nemeth.laszlo@uni-sopron.hu (László Németh), laszlo.szalay.sopron@gmail.com (László Szalay).

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Tlakovanja hiperbolične $(2 \times n)$ -šahovnice z barvnimi kvadrati in dominami

Takao Komatsu

School of Mathematics and Statistics, Wuhan University, Wuhan, China

László Németh

University of Sopron, Institute of Mathematics, Hungary

László Szalay

*Univerza J. Selye, Oddelek za matematiko in informatiko, Slovaška**

Povzetek: Več člankov obravnava tlakovanja s kvadrati in dominami dobro znanega regularnega kvadratnega mozaika v evklidski ravnini, noben pa se ne ukvarja s hiperboličnimi regularnimi kvadratnimi mozaiki. V tem članku raziskujemo problem tlakovanja enega od možnih tipov hiperboličnih posplošitev $(2 \times n)$ -šahovnice z barvnimi kvadrati in dominami.

Ključne besede: Tlakovanje, domino, hiperboličen mozaik, Fibonaccijeva števila, kombinatorična identiteta.

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**E-poštni naslovi:* komatsu@whu.edu.cn (Takao Komatsu), nemeth.laszlo@uni-sopron.hu (László Németh), laszlo.szalay.sopron@gmail.com (László Szalay).