

CIRCLE PACKINGS OF THE HYPERBOLIC PLANE

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Problems related to circle packings are central in discrete geometry. Here, given $n \in \mathbb{N}$, we want to find the maximum number of pairs of touching circles in a packing of n congruent circles of the hyperbolic plane. It is known, that on the Euclidean plane, the extremum comes from a spiral construction of the tiling of the plane with regular triangles. Here we give both lower and upper bounds in the hyperbolic plane. In particular, we prove that if the radius of the circles is not too small, the number of touching pairs is less than the one coming from the order 7 triangular tiling.