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## DELTOID TANGENTS WITH EVENLY DISTRIBUTED ORIENTATIONS AND RANDOM TILINGS

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We study the construction of substitution tilings of the plane based on certain simplicial configurations of tangents of the deltoid with evenly distributed orientations. The random tiling ensembles are obtained as a result of tile rearrangements in the substitution rules associated to edge flips. Special types of random tilings for Euclidean, spherical and hyperbolic three-manifolds are also considered.

*MSC*: 52C23, 52C30, 60D05 *Keywords*: Configurations of lines, random tilings, simplicial arrangements, substitution tilings, three-manifolds

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