Unfolding Level 1 Menger Polycubes of Arbitrary Size With Help of Outer Faces

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Abstract

In this article, we suggest a grid-unfolding of level 1 Menger polycubes of arbitrary size with L holes along the x-axis, M the y-axis and N the z-axis. These polycubes can have a high genus, and most vertices are of degree 6. The unfolding is based mainly on the inner faces (that do not lie on the outer most envelope) except for some outer faces that are needed to connect lines or planes in the object. It is worth noticing that this grid-unfolding algorithm is deterministic and without refinement.