

# On the construction and differentiability of minimal non-invertible skew-product maps of 2-manifolds

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In [5] the authors constructed a non-invertible minimal map of a torus, in [1] it was proven that the only 2-dimensional manifolds admitting minimal maps are tori and Klein bottles and their unions. Examples of such homeomorphisms are known since 1960's (e.g. [3] or [6]). On the other hand, the question whether there exists a non-invertible minimal map of a Klein bottle remained open until recently, [7].

The construction of such mapping (using methods from [4]) is the cornerstone of this talk. Also it is known due to [2] that there is no analytic minimal non-invertible map on a 2-manifold. Hence the differentiability and Lipschitz continuity of minimal non-invertible maps of 2-manifolds will be discussed as well.

## References

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